

It is particularly the way in which things go....

On the relationship between perceived unfairness at work
and employees' well-being and absence behavior

Het is vooral de manier waarop het gaat...

Over de relatie tussen ervaren onrechtvaardigheid in organisaties
en het welbevinden en ziekteverzuimgedrag van werknemers
(Met een samenvatting in het Nederlands)

Proefschrift

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Chapter 1

Introduction

This thesis is about the negative consequences of perceived unfairness in organizations. In short, a fair or just act is one that is perceived to be 'good' or righteous by others (Folger & Cropanzano, 1998). In contrast, an unfair act is one that is perceived to be 'bad' and immoral.

It seems natural for human beings to worry about fairness issues. For example, many of the earliest human writings showed an interest in justice, such as the Bible and Aristoteles (Hardie, 1968). The tenor in these writings is that fair social interactions are essential for human beings to survive or to live a satisfactory life. Thus, one could say that justice or fairness can be conceived as an important human value or need, besides love and food.

Issues that concern justice or fairness also refer to actual discussions. For example, important contemporary topics in the Netherlands are: What are important human values in our society? What is a good and proper way to deal with fellow citizens? For example, are we enough treated with respect and dignity by others? Is a lack of good manners and norms and values the explanation for societal problems?

This thesis focuses on the influence of fairness issues at work. More specifically, a fairness perspective is used to explain employees' impaired well-being at work -- the experience of stress reactions and a detached attitude towards work -- and absence behavior. A conceptual distinction is made between two types of fairness: distributive and procedural unfairness (Cropanzano & Greenberg, 1997). Distributive unfairness concerns the perception that outcomes or "things one receives from the organization" are unfair (e.g., salary or appreciation). Procedural unfairness refers to perceptions of unfair processes or "the way in which things are decided, communicated or implemented by representatives of the organization" (e.g., are employees treated with dignity and respect?).

The latter type of unfairness, the perceived fairness of processes, is sometimes even more important for employees than the final result of decision-making processes. For example, research has shown that individuals are more happy with an unpleasant outcome (e.g., job loss), when a good explanation from superiors is provided (Bies & Moag, 1986). However, particularly the role of the perceived fairness of processes on employees' well-being and absence behavior has been neglected in prior research. An important research question in this thesis is, therefore: Does perceived procedural unfairness influence well-being and absenteeism, in addition to distributive unfairness?

Absence motives: "Stress" or "Withdrawal" ?

In addition, an attempt will be made to get insight in employees' motives to report sick as a result of perceived unfairness. Although it is relatively unclear from empirical studies why employees may report sick as a result of their negative work experiences in the workplace, there is a lot of speculation and theorizing about the reasons why people may be absent.

In the contemporary discussion in the Dutch media about absenteeism particularly two viewpoints are visible. One viewpoint that has been propagated is that employees who report sick because of work experiences are not really suffering from health complaints but are absent because they want to escape from a problematic work situation (e.g., NRC Handelsblad, 2001). In line with this, Johns (1997) introduced the "withdrawal" model that assumes that people report sick because they want to escape from an aversive work situation. According to this model, absenteeism and voluntary turnover are caused by the same underlying mechanisms. The model can be viewed as an informal absence model under which several existing absence studies can be categorized. For instance, empirical studies that use a withdrawal-explanation have often focused on poor organizational commitment (i.e. psychological withdrawal) as a predictor of both absenteeism (temporarily withdrawal) and

turnover (definite withdrawal). Loosely speaking, one could say that the implicit assumption in these studies is that employees less want to attend work.

At the same time, newspapers publish articles that support the idea that characteristics in the workplace lead to the development of health complaints. For instance, research was presented (Algemeen Dagblad, 2001; De Volkskrant, 2001, respectively) that revealed that work stress has been associated with an increased risk for cardiovascular disease (Van Amelsvoort, Schouten, Maan, Swenne, Kok, 2001; Vrijkotte, Van Doornen, De Geus, 2000). This viewpoint agrees with Johns' "stress model" (1997), which is of a different nature than the withdrawal model. The implicit and plain assumption in the "stress" model is that employees develop health complaints because of the work situation. Thus, it is assumed that employees are less able to attend work.

A secondary goal of this thesis is to get more insight in the reasons why employees may report sick because of perceived unfairness. Therefore, another global research question in this thesis is: What are employees' motives to report sick as a consequence of perceived unfairness at work ? Do employees report sick because they develop stress reactions as a consequence of perceived unfairness ("stress-explanation for absenteeism") or because they temporarily want to withdraw (e.g., escape) from an unfair work situation ("withdrawal-explanation for absenteeism") ?

Major Focus, Context, and Outline

Major Focus

Figure 1 depicts the major focus of this thesis and summarizes the two global research questions in a simple graph. The left side describes the two types of unfairness. The middle of the graph reflects how unfairness may affect organizational well-being and describes possible absence motives. The right side refers to the specific behavior that is explained, namely absenteeism.

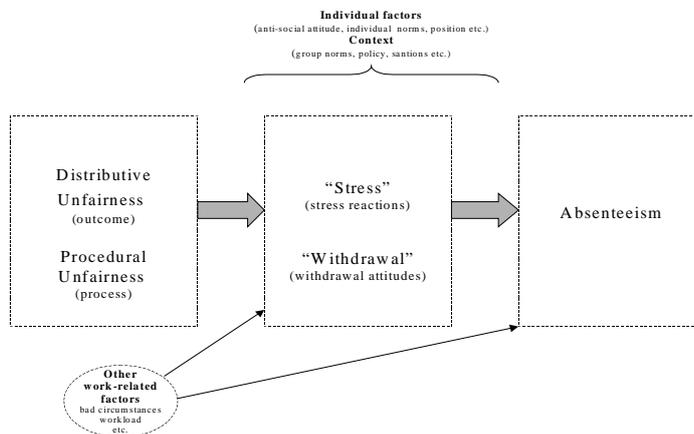


Figure 1. Perceived Unfairness, Organizational Well-Being and Absenteeism

Context

There are two reasons why absenteeism is at center in this thesis. First, a high absence rate as well as a high level of work stress is (still) a problem in the Netherlands and costs society a lot. Despite the fact that there is a lot of attention for the negative effects of absenteeism and the fact that both the employee and the employer are now hold responsible for absenteeism ("Wet Verbetering Poortwachter", 2002), recent figures show that in many branches absence rates have not been significantly reduced in the last years (CBS, 2003). Therefore, knowledge is needed about negative work circumstances that may give rise to work drop-outs due to sickness. Second, a fairness-perspective has already shown to be useful to explain several organizational behaviors (see, for example, Greenberg's work on employee theft, 1993a; 1993b; 1997). However, much is unknown about the relationship between unfairness, stress reactions, and absenteeism.

It may speak for itself that perceived unfairness is only one of the many possible causes of absenteeism. For example, in addition to work-related factors, individual (e.g.,

gender, hierarchical position) and social factors (e.g., organizational culture, absence policy) may influence the extent to which people report sick (Mastekaasa & Olsen, 2000; Johns & Xie, 1999). Moreover, in addition to perceived unfairness at work, several other work-related factors, such as low support and high demands and low job control, have shown to influence absenteeism (Unden, 1996; Vahtera, Pennti & Untela, 1996). These other factors will be raised only indirectly in this thesis. For more information about precursors of absenteeism and extensive reviews, see work of several other authors (e.g., Geurts, 1995; Johns, 1997; Johns, 2001; Martocchio & Harrison, 1993).

Outline

In this introduction, the following topics will pass in review. A relative large part of the introduction deals with what is meant by 'a fairness perspective'. This part contains important background information for all the following chapters. The additional value of studying absenteeism from a fairness perspective is discussed. Furthermore, issues that need to be resolved in this thesis are mentioned briefly. Another topic that receives some attention but is not a prominent topic in the overall thesis is why fairness is important for individuals.

The latter part of the introduction deals more explicitly with the relationship between perceived unfairness, well-being, and absenteeism. The topics in this part are only mentioned briefly and will be more extensively dealt with in the following chapters. Again, issues that need to be resolved in this thesis are discussed. The final part of this introduction provides an overview of the following chapters and the specific research questions that will be addressed in these chapters.

A 'Fairness Perspective'

What is meant by 'a fairness perspective' in this thesis? Below, some unique characteristics of a fairness-perspective are discussed as well as the possible additional value of a 'fairness perspective' in explaining organizational well-being and absenteeism.

Characteristics of Organizational Unfairness

In contrast to many other characteristics of the workplace (e.g., work load or level of job control), judgments about fairness always refer to social interactions: relations between individuals or groups. Or as Cropanzano & Greenberg (1997) have put it: "When no one is interacting, justice is no issue, when people interact, however, they begin to treat one another in certain ways".

When people say that they are treated unfairly, they mean that they are not treated by others as they believe people should be treated. In other words, "unfair" means that some ethical standard(s) regarding moral behavior are violated. According to researchers who study perceived unfairness at the workplace, employees are particularly negative affected when they believe that the organization lacks the intention to treat its employees fairly (Folger and Cropanzano, 1998). Thus, although employees may find particular work circumstances annoying or stressful (e.g., their salary is low or their workload is high), employees who perceive unfairness at work also believe that the organizations' intentions and acts are unfair (e.g., leaders are driven by self-interest).

Table 1 summarizes important issues that concern the concept 'organizational fairness'. The first row summarizes three characteristics of a fairness perspective.

Organizational Fairness		
Characteristics	relevant during social interactions human value, refers to moral behavior, what people find 'righteous' emphasis on perceptions of the organizations' intention in trying to be fair	
Types	<i>distributive fairness:</i> fairness of outcomes or "the things one receives"	<i>procedural fairness:</i> fairness of processes or "the way in which things are decided, communicated or implemented"
Criteria	<i>distributive principles:</i> e.g., favorable result of social comparisons, reciprocity, equity	<i>procedural principles:</i> e.g., voice, consistency, respect, openness in communication

Possible Related Concepts
 (e.g., psychological contract,
 other negative work
 perceptions)

Individual or Group Differences
 (e.g., culture, gender, nature of
 psychological contract,
 hierarchical position)

Figure 2. Concept Organizational Fairness

Additional Value of 'A Fairness Perspective: Unresolved Issues

It remains to be seen whether 'a fairness perspective' indeed contributes to the explanation of well-being and absence processes. There are, however, indications that individuals' perceptions of how an organization treats its members-- which is also an important characteristic of a fairness perspective -- is crucial for the origin of employee behaviors. For instance, the literature on psychological contracts (e.g., Rousseau, 1989) assumes that when employees believe that the organization breaks its promises to employees, this triggers a negative reaction of the employee: (s)he may in turn break his or her promises to the organization. Also the literature on absenteeism recognizes the importance of so-called 'two-way traffic' processes. For instance, the perception that the organization acts badly towards its employees by providing them low social support, turns out to be a better predictor of future absence behavior than, for instance, low organizational commitment of employees, an individuals' attitude that does not directly refer to the organizations' behavior (Johns, 1997). Since employees' perceptions of how an organization treats its members is a central element of organizational justice (Cropanzano & Greenberg, 1997), it seems promising to study the role of unfairness at work in the explanation of absenteeism.

In order to assess the value of a fairness perspective, it is important to find out whether a fairness perspective explains well-being and absence processes above other

negative work perceptions. For instance, it may be possible that work circumstances that are simply perceived as 'annoying' or 'stressful' are just as important for explaining well-being and absenteeism than perceived violation of the human value fairness. In order to judge the value of a fairness perspective, it is therefore important that studies using a fairness perspective to explain well-being and absenteeism control for other negative employee perceptions of the workplace than unfairness perceptions.

Two Types of Unfairness: Distributive and Procedural Unfairness

As was already mentioned in the beginning of this introduction, distributive unfairness refers to the fairness of received outcomes, whereas procedural unfairness refers to the fairness of perceived processes (see also the second row in Table 1 for definitions). Another important question is: What is exactly considered to be an unfair outcome or process?

There are several ways to come to the conclusion that something is fair or unfair. For example, philosophers and theologians focus on normative and prescriptive definitions of justice and fairness. In contrast, social scientists regard an act as unfair when people perceive it as unfair (Folger & Cropanzano, 1998). In other words, the definition is subjective and socially constructed.

Distributive and Procedural Organizational Fairness Principles

When individuals perceive an outcome or process as (un)fair seems partly to depend on the social context (e.g., Deutch, 1975). That is, the definition of fair interpersonal interactions appears to differ across populations, for instance, in eastern and western populations (e.g., Cropanzano & Greenberg, 1997). A clear example is the different viewpoints regarding the fairness of outcomes in countries such as China and the United States. In China, it is generally regarded fair when all employees receive similar outcomes,

whereas the United States consider it fair when outcomes depend on individuals' achievements and successes (e.g., Chen, 1995).

Fairness principles are individual's beliefs that outcomes or processes are fair when they satisfy certain criteria (cf. Deutch, 1975; Leventhal, 1980). Below some distributive and procedural fairness principles are mentioned that are at present considered to be relevant in, particularly western, organizations (see also the third row in Table 1).

Distributive principles

In general, it appears that individuals generate a frame of reference to decide whether a received outcome is fair (e.g., Homans, 1961). Social comparisons are used to form a frame of reference (Adams, 1965). For instance, individuals may compare their salary with their colleagues' salary and decide that they receive a too low salary. However, they may also create an internal standard based on earlier experiences and may, for instance, compare their current salary with the salary received in earlier times (Cropanzano & Greenberg, 1997; Kulik & Ambrose, 1992). If the result of comparisons is unfavorable (i.e. below the reference point), individuals are more inclined to perceive received outcomes as unfair.

In addition, employees find it unfair when they contribute more to the organization than they receive in return (cf. McClintock, C.G., Kramer, R.M. & Keil, L.J. (1984); Mueller and Wynn, 2000). In Adams' equity theory, which guided most of the distributive research, both the balance between investments and outcomes, i.e. reciprocity, as well as social comparisons play an important role. According to equity theory, people compare the ratio of their own investments and outcomes with the ratio of comparison others (Adams, 1965; Walster, Walster & Berscheid, 1978).

Box 1 shows fragments of interviews with employees from different organizations and illustrates how workers from different organizations use both distributive principles, result of social comparisons and reciprocity, to judge the fairness of outcomes.

Box 1 Violation of Distributive Fairness Principles

"I get more and more responsibilities but my salary is still the same. I don't consider that fair." (social comparison with earlier times, reciprocity)

"He did the same work as far as I'm concerned, and now he's having this promotion while I'm even lowered in salary" (social comparison with colleagues, reciprocity)

"I work for 200% but there's no personal appreciation whatsoever for my investments. Why is that? I don't understand. You must have the feeling that you work for something." (reciprocity)

"Some appreciation for us - if only a pat on the back - is out of the question, while we are doing the rotten jobs and they are only sitting behind their desks". (social comparison with superiors, reciprocity)

Procedural principles

Below, some procedural fairness principles will be discussed that have proven to be important in organizations. First, some procedural fairness principles are mentioned that concern the fairness of "the way in which things are decided". Second, some procedural fairness principles will be described that concern the fairness of "the way in which things are communicated or implemented by superiors".

Important research from the initial research on procedural fairness is the work of Thibaut and Walkers' (1975). In experimental laboratory studies they found that people perceive decision-making procedures as fairer (and are more satisfied with the results) when they get the opportunity to express their views. This fairness principle was called 'process control' but has also been referred to as 'voice' or 'consideration of different views' (Folger, 1977). Another important contribution has been provided by Leventhal (1976, 1980), who introduced several attributes of fair procedures, and whose importance in organizations was confirmed later on in empirical research (Cropanzano & Greenberg, 1997; Lind & Tyler, 1988). For example, an important fairness principle mentioned by Leventhal is consistency: procedures should be applied consistently across persons and over time.

In addition, some procedural principles have been identified that concern the fairness of "the way things are communicated to employees or implemented at their workplace" by

representatives of the organization (Folger & Cropanzano, 1998). This interpersonal component of procedural fairness has also been referred to as interactional fairness (e.g., Bies & Moag, 1996). It has, for example, been shown that representatives of the organization who are sensitive and respectful towards their subordinates, and who are open and straightforward in their communication are more regarded as fair.

Box 2 shows fragments of interviews with employees from different organizations and illustrates how workers from different organizations refer to above-mentioned procedural principles when they describe organizational decision-making and communication processes.

Box 2 Violation of Procedural Fairness Principles

"The reorganization wasn't fair. We had to fill out a questionnaire, then they made a selection. But everybody can do this job, it's an easy job. Some of the people, who have been fired, worked here for more than 20 years and thought they performed well. And now they hire temporary workers who don't even have to fill out this questionnaire. It's unheard-of". (consistency)

"Decisions are made about our work performance while superiors do not even know the situation on the spot. It's just absurd." (accuracy)

"For me it is clear that this organization acts purely out of self-interest. They only listen to the client because they don't want to lose them. They never listen to our side of the story." (bias-suppression and representativeness or voice)

"If I were the boss, I would daily visit the work floor and show some respect to the workers, make a joke or two, just to make them feel that they are valuable to the organization. It used to be like that. In the earlier days you got more personal attention from the top. Now there's no compassion for people anymore". (social sensitivity: standing)

"They don't even give you a good explanation when they want to get rid of you. There's no respect. You're only a number. That hurts". (account-giving and standing)

Additional Value of Procedural unfairness: Unresolved Issues

It is unclear if procedural unfairness contributes to the explanation of well-being and absenteeism. In prior studies, particularly inequity or lack of reciprocity has been related to work stress and absenteeism (e.g., Bakker, Schaufeli, Sixma, Bosveld & Van Dierendonck, 2000; Bakker, Schaufeli, Demerouti, Janssen, Van der Hulst & Brouwer, 2000; Dittrich & Carrell, 1979; Geurts, Buunk & Schaufeli, 1993; Geurts, Buunk & Schaufeli, 1994; Geurts, Schaufeli & Rutte, 1999; Hendrix & Spencer, 1989; Schaufeli, Van Dierendonck, Van Gorp,

1996; Taris, Peeters, Le Blanc, Schreurs and Schaufeli, 2002; Van Dierendonck, Schaufeli & Sixma, 1994; Van Dierendonck, Schaufeli & Buunk, 1996;1998; Van Horn, Schaufeli & Enzmann, 1999; Van Horn, Schaufeli & Taris, 2001; Van Yperen, 1998; Van Yperen, Hagedoorn & Geurts, 1996). Thus, particularly the influence of distributive unfairness has been studied, rather than the influence of procedural unfairness. Although inequity and reciprocity are considered to be distributive fairness principles (see also Box 1), most of these prior studies emphasize the fact that the social exchange relationship between the organization and the employee is not 'balanced'. However, according to fairness researchers, it is actually the feeling of unfairness, determined by inequity or lack of reciprocity, that may negatively affect individuals. This suggests that it is fruitful to study violation of other fairness principles as well in relation to well-being and absenteeism, such as violation of procedural fairness principles.

Speaking of the (unique) contribution of procedural unfairness presumes that individuals differentiate between distributive and procedural unfairness, thus that they are able to differentiate between unfair processes (e.g., decision-making processes) and unfair outcomes (e.g., resulting outcomes from decision-making processes). However, empirical evidence is needed to prove that distributive and procedural unfairness are actually perceived by individuals as two separate constructs.

In addition, it is unclear whether the contribution of procedural unfairness in explaining well-being and absenteeism depends on employee or group characteristics (see also text at the right of Table 1 near row 2). There are, for instance, indications that females are more negatively influenced by procedural unfairness than males, and that males are more negatively influenced by distributive unfairness than females (Sweeney & McFarlin, 1997). This may have consequences for the ultimate value of procedural fairness (but also of distributive fairness) at the workplace.

(Why) is Fairness Important?

It is relatively unknown -- at least from empirical studies -- why justice is important for people (Tyler, DeGoey & Smith, 1996). The most prevailing theories conceive fairness explicitly in a self-serving function. For instance, equity (i.e. ratio of own investments and outcomes equals ratio of investments and outcomes from a comparison person) is considered to be a strategic choice intended to maximize individual gains assuming that others follow the same rules and motives (Adams, 1965; Homans, 1961; Walster et al., 1978). Below three approaches are mentioned that also refer to the importance of procedural fairness.

Three approaches

Lind and Tyler (1988) particularly focused on why people may care about procedural fairness, thus about fair processes. They differentiated between self-interest theories and the group-value theory. For instance, Thibaut and Walker's (1975) instrumental model is based on the assumption that people prefer voice (i.e. the opportunity to express their opinions) to enlarge the chance at maximizing gains, thus to have some control of the processes that lead to the decision in order to make sure that they receive valued outcomes.

The group-value model (1988, see also relational model, 1992) was developed by Lind and Tyler (1988) to account for other – more relational - functions of procedural justice. In short, this theory means that those procedures are appreciated best which communicate to employees that they are valuable and respected members of their social group (represented by the authorities). The implicit assumption is that employees care about their position and inclusion in social groups. First, they want to be recognized as a respected member of the group. Second, they want to belong to a fair (“good or morally right”) group.

Finally, Van den Bos and Lind (2002) introduced a new model in which they state that fairness matters to people because fairness would remove uncertainty (for instance, about

chances to receive future outcomes or about one's social position) or alleviate much of the discomfort that uncertainty would otherwise generate.

Why is Fairness Important?: Unresolved Issues

It can be doubt whether self-serving instrumental motives are telling the whole story about why people care about justice (Montada, 1998; Folger and Cropanzano, 1998). That is, self-serving motives -- maximizing personal outcomes but also ensuring inclusion in social groups, or removing uncertainty -- may not entirely explain why people can be upset about injustice that concerns other people, which has been found in several studies. For example, managers' guilt feelings after layoff decisions (Lerner, 1996; Smith, 1994) indicate more solidarity by the management with the staff than expected. Guilt feelings by survivors of layoffs (Brockner, 1994) are other examples. In short, justice may not only be a mean but also an end in itself: an ought (Folger and Cropanzano, 1998). In other words, people may feel that all human beings are entitled to a fair treatment (Montada, 1998).

Why individuals care about fairness, is - although important - not a central issue in this thesis. Relevant is, however, that whatever the exact reason may be why fairness is important, all theories emphasize that individuals are considerably negatively affected if confronted with unfairness.

Unfairness, Well-being and Absenteeism

Three groups of prior empirical studies appear to be relevant when studying absenteeism from a fairness perspective. Below, a rough sketch of the main focus in these three research approaches is given.

Three Research Approaches

A first group of studies that is here discussed examined the role of perceived inequity (i.e. distributive unfairness) in the explanation of absenteeism (e.g., Dittrich & Carrell, 1979; Geurts et al., 1994; 1999; Van Yperen et al., 1996). These studies show that people who

perceive inequity are more often absent. For example, Geurts and others (1994; 1999) found that people who perceive inequity -- thus who feel disadvantaged in the exchange relationship-- are more often absent in the year following the survey. In these studies, evidence was found for a direct relationship between inequity and absenteeism. No support is found for a proposed mediating role of feelings of resentment and poor commitment (Geurts et al., 1999). According to the authors, absenteeism should be considered as a calculative act: a direct attempt to restore an equitable exchange relationship: by being absent, employees lower their inputs without changes in their salary (Adams, 1965).

A second group of studies has related perceived inequity (i.e. distributive unfairness) to stress reactions, such as burnout. In the past years, several studies found empirical evidence for this relationship. Cross-sectional surveys (e.g., Schaufeli et al., 1996) as well as longitudinal (Bakker et al., 2000) and experimental field research (Van Dierendonck et al., 1998) among several occupational groups has shown that higher levels of burnout were associated with employees' feelings that they receive less rewards than they invest in the exchange relationship. According to the authors, people have a chronic tendency to pursue reciprocity in interpersonal relationships, and feel distressed if they perceive relationships as inequitable (Adams, 1965; Pritchard, 1969; Walster et al., 1978).

A third group of prior studies is about the consequences of procedural unfairness at the workplace. Procedural unfairness has seldom been related to absenteeism and stress reactions. In fact, a large part of the research that examines consequences of procedural unfairness focuses on the development of negative work attitudes and behaviors (e.g., Bennett & Robinson, 2000). For example, it has been shown that employees who judge organizational processes as unfair are low in organizational commitment and trust in management (e.g., Brockner & Siegel, 1996). In addition, procedural unfairness has shown to be related to employee theft, sabotage, turnover, lack of cooperation, and lack of

organizational citizenship behaviors (e.g., Greenberg, 1993a; Jones, 1998; Moorman, 1991; Organ & Ryan, 1995).

Unfairness, Well-Being and Absenteeism: Unresolved issues

If one puts these three research approaches side by side and looks at them from a bird's-eye-view, it can be noticed that seemingly obvious relationships have been neglected in previous studies.

Unfairness and absenteeism: preference for withdrawal explanations

The first mentioned group of studies that examined absenteeism from an equity-perspective, used a withdrawal-explanation for the found empirical relationship between inequity and absenteeism, instead of a stress-explanation. For instance, they assume that individuals report sick in order to restore equity in the exchange relationship, a calculative act, and not because they may be less able to attend work because they developed stress complaints from the unfair situation. At the same time, however, the second mentioned group of studies shows that inequity is related to stress complaints, suggesting that an unfair situation indeed fosters stress reactions in individuals. This means that it may be -- in theory -- possible that the main reason why people report sick because of felt unfairness at the workplace is that they suffer from stress reactions rather than that they restore equity in the exchange relationship.

Procedural unfairness and negative personal consequences

Furthermore, it can be noticed that previous studies that focus on consequences of unfair processes pay -- compared to distributive fairness studies -- little attention to negative personal consequences, such as stress complaints or sickness behavior. Rather, the majority of procedural fairness studies focuses on the development of negative attitudes and behaviors towards the organization (e.g., low trust in managers, theft, turnover). However, it is not inconceivable that procedural unfairness causes strain, negative feelings and stress reactions

in employees. That is, studies have shown that perceptions of procedural unfairness can cause negative affective reactions, such as anger and low-self-esteem (Bies & Shapiro, 1987; Cropanzano & Randall, 1995; Weiss, Suckow & Cropanzano, 1999), which may foster stress reactions in individuals. In addition, personal consequences may mediate the often found relationship between procedural unfairness on the one hand and negative attitudes and dysfunctional work behavior on the other (see Weiss, Suckow & Cropanzano, 1999, for a similar argument). For instance, anger or developed stress reactions at work may reinforce the development of distant work attitudes, absenteeism and turnover.

Main purpose

The main purpose of this thesis is to study employees' well-being (i.e. stress reactions and distant attitudes) and absence behavior from a wider fairness perspective, by studying the impact of the perceived fairness of organizational processes (i.e. procedural fairness), in addition to the perceived fairness of received outcomes (i.e. distributive fairness). Furthermore, an attempt is made to test implicit assumptions from alternative theories that try to explain absenteeism and well-being (i.e. stress-explanations versus withdrawal-explanations for absenteeism).

Overview

Below an overview is given of the content of Chapters 2 to 6, the chapters in which empirical data are presented, and of Chapter 7, the general discussion of the results.

Chapter 2

Chapter 2 is about the meaning and measurement of organizational justice. It describes a multi-sample study conducted in three organizations. The presented study in Chapter 2 addresses the following four research questions:

- 1) Can theoretically distinct fairness concepts, such as distributive and procedural fairness, be empirically distinguished?

- 2) Do indirect fairness measures (perceived violation of fairness principles) and direct fairness measures (perceived level of unfairness) refer to similar fairness experiences?
- 3) Are distinct types of perceived unfairness (e.g., distributive and procedural unfairness) influenced by different negative work circumstances?
- 4) (How) is perceived violation of fairness principles related to perceived violation of the psychological contract?

Chapter 3

Chapter 3 describes a survey in which the relationship between perceived unfairness and prospective absenteeism was studied in a sample of Belgian security guards. In short, Chapter 3 addresses the following three research questions:

- 1) Are both distributive and procedural unfairness important for the prediction of absenteeism?
- 2) Do perceptions of unfairness contribute to the explanation of absenteeism if one considers traditional work-stressors (i.e. high work load and low job control)?
- 3) Why would employees report sick because of unfairness at work, because of stress- or withdrawal-motives?

Chapter 4

Chapter 4 presents a two-wave longitudinal survey among the Belgian security guards from the study described in Chapter 3. A model was tested in which distributive and procedural unfairness relate to employees' impaired well being, absenteeism and turnover. Three questions are central in this chapter:

- 1) Are there differences in the way how distributive and procedural unfairness relate to employees' impaired well being (i.e. stress reactions and psychological withdrawal)?
- 2) Does perceived unfairness at work negatively affects well being, or the other way around?
- 3) Are there similarities or differences in the way how perceived unfairness is related to

absenteeism and turnover?

Chapter 5

Chapter 5 describes a survey (cross-sectional) in which the relationship between perceived unfairness and absenteeism is studied in a sample of Dutch employees -- particularly blue-collar workers and managers -- from a food industry firm. This study controls for gender and hierarchical position. It addresses the following questions:

- 1) Do employees report sick because of stress reactions triggered by unfairness at work?
- 2) Do absence norms influence absence processes triggered by unfairness?
- 3) Is a possible relationship between perceived unfairness on the one hand and well-being and absenteeism on the other in fact a relationship between gender or hierarchical position and well being and/or absenteeism?

Chapter 6

In Chapter 6, the model that received most support in the studies presented in the previous chapters, is tested in different groups of employees that may differ in their work values. The following research questions are addressed in this chapter:

- 1) Is there a difference between male and female employees in how they are affected by distributive and procedural unfairness?
- 2) Is there a difference between employees high and low in relational orientation in how they are affected by distributive and procedural unfairness?

Chapter 7

Chapter 7 summarizes the most important conclusions of the empirical studies presented in chapter 2 to 6. In addition, the results are more generally discussed in the context of recent insights about consequences of negative workperceptions in general and unfairness in specific, stress and coping with unfairness, leadership, and psychological contracts.

Chapter 2

Organizational Fairness: Meaning and Measurement

Although there has been a growing amount of research on the consequences of perceived unfairness, less empirical studies have paid attention to the construct of organizational fairness itself. The central aim of the present study is to examine conceptual issues regarding organizational fairness, by reviewing the literature and analyzing empirical data from three companies. We try to answer four global questions in this study: 1) Can theoretically distinct fairness concepts (i.e., distributive and procedural fairness) be empirically distinguished?; 2) To what extent do direct and indirect fairness measures refer to similar fairness concepts?; 3) Do different kind of negative work circumstances cause distinct types of fairness violations?; 4) To what extent is perceived violation of fairness principles related to a seemingly related construct: perceived violation of the psychological contract?

Organizational Fairness: Empirically Distinct Dimensions?

In general, the literature makes a conceptual distinction between two types of fairness: distributive and procedural fairness (Cropanzano and Greenberg, 1997; Leventhal, 1980; Lind and Tyler, 1988). Distributive fairness concerns employees' judgment that outcomes (e.g., financial rewards) received from the organization are fair. Procedural fairness refers to employees' perceptions of fair processes (i.e. 'how things are usually going on') in the organization. Procedural fairness judgments concern: (1) the way decisions are made about the allocation of outcomes or in general as well as (2) how people are treated interpersonally during processes leading to decisions. This second 'social' component is also called 'interactional' fairness and has been treated by several authors as a third, separate fairness construct (e.g., Bies and Moag, 1986).

It is common practice that researchers use distinct measures for the theoretically distinct concepts of distributive and procedural fairness. Sometimes researchers also use

distinct measures of structural and social procedural ('interactional') fairness. However, there is not much evidence that distributive, procedural and interactional fairness can be empirically distinguished. Some studies report relatively high correlations between distributive and procedural fairness (e.g., $r = .72$; Sweeney and McFarlin, 1997) as well as between procedural fairness and interactional fairness (e.g., $r = .64$; Skarlacki et al., 1999). Moreover, the substantial intercorrelations between different fairness concepts found in previous studies was one of the reasons why Organ and Ryan (1995) decided to combine fairness measures in their meta-analysis into one 'overall' fairness indicator. Thus, at present there is no clear empirical evidence for the validity of distinct fairness concepts.

According to Folger (1996), the distinction between distributive, procedural and interactional fairness is often blurred in practice. Among other things, he asserts that employees' natural reactions to outcomes often take process considerations into account. For instance, distributive and procedural fairness tend to go together in people's mind because employees make inferences about the fairness of procedures based on the perceived fairness of outcomes. Specifically, employees who are disadvantaged in pay may infer that decision-making processes regarding pay-allocation are usually unfair at the organization. In addition, interactional fairness may be hard to distinguish from procedural fairness because both refer to processes and methods for doing things – the manner in which business is transacted. Hence, from an empirical as well as from a practical point of view, the distinction between several types of fairness is called into question.

The above-mentioned emphasizes the importance of empirical studies on the underlying dimensional structure of fairness measures (see also Moorman, 1991; Niehoff and Moorman, 1993). Therefore, the first aim of the present study is to examine the factorial structure of a newly developed 20-item questionnaire, which intends to include a reasonable reflection of the fairness principles that are at present considered to be relevant in

organizations. Fairness principles (OFP) are individual's beliefs that outcomes or processes are fair when they satisfy certain criteria (cf. Deutch, 1975; Leventhal, 1980). For instance, an outcome is considered unfair when it is lower than it should be, compared to some referent or standard (e.g., Homans, 1961). In equity theory (Adams, 1965) that has guided most distributive research, the equity rule plays a central role, which dictates that persons with greater contributions in the exchange relationship should receive higher rewards from the organization. Before we present the hypotheses in this study, more information is given about the included fairness principles (see also Appendix below).

Appendix

English translation of the - originally Dutch - Organizational Fairness Principles instrument (OFP)

Distributive Fairness Principles

A. Material Distributive Fairness Principles

What do you think of your salary...

1. ... when you compare your effort at work with your colleagues' efforts at work?
2. ... when you consider how often you are willing to do something for a colleague, in comparison to your colleagues?
3. ... when you compare your workload with your colleagues' workload?
4. ... when you compare your workload with your workload in earlier times?
5. ... when you compare the difficulty of your work with the difficulty of your work in earlier times?

Employees had to indicate which answer best reflects their opinion on a five-point-scale ranging from 1 = "in that case I find my salary much too low" to 5 = "in that case I find my salary much too high".

B. Social Distributive Fairness Principles

What do you think of the appreciation you receive from superiors...

6. ... when you compare your effort at work with your colleagues' efforts at work?
7. ... when you consider how often you are willing to do something for a colleague, in comparison to your colleagues?
8. ... when you compare your workload with your colleagues' workload?
9. ... when you compare your workload with your workload in earlier times?
10. ... when you compare the difficulty of your work with the difficulty of your work in earlier times?

Employees had to indicate which answer best reflects their opinion on a five-point-scale ranging from 1 = "in that case I feel very under appreciated" to 5 = "in that case I feel very over appreciated".

Procedural Fairness PrinciplesA. Social Procedural Fairness Principles

The questions below refer to the way one is treated by superiors at (name of the organization). Please, give your personal opinion.

11. Do superiors inform you in time about changes in the work?
12. Do superiors provide you with a good explanation if something turns out wrong for you?
13. Do superiors show that they respect you?
14. Do superiors show that you are valuable for the organization?
15. Do you feel that superiors communicate in an honest and straightforward manner?

Employees had to indicate which answer best reflects their opinion on a five-point-scale ranging from 1 = "not at all" to 5 = "to a large extent".

B. Structural Procedural Fairness Principles

Below you will find some statements about (name of the organization). Please, indicate to what extent you think that the following statements are characteristic for (name of the organization).

16. Superiors at (name of the organization) act purely out of self-interest (reversed).
17. At this company, each employee is treated in the same way.
18. Superiors try to be well-informed before they take any decisions.
19. At this company, employees' complaints are taken seriously
20. At (name of the organization) due consideration is given to employees' viewpoints.

Employees had to indicate which answer best reflects their opinion on a five-point-scale ranging from 1 = "not at all" to 5 = "to a large extent".

One half of the items in the OFP questionnaire (i.e. ten items) refers to equity-based distributive fairness (i.e. perceived fairness of received outcomes). The equity-rule is considered to be important in contexts where the goal is to enhance productivity, such as in many (Western) organizations (e.g., Miles and Greenberg, 1993). Although some doubt whether the equity-rule is the only valuable reward-allocation rule in organizations, for instance because organizational goals may change over time (cf. Chen, 1995; Martin and Harder, 1994), at present this rule predominates in distributive research in organizations. In the OFP, contributions such as 'workload' or 'efforts at work' are matched to material (i.e. pay) rewards (five items) and social (i.e. appreciation by superiors) rewards (five items). Employees are asked to compare their current situation with colleagues (Adams, 1965) and with an earlier point in time (Homans, 1961).

The remaining ten items refer to several procedural fairness principles which have been found to be important in organizational settings (Folger and Cropanzano, 1998;

Cropanzano and Greenberg, 1997). More specifically, five items refer to the following structural procedural fairness principles (cf. Leventhal, 1980; Thibaut and Walker, 1975): consistency (procedures should be applied consistently across persons and over time), bias-suppression (personal self-interest should be minimized), accuracy (decisions should be based on high-quality information), correctability (opportunities should exist to reverse decisions) and process control/representativeness (various interests should be taken into account). In addition, five items refer to social fairness principles ('interactional fairness') such as standing (i.e. being treated with dignity and respect), openness, account-giving (i.e. clear and adequate explanations for decisions should be provided) and timely feedback about work changes (e.g., Bies and Moag, 1986; Daly and Geyer, 1994; Folger and Bies, 1989; Tyler and Bies, 1990).

Which expectations do we have of the dimensional structure of the OFP? We assume that the distributive and procedural fairness items cluster into different (but correlated) dimensions. It is evident from definitions of distributive and procedural fairness (e.g., Cropanzano and Greenberg, 1997) that the distributive items focus on received outcomes and that the procedural items focus on methods for doing things or processes. In addition, it can be noticed that a respondents' personal and immediate outcomes and contributions (investments at work) play a central role in the equity-based distributive items (Adams, 1965). In contrast, the procedural principles items refer to chances for all employees (including oneself) at getting a fair treatment from the organization – now or in the long term – and irrespective of current personal contributions or outcomes (cf. Folger, 1996, fairness 'in principle'). Table 1 shows some different characteristics and example-items of the distributive and procedural organizational fairness dimensions.

	Distributive Fairness Principles Items	Procedural Fairness Principles Items
	1) outcomes (ends or 'what you receive') 2) actual and immediate outcomes considering one's own current contributions 3) personal consequences	1) process (means or 'how things usually go') 2) justice 'in principle' (chances at fair treatment irrespective of employees' current behavior) 3) personal and others' consequences (e.g., colleagues)
"Material" Focus	Material Distributive Fairness	Structural Procedural Fairness
1) concrete, tangible 2) clear, formal 3) relevant in decision-making work-context	Example-item: "What do you think of your salary...when you compare your workload with your workload in earlier times?" (in that case I find my salary much too low" to 5= in that case I find my salary much too high")	Please, indicate to what extent do you think that the following statements are characteristic for (name of the organization) Example-item: "Superiors at (name of the organization) act purely out of self-interest" (1= "not at all" to 5= "to a large extent")
"Social" Focus	Social Distributive Fairness	Social Procedural Fairness ('interactional')
1) socioemotional, psychological 2) vague, informal 3) relevant in all contexts that involve personal exchange	Example-item: "What do you think of the appreciation you receive from superiors...when you compare your efforts at work with your colleagues' efforts at work?" (in that case I feel very under appreciated" to 5= in that case I feel very over appreciated ")	The questions below refer to the way one is treated by superiors at (name of the organization). Please, give your personal opinion. Example-item: "Do you feel that superiors communicate in an honest and straightforward manner?" (1= "not at all" to 5= "to a large extent")

Table I. Characteristics and examples of items in the Organizational Fairness Principles Instrument (OFF)

Employees may not only differentiate between distributive and procedural items but also between items with a 'material' and 'social' focus. Fairness items with a 'material' focus particularly refer to concrete and tangible consequences for employees of unfairness (cf. Folger, 1996). For instance, a consequence may be that employees are disadvantaged in pay. Items with a 'social' focus particularly refer to socioemotional, psychological consequences of unfairness. For instance, employees may feel less respected by the organization which may affect their self-esteem. Simply stated, one could say that the structural procedural items refer to characteristics of decision-making processes, such as accuracy (i.e. decisions should be based on high-quality information) that tend to yield fair distributions of material goods more often, whereas the social procedural items (e.g., account-giving, openness, a respectful treatment) refer more to socioemotional aspects in the exchange relationship (Folger, 1996).

Another difference is that fairness principles that are central in the social-oriented items are more difficult to translate in clear guidelines and formal organizational policies than fairness principles in the material-oriented items. For instance, with regard to social procedural fairness, it is very hard to develop an organizational policy that makes that employees feel 'treated with dignity and respect'. In addition, one could say that structural procedural rules (e.g., consistency, bias-suppression, accuracy, correctability, process

control) are more relevant in a particular decision-making context, such as a work-context, whereas social procedural rules (e.g., standing, openness, account-giving) are relevant in all contexts that involve interpersonal exchange (cf. Cropanzano & Greenberg, 1997).

Although the social component of procedural fairness ('interactional fairness') is usually viewed as important for employees' fairness experiences at work and is seen as something different than its more material-oriented structural counterpart (e.g., Bies and Moag, 1986), a distinct 'social side' of distributive fairness is less emphasized in the literature.² In fact, most distributive fairness studies have primarily paid attention to the perceived fairness of pay, thus to a material outcome. However, it is reasonable to assume that employees also find it unfair (inequitable) when they receive less credits (e.g., less appreciation from superiors) for their work achievements than others with similar work achievements.

In a similar way as with procedural fairness, an important difference between material and social distributive fairness is that material distributive fairness is more clear and better to translate in formal policies than social distributive fairness. That is, it is usually more clear which investments the organization expects from its employees in return for a salary, and this may even be written in a formal job specification or employment contract, whereas it is less clear for employees what kind of contributions (if any) may lead to social rewards, such as appreciation from superiors. The latter may exclusively play a role in psychological contracts ("in their mind"): informal exchange agreements between employees and the organization (Rousseau, 1989). Moreover, although a 'fair day's pay for a fair day's job' is normal in paid jobs and even characterizes a paid-job, socioemotional rewards are also (and for some exclusively) relevant in a non-work context (cf. Rousseau and Parks, 1993). To conclude, we assume that there is reason to believe that employees differentiate between material-oriented and social-oriented procedural and distributive fairness items (see Table I).

The present study compares the appropriateness of six factorial solutions of the OFP questionnaire. For instance, we will test an “overall fairness” model in which all items load on one factor and we will test two-factor models in which a distinction is made between distributive and procedural items or between material-oriented items and social-oriented items. In addition, we test our hypothesis that the OFP has a four-dimensional structure, in which material distributive, social distributive, social (‘interactional’) procedural and structural procedural fairness are separate dimensions (Hypothesis 1).

Indirect and Direct Fairness Measures: Measuring Similar Constructs?

Several distributive and procedural fairness operationalizations are used in studies that aim to explain employee outcomes (e.g., attitudes and behaviors). Measures can be roughly divided in two categories: direct and indirect measures. In direct measures, employees simply indicate the extent to which a specific outcome or procedure is fair (e.g., “The procedures used to evaluate my performance have been fair and objective”; Sweeney and McFarlin, 1997). Indirect measures, such as the OFP, refer to fulfillment or violation of fairness principles, such as accuracy (e.g., “Does your company have procedures that ensure information for making decisions is accurate?”, Folger and Konovsky, 1989). Both measures have their (dis)advantages. For instance, a disadvantage of direct measures is that it remains unclear what respondents mean by “fair” or “unfair”. A disadvantage of indirect measures is that it is unclear whether measured fairness principles are relevant within a certain context. That is, it is generally assumed that about the same fairness principles (e.g., equity, consistency, accuracy etc.) do apply in organizations but their their relative weights and forms are shaped by the specific contexts (cf. Cropanzano and Greenberg, 1997; Greenberg, 1993b; Leventhal, 1980).

The rationale for operationalizations is rarely explicitly discussed by researchers (cf. Folger, 1996). Sometimes it is questionable to what extent perceived unfairness is measured

at all. For instance, Cropanzano and Greenberg (1997) point to the fact that in many studies distributive fairness is directly assessed by items that refer to outcome favorability (e.g., pay satisfaction) instead of outcome fairness (e.g., pay fairness). This raises the question whether it is possible to compare studies that focus on the explanation of employees' outcomes but use different fairness operationalizations.

The second aim of the present study is therefore to explore how and to what extent the resulting OFP-dimension(s) relate(s) to direct distributive and procedural judgments in which employees indicate the extent to which concrete outcomes or procedures are viewed as fair. We assume that indirect (OFP) and direct measures will be positively related. That is, fairness principles (such as principles in the OFP) are supposed to govern direct fairness judgments (e.g., Leventhal, 1980). In other words, the direct judgment that outcomes or procedures are unfair is assumed to be based on employees' perceptions that particular fairness principles are violated. However, since the importance (i.e. weight) of general fairness principles is determined by the specific organizational context (cf. Greenberg, 1993b; Leventhal, 1980; Mueller and Wynn, 2000), the relevance of the measured principles may differ across organizations. It is reasonable to expect though, that -- in all three organizations -- distributive principles relate more than procedural principles to direct distributive judgments, whereas procedural principles relate more than distributive principles to direct procedural judgments (Hypothesis 2).

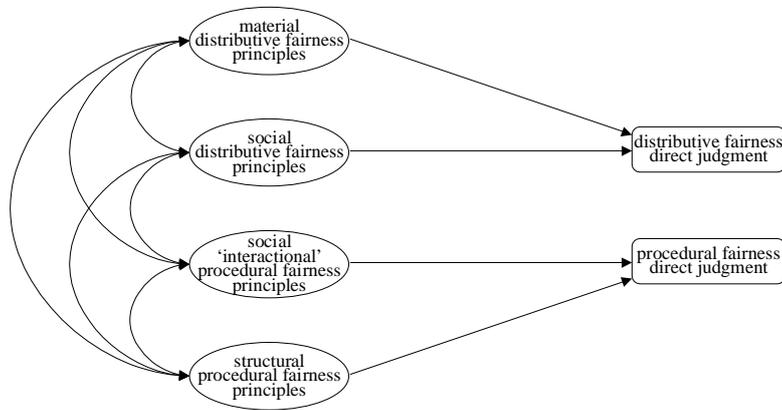


Figure 1. Hypothesized relationships between indirect (fairness principles) and direct justice measures

In Figure 1 distributive principles are exclusively related to distributive judgments and procedural principles are exclusively related to procedural judgments. However, it is conceivable that people have for instance, in addition to distributive principles (i.e. equity = persons with greater contributions should receive higher rewards), procedural principles (e.g., accuracy = decisions should be based on high-quality information) in mind when they evaluate the fairness of received outcomes (e.g., pay). That is, employees may also take process considerations into account when they evaluate the fairness of outcomes, or vice versa, they may have the fairness of received outcomes in mind when they evaluate the fairness of procedures (Folger, 1996). This assumption will be tested as well.

Distinct Types of Unfairness: Are they influenced by Different Work Circumstances?

As has just been argued, employees' perceptions that fairness principles are violated influence their direct judgment that outcomes or procedures are unfair. But what makes that employees feel that certain fairness principles are violated? We assume that negative work circumstances contribute to the perception that fairness principles are violated at work. The

third aim of the present study is therefore to examine if different kind of work circumstances give rise to the experience of different types of fairness violations.

Employees' own current investments play a central role in our distributive fairness measures (see Table 1). Specifically, the equity-rule dictates that persons with greater investments in the exchange relationship should receive higher rewards from the organization (Adams, 1965). In line with this, research has shown that perceived high work demands increase feelings of inequity (e.g., Bakker, Schaufeli, Sixma, Bosveld and Van Dierendonck, 2000). This may be explained as follows: perceived high job demands increase employees' (subjective) level of investments, which makes that - in order to achieve equity - employees feel that they should receive more rewards from the organization.

As previously argued, it is more clear which investments the organization expects in return for material rewards rather than social rewards (see also Table 1). We assume that the chance that employees will feel underpaid increases when tasks that obviously belong to their job are more demanding than expected. For example, employees with a relatively high work load (e.g., long workdays, often confronted with difficult situations) may find that they 'deserve' more salary than their colleagues. We expect that the chance that employees will feel underappreciated by superiors increases when there is a conflict between what employees and superiors perceive as valuable contributions at work. Problems about the workcontent may arise when the work content has been changed in a negative way, and may be reflected in frequent conflicts about the work content. As a consequence, employees invest in work tasks they do not like, which may increase their 'subjective' level of investments, or invest in work tasks which are valuable to themselves but will not be appreciated by superiors. In sum, we hypothesize that problems with workload particularly relate to material distributive unfairness, whereas problems about the work content particularly relate to social distributive unfairness (Hypothesis 3).

In contrast to distributive unfairness, employees' current (perceived) investments play a less important role in procedural fairness issues. Rather, the perception that procedural principles are violated will probably primarily be influenced by employees' judgment about the way in which things are organized at work and about communication styles of leaders. Specifically, particularly situations that may decrease the chance at a fair treatment (fairness 'in principle') may lead to perceptions that procedural fairness rules are violated.

As previously argued, a difference between social and structural procedural fairness principles is that the former is relevant in all contexts that involve interpersonal exchange, whereas the latter is relevant in a particular decision-making context, such as a work-context. We assume that perceived lack of communication increases the chance that employees believe that fairness principles governing 'interpersonal exchange' are violated. For example, if there is hardly any communication between representatives of the organization and employees, it is difficult for employees to infer that they are viewed as respectful members of the organization. Moreover, it may enlarge the chance that employees assume that superiors have something to hide and are thus not entirely honest and straightforward. Perceived lack of job information may particularly increase the chance that people assume that procedural structural fairness principles are violated. That is, employees may infer that being deprived of job information lowers their chance to receive fair material outcomes in the long run in exchange for their investments in the job. For instance, they may assume that lack of information about the goal of the job makes it impossible to perform their job in a way that is valued by the organization in the long run, which reduces the chance at fair outcomes in the future. Moreover, they may infer that their colleagues do receive inside-information about the job, whereas they themselves receive no information. In sum, lack of communication is particularly related to perceived social procedural or 'interactional' unfairness, whereas lack

of job information is particularly related to perceived structural procedural unfairness

(Hypothesis 4). Figure 2 summarizes Hypotheses 3 and 4.

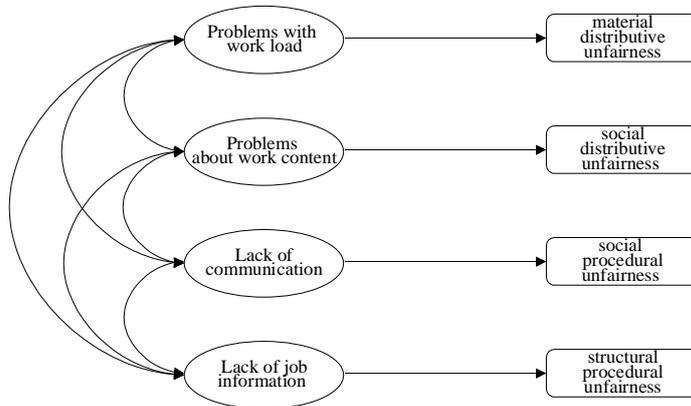


Figure 2. Hypothesized Model: Relationship between Work Circumstances and Fairness Dimensions

Violated Fairness Principles and Psychological Contracts: Measuring Different Qualities?

Examination of the relatedness or separateness of different types and operationalizations of unfairness and other negative work circumstances may enlarge our insight in the meaning of organizational fairness. In addition, it is interesting to examine how unfairness is connected to a seemingly related construct: perceived violation of the psychological contract. Psychological contracts consist of the beliefs employees hold regarding the terms of the informal exchange agreement between themselves and the organization (Rousseau, 1989). Violation of a psychological contract occurs when an employee perceives that the organization has failed to fulfill one or more of its obligations comprising the psychological contract (Rousseau and Parks, 1993). Perceived unfairness and violation of the psychological contract have been shown to be related to the same employee outcomes, such as lower trust in superiors (e.g., Folger and Konovsky, 1989; Robinson and Rousseau, 1994), less organizational citizenship behavior (e.g., Moorman, 1991; Robinson and Wolfe Morrison, 1995), and intention to leave the organization (e.g., Dailey and Kirk,

1992; Turnley and Feldman, 1999). These results suggest that unfairness and violation of the psychological contract share psychological qualities that are responsible for negative work outcomes.

Several authors have written about the presumed relatedness and separateness of both concepts (see, for instance, Guests, 1998; McLean Parks and Kidder, 1994; Wolfe Morrison and Robinson, 1997; Robinson and Rousseau, 1994; Sheppard et al., 1992). A possible relationship between fairness and psychological contracts can take many forms. In its simplest form one could say that violation of the psychological contract is unfair because the organization did not fulfill its promises: an employee does not receive from the organization what is promised (cf. distributive rules, Leventhal, 1980).³ In other words, perceived violation of the psychological contract may lead to a direct distributive fairness judgment (e.g., received outcomes are too low). In the present study, we are interested in the relationship between the OFP (employees' perceived fulfillment or violation of fairness principles) and employees perception that the psychological contract has been violated. We assume that the content of the psychological contract, thus the beliefs employees hold regarding the terms of the informal exchange agreement between themselves and the organization, may contain fairness principles. Thus, we believe that employees may expect that the organization adheres to particular fairness principles (e.g., employees should be treated with dignity and respect) in the exchange relationship. When these fairness principles are violated, employees may perceive that the psychological contract is violated. Therefore, the final aim of the present study is to explore to what extent the OFP is related to perceived violation of the psychological contract.

Method

Respondents and Procedure

The sample included employees from different work settings in three companies: (1) male security officers from a Belgian security firm ($n = 514$), (2) male (83%) and female (17%) security officers from the Dutch section of the same security firm ($n = 222$), and (3) male (73%) and female (27%) blue-collar and white-collar (i.e. managers, lawyers, technical designers) from a Dutch food industry company ($n = 275$). Respondents were asked to fill out a questionnaire concerning their 'perception of work'. Research was based on voluntarily participation. The total sample ($N = 1011$) included 900 (89%) males and 111 females (11%). Their mean age was 40 years ($sd = 10$). Organizational tenure ranged from less than a year to 35 years ($M = 8$; $sd = 7$). The response was 64% for both the Belgian security firm and the Dutch food industry company, and only 35% for the Dutch security firm.

Measures

Some preliminary work was done to construct the Organizational Fairness Principles (OFP) measure. For instance, items and questionnaires used in previous studies were examined (e.g., Bies and Moag, 1986; Folger and Konovsky, 1989; Lim et al., 1988), on the basis of which our own items were formulated. Originally, a larger set of items (63) was used to assess perceived organizational fairness. Pilot interviews among representatives of our first sample (Belgian security officers) were conducted to select and formulate appropriate items. These pilot interviews revealed among other things that particularly salary as a material outcome and superior appreciation as a social outcome were relevant. Moreover, on the basis of these interviews and some preliminary analyses (i.e. item correlations) on the data of our first sample, several items were excluded in order to develop a shorter questionnaire. The final questionnaire (the OFP) attempts to measure violation of important fairness principles and consists of 10 distributive and 10 procedural items. See the Appendix for an English

translation of the (originally Dutch) complete questionnaire. Afterwards, item 16 was reversed such that higher scores on the OFP can be viewed as an indicator of perceived fairness.

Direct Evaluation of Distributive Fairness was measured with two items: “What do you think of your salary?” and “What do you think of the appreciation you receive from superiors?” (1= much too low, 7= much too high). Actually, these items assess outcome favorability instead of outcome fairness. As previously mentioned, similar items have been frequently used in previous fairness studies (Cropanzano and Greenberg, 1997). The internal consistency was sufficient for the Belgian and Dutch security firm ($\alpha = .80$; $\alpha = .70$) but insufficient for the Dutch food industry company ($\alpha = .20$). Therefore, we decided to use these items separately.

Direct Evaluation of Procedural Fairness was measured with the following five items: “How fair do you find the way decisions are usually made about the content of your work?”, “How fair do you find the way decisions are usually made about the workload?”, “How fair do you find the way decisions are usually made about the work circumstances?”, “How fair do you find the way decisions are usually made about issues that concern employees?” and “How fair do you find the way decisions in general are usually made at your company?” (1= very unfair, 6= very fair). The internal consistency was good for all three companies ($\alpha = .91$; $\alpha = .88$; $\alpha = .87$).

Work circumstances were assessed with scales that were based on a reliable and validated Dutch questionnaire (Van Veldhoven & Meijman, 1994; De Jonge, Bosma, Peter & Siegrist, 2000). In these questionnaire, employees are asked to indicate how often certain issues take place at their job. Participants respond on a four-point scale ranging from (1) “never” to (4) “always”. The data regarding work circumstances is only available for the Belgian Security Firm (n = 514) and for the Dutch Security Firm (n = 222). Items were

recoded such that high scores refer to the perception that bad work circumstances often take place.

Problems with Work Load were assessed with two scales. The first scale refers to work overload and consist of eleven items. An example-item is: "Is your workload too heavy?" The internal consistency was good for the two companies ($\alpha = .80$; $\alpha = .87$). The second scale refers to emotional demands and consist of three items. An example-item is: "Are you in your work confronted with things that deeply impress you?" ($\alpha = .61$; $\alpha = .68$).

Problems about Work Content were also assessed with two scales. The first scale exists of six items and indicates employees' conflicts about the content of tasks ($\alpha = .76$; $\alpha = .73$). An example item is: "Do you have to perform your job in another way than you prefer?". The second scale exists of three items and indicates employees' problems with changes in work tasks. An example-item is "Do changes in your tasks have negative consequences for you?" ($\alpha = .81$; $\alpha = .73$).

Lack of Communication was indicated with a three-item scale ($\alpha = .85$; $\alpha = .77$). An example item is: "Do you hear enough about the state of affairs in the organization?".

Lack of Job Information was assessed with a two-item scale ($\alpha = .67$; $\alpha = .71$). An example-item is: "Do you get enough information about the result of your job?".

Violation of Psychological Contract was measured with an evaluation-oriented measure of the psychological contract (Rousseau and Tijoriwala, 1998). Participants had to read the following text (originally in Dutch): "When someone attends to work at a company, this company expects that the new employee will do certain things. Similarly, the new employee expects that the company will do certain things for him or her. The company promises some things. This may be explicit but some promises may be implicit". Fulfillment of the psychological contract was then measured with the following item: "To what extent did

(name of the company) fulfill her promises?" (1= not at all, 5= to a large extent). Afterwards this item was recoded such that higher scores refer to violation of the psychological contract.

Strategy of Analyses

The hypotheses were tested with multi-group confirmatory factor analyses and structural equation modeling (SEM) analyses, using the AMOS computer program (Arbuckle, 1997). In the present series of analyses, the goodness-of-fit index (GFI, Jöreskog and Sörbom, 1993), the incremental fit index (IFI; Bollen, 1989), the non-normed fit index (NNFI; Bentler and Bonett, 1980), the comparative fit index (CFI; Bentler, 1990) and the root mean square error of approximation (RMSEA; Jöreskog and Sörbom, 1993) are utilized. In general, models with fit indices larger than or equal to .90 and an RMSEA smaller than or equal to .08 indicate a reasonable fit (Browne and Cudeck, 1993).

A multi-group confirmatory factor-analytic approach is used to test the dimensionality of the fairness principles as assessed by the 20-item questionnaire. The analyses include a comparison of six competing models, which can be described as follows:

- M₁: A one-factor model in which all fairness principles-items load on an overall, composite fairness factor.
- M₂: A two-factor model in which a distinction is made between distributive items and procedural items. These two dimensions are allowed to correlate.
- M₃: A two-factor model in which only a distinction is made between material-oriented items and social-oriented items. These two dimensions are allowed to correlate.
- M₄: A three-factor model in which all distributive items cluster into one dimension, the procedural social items cluster into another dimension, and the procedural structural (or "material-oriented") items also cluster into another dimension. These three dimensions are allowed to correlate.

- M₅: A three-factor model in which the distributive material items cluster into one dimension, the distributive social items cluster into another dimension, and all procedural items cluster into a third dimension. These three dimensions are allowed to correlate.
- M₆: A four-factor model that includes four separate (i.e. distributive material, distributive immaterial, procedural social and procedural structural fairness) but interrelated factors.

Results

Confirmatory Factor Analyses: A Comparison of Six Factorial Models

The upper part of Table 2 shows the fit of the six specified models. Using multi-group analysis, the best relative fit of the six models is found for M₆ (Four-Factor-Model). The Chi-square difference test was used to compare different alternative models. As can be seen in the table, the fit of the Four-factor model (M₆) is superior to the fit of all other models.

AMOS provides modification indices, which give information about the relationships in a model that should be added or altered to improve the fit between the hypothesized model and the empirical data (Hayduk, 1987). On the basis of the modification-indices, it was decided to improve the fit of the six models by allowing five pairs of error-terms to correlate: 1) item 1 and item 2 of the material distributive items, 2) item 6 and 7 of the social distributive items, 3) item 4 and 5 of the material distributive items, 4) item 8 and 9 of the social distributive items, and 5) item 13 and 14 of the social procedural items (see Appendix). The first two distributive item-pairs share reference to employees' motivation to make contributions at work, or 'internal efforts', whereas the other distributive items refer more to what the organization asks from employees, or 'external efforts' (cf. Siegrist, 1996). The third and fourth distributive items-pairs share reference to 'earlier times' (instead of

‘colleagues’) as a comparison standard. Items 13 and 14 from the procedural items share their reference to ‘standing’ (see Tyler and Lind, 1992).

Table 2

Multi-Group Confirmatory Factor Analyses: Goodness-of-fit Indices of Competing Models, N = 1011

Model	χ^2	df	GFI	CFI	IFI	NNFI	RMSEA	Chi-square difference test
M ₁ : One-Factor (“overall fairness”)	5134.81	510	.57	.55	.55	.50	.10	M ₁ -M ₆ : $\Delta\chi^2$ (18) = 3062.77, p < .001
M ₂ : Two-Factor (D & P)	2923.80	507	.76	.77	.77	.74	.07	M ₂ -M ₆ : $\Delta\chi^2$ (15) = 851.76, p < .001
M ₃ : Two-Factor (M & S)	4983.36	507	.57	.57	.57	.51	.09	M ₃ -M ₆ : $\Delta\chi^2$ (15) = 2911.32, p < .001
M ₄ : Three-factor (D, PS, PM)	2737.66	501	.77	.78	.78	.75	.07	M ₄ -M ₆ : $\Delta\chi^2$ (9) = 665.61, p < .001
M ₅ : Three-Factor (DM, DS, P)	2262.44	501	.80	.83	.83	.81	.06	M ₅ -M ₆ : $\Delta\chi^2$ (9) = 190.40, p < .001
M ₆ : Four-Factor (DM, DS, PS, PM)	2072.04	492	.81	.85	.85	.82	.06	
M ₀ : Null Model	10870.31	570	.30	--	--	--	.13	
Model (Correlated Errors)	χ^2	df	GFI	CFI	IFI	NNFI	RMSEA	Chi-square difference test
M ₁ : One-Factor (“overall fairness”)	2836.76	495	.75	.77	.77	.74	.07	M ₁ -M ₆ : $\Delta\chi^2$ (18) = 1568.30, p < .001
M ₂ : Two-Factor (D & P)	1584.16	492	.87	.89	.90	.88	.05	M ₂ -M ₆ : $\Delta\chi^2$ (15) = 315.71, p < .001
M ₃ : Two-Factor (M & S)	2789.56	492	.75	.78	.78	.74	.07	M ₃ -M ₆ : $\Delta\chi^2$ (15) = 1521.11, p < .001
M ₄ : Three-factor (D, PS, PM)	1508.37	486	.88	.90	.90	.88	.05	M ₄ -M ₆ : $\Delta\chi^2$ (9) = 239.92, p < .001
M ₅ : Three-Factor (DM, DS, P)	1346.90	486	.89	.92	.92	.90	.04	M ₅ -M ₆ : $\Delta\chi^2$ (9) = 78.45, p < .001
M ₆ : Four-Factor (DM, DS, PS, PM)	1268.45	477	.90	.92	.92	.91	.04	

Note. χ^2 = chi-square; df = degrees of freedom; GFI = goodness-of-fit index; IFI = incremental fit index; NNFI = non-normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation. D = distributive items, P = procedural items, M = material-oriented items, S = social-oriented items.

The lower part of Table 2 shows that, after these modifications, the best fit is again found for M₆. The revised model is significantly better than the four-factor-factor model without correlated errors, $\Delta\chi^2$ (15) = 803.59 p < .001. All fit indices are now equal to or above .90 and the RMSEA is .04, indicating a reasonable fit. Note that the fit particularly improves when distributive and procedural fairness principles are modeled as separate principles (M₂, M₄, M₅, M₆). That is, the worst fit is found for M₁, the One-Factor Model, and M₃, the Two-Factor Model (M & S), in which distributive and procedural principles are mixed. Further distinctions within the distributive principles and within the procedural

principles also improve the fit significantly, but to a much lesser extent. In sum, confirmatory factor analyses show that -- as expected -- the four-factor-structure of the OFP is in all three samples. Thus, Hypothesis 1 has been confirmed.

The mean factor-loading in the final model with correlated errors (M_6) is .67. One factor-loading is extremely low compared to the other ones: in the Food Industry Firm item 16 loads only .25 on the structural procedural factor. However, more than 85 percent of the factor loadings is above .60 (highest value = .82). Additional analyses in Amos using constraints (i.e. setting parameters equal to each other) revealed that the majority of the factor loadings is not significantly different in the three organizations. Particularly (unstandardized) factor-loadings of structural procedural items differ significantly in the three organizations. However, most factor loadings are equal in the different samples.

Descriptive Statistics

Based on the confirmatory factor analyses, four sub-scales of the OFP were constructed. In all three samples (Belgium Security Firm, Dutch Security Firm, Dutch Food Industry Company), the internal consistency was satisfactory for material distributive fairness ($\alpha = .83, .84, .82$), social distributive fairness ($\alpha = .82; .83; .84$), structural procedural fairness ($\alpha = .81; .71; .73$) and social procedural fairness ($\alpha = .86; .83$ and $.85$). Table 3 shows the mean values, standard deviations, and intercorrelations of all variables included in this study collapsed over samples. Note that, as expected, the material distributive principles scale is higher correlated with a direct evaluation of material distributive fairness than the other indirect (OFP) fairness measures, and that both procedural principles scales are higher correlated with a direct evaluation of procedural fairness than distributive principles. However, indirect social distributive fairness (OFP) shows an unexpected high correlation with direct procedural fairness.

Table 3.
Range, Means, Standard Deviations, and Intercorrelations of Direct and Indirect (OFP) Fairness Measures, N = 1011

	range	M	SD	1	2	3	4	5	6	7	8
1. Distributive Fairness principles Material (salary)	(1-5)	3.61	.51	-							
2. Distributive Fairness principles Social (appreciation)	(1-5)	3.45	.47	.60	-						
3. Procedural Fairness principles Social ('interactional' fairness)	(1-5)	3.57	.82	.29	.45	-					
4. Procedural Fairness principles Structural	(1-5)	3.52	.85	.30	.43	.72	-				
5. Distributive Fairness Direct favorability salary	(1-7)	5.00	.99	.54	.28	.26	.20	-			
6. Distributive Fairness Direct favorability appreciation	(1-7)	5.01	1.01	.38	.40	.39	.33	.49	-		
7. Procedural Fairness Direct 5 organizational processes	(1-6)	3.24	.93	.36	.52	.70	.70	.23	.38	-	

Note. All correlations are significant at the .05 level.

Relationships between Indirect and Direct Fairness Measures

The final model that resulted from the confirmatory factor analyses (M_6) is supplemented with direct fairness measures. Paths were added from the four (correlated) latent constructs to direct fairness measures. In the first model (M_1) – the so-called Exclusive Model - distributive principles exclusively relate to direct distributive judgments whereas procedural principles exclusively relate to direct procedural judgments. Specifically, this model includes four paths: a path from material distributive principles to pay favorability, a path from social distributive principles to appreciation favorability, a path from social procedural principles to direct procedural fairness, and a path from structural procedural principles to direct procedural fairness (see also Hypothesized relationships, depicted in Figure 1). Error-terms of the two direct distributive items were allowed to correlate since they share reference to outcome favorability and have similar answer categories (cf. Byrne, 1989). Remember that these items could not be combined into one measure as Cronbach's alpha was too low in one company. This model showed a reasonable fit to the data. Apart from the GFI, which is below .90 (.88), all fit-indices are equal to or above .90 (IFI = .91; NNFI = .90; CFI = .92) and the RMSEA is .04.

The Exclusive model (M_1) was compared with an alternative model (M_2) – the so-called Mixed Model – in which the following four paths were added: paths from material and social distributive principles to direct procedural fairness, a path from structural or ‘material-oriented’ procedural principles to pay favorability (material consequences), and from social procedural principles to appreciation favorability (social consequences). Thus, according to this model employees have, for instance, also material-oriented procedural principles in mind when they judge the fairness/favorability of material outcomes such as the fairness of pay (distributive fairness). The chi-square difference test shows that the fit of this second model (M_2) – the Mixed Model - is significantly better than the fit of the first model, $\Delta \chi^2 (12) = 77.62, p < .001$.

More detailed examination of the Amos-output of the second model shows that, in all three organizations, there is neither a significant path between structural procedural principles and pay favorability, nor between material distributive principles and direct procedural fairness. The standardized solution of the Mixed Model is depicted in Figure 3. For reasons of clarity, the manifest variables (OFP-items) and the nonsignificant paths are not depicted. Path-coefficients that are depicted refer to the Belgian security Firm, Dutch security Firm, and Food Industry, respectively. This model explains on average 33% of the variance in direct distributive measures and 69% of the variance in direct procedural measures.

Although the Mixed model is significantly better than the Exclusive model, Figure 3 shows that material and social distributive direct fairness judgments are generally more predicted by distributive fairness principles than by procedural fairness principles. In addition, procedural direct fairness judgments are more predicted by procedural fairness principles (social and/or structural) than by distributive fairness principles. This means that Hypothesis 2 is supported.

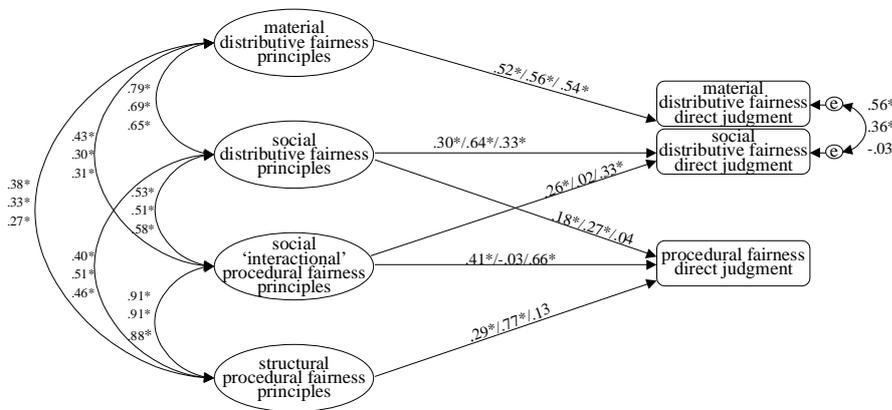


Figure 3. Standardized solution of 'mixed model' (multi-group analysis), total N = 1011

Structural Equation Analysis: Relationship between Work Circumstances and OFP-scales

In the next series of multi-group structural equation analyses, paths were added from work circumstances (i.e. job demands, problems with work content, lack of communication, lack of information) to the four OFP-scales (i.e. material distributive fairness, social distributive fairness, social procedural fairness, structural procedural fairness). In the first model (M₁) – the so-called "Exclusive Relationships Model" - problems with workload exclusively relate to material distributive fairness, problems about work content exclusively relate to social distributive fairness, lack of communication exclusively relates to social procedural fairness, and lack of information about work tasks exclusively relates to structural procedural fairness (see also Hypothesized Model, depicted in Figure 2). Error-terms of the four fairness dimensions were allowed to correlate. The fit of this model is suboptimal. Some fit-indices are reasonable good (GFI= .93; IFI = .90; CFI = .90), but others are not (NNFI = .81; RMSEA = .09).

The "Exclusive Relationships Model" (M₁) was compared with the "Distributive Mixed Model (M₂), in which a path was added from problems with workload to material

distributive fairness and a path from problems with work content to social distributive fairness. However, these relationships turned out to be non-significant ($\beta = -.10/-.07$ and $\beta = .04/-.04$, respectively). Consistently, changes did not improve the fit of the model ($\Delta \chi^2 (4) = 0.64$). Then the "Exclusive Relationships Model" was compared with the "Procedural Mixed Model (M_3)", in which a path was added from lack of communication to structural procedural fairness and from lack of information about work tasks to social procedural fairness. The fit is considerably improved by these changes ($\Delta \chi^2 (4) = 181.342$ $p < .001$). All fit-indices are satisfactory ($\chi^2 = 134.886$; $df = 46$; $GFI = .97$; $IFI = .97$; $NNFI = .93$; $CFI = .97$; $RMSEA = .05$), indicating that the relationships in the "Procedural Mixed Model" give a good description of the data. The model explains on average 25% in material and in social distributive unfairness, 30% in social procedural unfairness, and 20% in structural procedural unfairness.

The standardized solution of the "Procedural Mixed Model" is depicted in Figure 4. Path-coefficients refer to the Belgian and Dutch Security Firm, respectively. In sum, the results reveal that material distributive unfairness is particularly predicted by problems with workload whereas social distributive unfairness is particularly predicted by problems about the work content. This means that Hypothesis 3 is confirmed. In addition, the results reveal that social and structural procedural unfairness are predicted by both lack of communication and by lack of job information. This means that Hypothesis 4 is rejected.

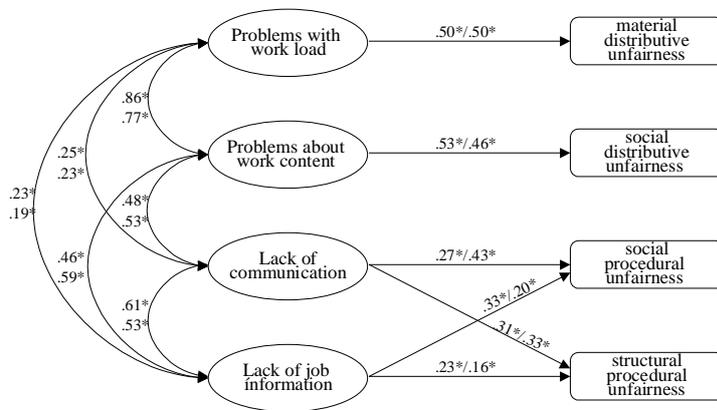


Figure 4. Standardized solution of Procedural Mixed Model: Relationship between Work Circumstances and Fairness Dimensions

Structural Equation Analysis: Relationship between the OFP and Violation of PC

Finally, the relationship between perceived violation of fairness principles (OFP) and perceived violation of the psychological contract was explored. Correlation-analysis revealed that all four distinct fairness types are significantly correlated to employees' judgment that the organization did not fulfill its promises (material distributive fairness: .35*; social distributive fairness: .38*; social procedural fairness: .61; structural procedural fairness: .55). In addition, a model (M₁) was tested in which all four factors of the OFP (M₆) are related to perceived violation of the psychological contract. This model is significantly better than the Null model, Delta χ^2 (105) = 10179.444, $p < .001$, and fits well to the data. Examination of the results reveals that in all three companies perceived violation of the psychological contract was significantly related to violated social procedural fairness principles ($\beta = .68 / .27 / .77$, all p 's < .01). In two companies other types of fairness principles were also related. Specifically, perceived violation of the psychological contract was in the Belgium security firm also related to perceived violation of material fairness principles ($\beta = .29$) and in the Dutch security firm also related to perceived violation of structural procedural fairness principles

($\beta = .36$). The OFP explains in all three organizations about 50% of the variance in perceived violation of the psychological contract.

Conclusions and Discussion

The main purpose of the present study was to enlarge insight in the meaning of organizational fairness, by examining the dimensional structure of a new developed questionnaire (OFP) – which intends to represent a reasonable reflection of the fairness principles that are at present to be considered relevant in organizations. In addition, it was investigated if and how this questionnaire connects to related concepts.

Dimensional Structure of the Organizational Fairness Principles questionnaire (OFP)

The dimensional structure of the questionnaire was studied using multi-group confirmatory factor analysis. Six models with varying correlated factorial structures were compared. Most support was found for a correlated four-factor-structure. This four-factor structure provided the best relative fit to the data in all three organizations. Consistent with theories about organizational fairness, we found empirical evidence for a distinction between distributive and procedural principles. In addition, we found – in line with most theorizing on procedural fairness (e.g., Cropanzano and Greenberg, 1997) – that procedural fairness consists of two dimensions: procedural structural fairness could empirically be distinguished from procedural social fairness (or interactional fairness). Thus, the “social side” of procedural fairness is viewed as somewhat different than the structural side. Hier meest recente refs toevoegen.

An important theoretical contribution of the present series of studies is that -- consistent with our theoretical reasoning -- we found evidence for a material and social distributive dimension. In other words, our results suggest that there may also be such a thing as a “social side of distributive fairness”. Apparently, feeling disadvantaged in pay means

something different to employees than feeling disadvantaged in appreciation by superiors. It may depend on the nature of the psychological contract which form of distributive unfairness mostly bothers employees. For instance, Ehlen, Magner & Welker (1999) suggest that members of voluntary professional organizations may place a greater emphasis on social outcomes relative to material outcomes than do members of employer organizations. In addition, psychological contract theories (e.g., Rousseau, 1989) suggest that, independent of the type of the organization, people do differ in their expectations about exchange relationships. It is interesting to examine in future studies whether these two types of distributive fairness may predict different organizational attitudes and behaviors. It can, for instance, be speculated that feeling mistakenly disadvantaged in material outcomes is especially predictive for 'greedy' attitudes or behaviors (e.g., stealing company's properties, Greenberg, 1993a), whereas feeling mistakenly disadvantaged in socioemotional outcomes lowers extra-role behaviors (Moorman, 1991).

Interestingly, feeling disadvantaged in appreciation (social distributive fairness) is more than feeling disadvantaged in salary (material distributive fairness) related to the perception that procedural principles (social and structural) which refer to decision-making processes have been violated. An explanation may be that appreciation is more than salary perceived as an outcome which can be "acquired" during interactions with superiors who are (usually) also involved in decision-making processes. Additionally, since appreciation can take many forms (i.e. a pat on the back, chance of promotion), more organizational processes may be associated with the allocation of social outcomes than with the allocation of material outcomes such as salary. Thus, employees who feel that superiors act unfair or who are dissatisfied with the allocation of social outcomes probably have low scores on both social distributive and procedural fairness principles.

Despite the fact that most support was found for a four-factor structure, it is important to note that the model particularly improved when a distinction was made between distributive and procedural principles. Distinctions within distributive principles and within procedural principles (material-oriented versus social-oriented) improved the fit, but to a lesser extent. Indeed, consistent with previous empirical studies (e.g., Konovsky and Cropanzano, 1991), in particular the two procedural dimensions were found to be highly related ($\phi \cong .90$ in all three organizations). The two distributive dimensions were less related but also still substantially high (ϕ varies from .65 to .79). To conclude, although employees differentiate between more material-oriented and more social-oriented fairness items, it seems particularly important to distinguish between distributive and procedural principles.

Relationships between Indirect and Direct Fairness Measures

The second aim of the present study was to examine how the OFP – that intends to measure the violation of fairness principles and that can be viewed as an indirect fairness measure – relates to direct fairness evaluations, in which employees simply indicate whether specific outcomes or procedures are fair/favorable or not. Both indirect and direct fairness measures have been included in studies aimed at predicting employees' attitudes and behaviors (e.g., Skarlacki et al., 1999; Sweeney and McFarlin, 1997). We assumed that both measures would be related since abstract fairness principles (in the OFP) are supposed to govern direct fairness evaluations (e.g., Leventhal, 1980). As hypothesized, distributive fairness principles were particularly related to direct distributive evaluations, whereas procedural fairness principles were particularly related to direct procedural fairness evaluations.

We also found some significant 'mixed' relationships between indirect and direct measures. For example, our findings suggest (see Figure 3) that employees' evaluation of social rewards (e.g., received appreciation by superiors) is not only influenced by distributive

principles (e.g., appreciation by superiors considering one's investments relative to others' and earlier investments) but also by social procedural principles (e.g., respectful treatment by superiors). The relationship between these measures may not be that surprising since social procedural principles refer just like social distributive measures to socioemotional consequences for employees. Recall that an individuals' investments (e.g., workload, willingness to do something for a colleague) play a role in the distributive principles but not in the procedural principles (see Table 1). This raises the question to what extent employees' investments play a role in the perceived fairness/favorability of socioemotional outcomes. A vignette study of Martin and Harder (1994) suggests that superiors prefer the contributions rule (persons with greater contributions should receive higher outcomes) for the allocation of material outcomes but the equality rule (rewards should be divided equally across individuals) for the allocation of socioemotional outcomes. As far as we know, no studies have focused on what employees find the fairest way of allocating socioemotional outcomes. On the basis of the current findings, it can be speculated that, when they evaluate received socioemotional outcomes, employees consider their own contributions relative to others' and earlier contributions but also believe that employees must be appreciated by superiors irrespective of their own contributions. In light of this, appreciation by superiors (and maybe also some other socioemotional outcomes) may be viewed as part of a respectful interpersonal treatment (which plays a central role in social procedural principles) that all employees have "rights on". Future studies may be conducted to test this hypothesis.

Since both indirect and direct fairness measures have been used in previous studies to explain employees' outcomes, we were also interested to find out the extent to which these measures are related. The analyses revealed that procedural fairness principles (e.g., bias-suppression, accuracy, respect, openness) explain, in all three organizations, more than two third of the variance in direct procedural fairness evaluations. These results suggest that

indirect and direct measures refer to a similar underlying fairness concept and that included fairness principles in the OFP are relevant for the concrete procedural fairness experiences of employees. In contrast, the distributive fairness principles explain only about one third of the variance in direct distributive fairness. This might question the value of the equity-rule in organizations (see however, Mueller and Wynn, 2000). Another plausible explanation is that in the current study outcome favorability was measured instead of outcome fairness (cf. Cropanzano and Greenberg, 1997). In other words, our results suggest that perceived outcome favorability is only moderately related to the equity-based distributive principles in our study.

Work Circumstances and Different Types of Perceived Unfairness

It was examined whether different kind of work circumstances give rise to the experience of the four different types of fairness violations: material distributive unfairness, social distributive unfairness, social procedural unfairness, and structural procedural unfairness. The results partly confirmed our hypotheses. The idea that different kind of work circumstances relate to perceived distributive unfairness and to perceived procedural unfairness was confirmed. As expected, employees who perceive problems with their investments or work requirements, feel that they deserve more outcomes in return from the organization (see Table 1 and Adams, 1965). In contrast, and as expected, the perceived fairness of processes was particularly influenced by employees' judgment about the way in which things are organized at work (i.e. perceived lack of job information) and about communication styles of leaders (i.e. perceived lack of communication).

More specifically, the hypothesis was confirmed that problems with the workload (e.g., high workload) are predictive of material distributive unfairness, whereas problems about the workcontent (e.g., conflicts about the work content) are predictive of social distributive unfairness. It was argued that the chance that employees will feel underpaid increases when

tasks that obviously belong to their job are more demanding than expected, whereas the chance that employees will feel underappreciated by superiors increases when there is a conflict between what employees and superiors perceive as valuable contributions at work. In that case, employees may invest in work tasks they do not like, which may increase their 'subjective' level of investments, or invest in work tasks which are valuable to themselves but are not appreciated by superiors. This reasoning is worth to investigate in future research.

Since social procedural fairness is about the fairness of communication processes, and structural fairness is about the fairness of the decision-making context at work, it was assumed that perceived lack of communication would particularly predict social procedural unfairness, whereas perceived lack of job information would predict structural procedural unfairness. However, no support was found for this hypothesis. In fact, results revealed that lack of communication as well as lack of job information were predictive of both perceived social procedural unfairness and structural procedural unfairness. An explanation for these results is that providing information is actually a way of communication. For instance, timely feedback about workchanges is considered to be one of the social fairness rules, also in the current research (Bies & Moag, 1990). Communication may be more conceived as a way to transfer jobspecific information (e.g., the way in which one is fairly treated as a worker) or other, more general, information (e.g., the way in which one is fairly treated as a human being, Folger and Cropanzano, 1998). For this reason, it may be hard to distinguish global precursors of social and structural procedural unfairness. In order to reveal which work circumstances are exactly responsible for the idea that structural fairness principles are violated, it may be better to focus on employees' judgments about characteristics of a specific decision-making system instead of on the information employees receive about this system (see, for example, studies of Gilliland and colleagues about the fairness of selection systems, 1998).

Fairness Principles and the Psychological Contract

The final aim of this study was to explore the relationship between the OFP -- perceived fulfillment or violation of fairness principles -- and perceived fulfillment or violation of the psychological contract. We were interested in this relationship because both perceived unfairness and perceived violation of the psychological contract have proved to be successful in explaining several employee attitudes and behaviors, which suggests that they share some psychological qualities. Our findings revealed that about 50% of the variance in perceived violation of the psychological contract is explained by the OFP. In other words, the OFP is to a considerable extent related to employees' perceived violation of the psychological contract.

A possible interpretation of these results may be that the content of psychological contracts (the beliefs employees hold regarding the terms of the informal exchange agreement; cf. Rousseau, 1989) partly includes beliefs about fairness. According to Robinson and Rousseau (1994), employees' beliefs of the exchange agreement "can arise from overt promises (..), interpretations of patterns of past exchange, vicarious learning (..) as well as through various factors that each party may take for granted (e.g., good faith or fairness (..)" (p. 246). Employees' beliefs of how the organization 'should behave' are thus based on (1) own or others' experiences in exchange relationships, and (2) taken-for-granted factors that may not be explicitly promised by the organization, but can nevertheless be viewed as obligations. This last 'source' of beliefs may include fairness principles. Our finding that fairness principles explain about one half of the variance in perceived violation of the psychological contract may emphasize the importance of so-called taken-for-granted factors (i.e. ethical standards regarding moral behavior) in exchange relationships at work (cf. Cropanzano and Greenberg, 1997; Mueller and Wynn, 2000).

Instead of regarding fairness principles as part of the content of the psychological contract, Wolfe Morrison and Robinson (1997) have argued that fairness issues become important for employees after a contract breach, as a kind of sense-making process. They assume that when a contract is breached, the employee considers its magnitude and implications and why and how it is occurred. According to them, process issues are more important than outcomes in creating a sense of violation after a contract breach when the exchange is relational rather than transactional. In this light, our findings thus may suggest that most employees in the present study engaged in “relational contracts”. That is, a closer look at the relationship between the OFP and the psychological contract reveals that perceived violation of the contract is particularly related to (social) procedural principles. Future studies may focus on whether fairness principles must be viewed as part of the content of the psychological contracts or that more complex, dynamic relationships exist between both concepts (cf. McLean Parks and Kidder, 1994; Wolfe Morrison and Robinson, 1997).

Limitations and Implications

The present study is not without limitations. First, the low response in the Dutch security firm may have influenced our findings. However, fortunately our findings were not only based on this sample. Second, other distinctions in fairness principles have been made in the literature, which were not investigated in the present study. For instance, the social component of procedural fairness (“interactional fairness”) may be distinguished (Greenberg, 1993c; Cropanzano and Greenberg, 1997) in an informational component (e.g., explanation content) and an interpersonal sensitivity component (e.g., aspects of demeanor such as empathy and expressions of remorse). In addition, some recent studies on distributive fairness emphasize the importance of a distinction between perceived fairness of positive (e.g., promotion) and negative (e.g., demotion) outcomes (e.g., Toernblom and Ahlin, 1998). Thus, the organizational fairness concept may exist of more dimensions than the four that were

found in the present study. Third, the analyses are correlational and thus do not confirm causality. Our assertions that perceived violation of fairness principles leads to direct global fairness evaluations and contract violation is strictly speaking not correct. Fourth, although knowledge about the relationship between the OFP and outcome favorability is useful since this measure has often been used in previous studies, we still have no insight in the relationship between the OFP and 'actual' outcome fairness.

Despite these limitations, the present study may have implications for practice and future research. First, this study confirms the idea of a distinct social side of procedural fairness and suggests the existence of a social side of distributive fairness. However, the results show that it is particularly important to distinguish between distributive and procedural fairness rather than between socioemotional and material consequences for employees. Second, our results suggest that indirect fairness measures -- at least procedural measures -- refer to a fairness experience that is comparable to the one assessed with direct fairness measures. Finally, violated fairness principles are to a considerable extent related to perceived violation of the psychological contract, which further emphasizes the importance of fairness at work.

Footnotes

1. Little is known about why fairness matters (cf. Tyler, DeGoey, & Smith, 1996) and we do not pretend to have the answer. The assumption that structural and social procedural fairness may have different material or social consequences for employees is but one example of why people may differentiate between both concepts (cf. Folger, 1996; Folger & Cropanzano, 1998) and is not without problems. For instance, structural procedural fairness may have social consequences as well (e.g., implications for perceived organizational values) if one regards procedural fairness from a group-value or relational

viewpoint (Lind and Tyler, 1988; Tyler and Lind, 1992). In addition, employees may not only be negatively affected by injustice at work because of self-serving instrumental reasons (i.e. obstruction to fulfill their own material or social needs), but also because of their belief that each human being is entitled to a just treatment (cf. Montada, 1998).

2. In an interesting article of Greenberg (1993c) on the social side of fairness, interpersonal justice or 'showing concern for individuals regarding the distributive outcomes they receive' refers to the social side of distributive justice. The present study regards interpersonal justice as part of the social component of procedural justice (e.g., Cropanzano and Greenberg, 1997) because it refers to the fairness of the way in which the business is transacted (i.e. "means") instead of the fairness of outcomes (i.e. "ends"). In this study, the social side of distributive fairness refers to the fairness of social outcomes (e.g., fairness of received appreciation from superiors) rather than material outcomes (e.g., fairness of received pay).
3. Some researchers have argued that, although both equity and psychological contract recognize the notion of reciprocity, these concepts differ to a considerable extent from each other. That is, a perceived breach of the psychological contract is determined by comparing investments and rewards relative to what was promised by the organization (e.g., Wolfe Morrison and Robinson, 1997; Robinson and Rousseau, 1994). However, we agree with other researchers who call in question whether a promise indeed adds to the intensity of a perceived obligation (Folger and Cropanzano, 1998) or whether there need to be awareness of promises (Arnold, 1996).

Chapter 3

Unfairness at Work as a Predictor of Absenteeism

Absenteeism is undesirable for employees, their colleagues and employers (i.e., stagnation of work, high costs). It is therefore important to enlarge insight in possible causes, especially in work-related ones. This study, among security guards, examines the role of perceived unfairness at the workplace in explaining future absenteeism.

Two Explanations for Absenteeism

The majority of previous empirical studies that focus on individual work-related causes of absenteeism (see Johns, 1997) provide two broad explanations for absenteeism. The first one, the ‘withdrawal’-explanation, regards absenteeism as withdrawal from (i.e. avoiding) aversive work conditions. For instance, moderate support was found for a relationship between work dissatisfaction and low commitment on the one hand and absenteeism on the other (e.g., Farrell & Stamm, 1988). The second explanation for absenteeism is that employees are stressed by the work situation. This ‘stress’-explanation is based on stress-theories (see Cooper & Robertson, 1999) assuming that employees are not able to cope with certain work conditions (‘stressors’) and develop stress symptoms, such as psychosomatic health complaints. Within this tradition, several stressors, such as low perceived social support (Unden, 1996), have shown to be related to absenteeism. Simply stated, employees are thus absent because they temporarily do not want to work because of aversive work conditions (‘withdrawal’- explanation) and/or are not able to work because they are stressed by certain work conditions (‘stress’- explanation)¹.

Unfavorable Work Conditions

With an eye to the prevention of absenteeism, insight is useful in the specific work conditions that create an aversive and stressful work situation and cause absenteeism. Some studies using a traditional well-established stress model (Karasek’s Job Demand-Control-

Model, 1979) suggest that high job demands and low job control predict absenteeism (e.g., Schechter, Green, Olson, Kruse & Cargo, 1997; Vahtera, Pentti & Uutela, 1996), indicating that job design is important for explaining absence behaviors. This model is probably also helpful to explain absenteeism in the present study. That is, the security job requires that employees have to be constantly prepared for problematic events, and have to work during a long uninterrupted period at unfavorable working times (at nights and during weekends). In addition to high job demands, security guards may perceive low job control since both the employer (security firm) and the client who hires the security service use strict and well-defined prescriptions about how the job should be performed.

However, studies by Eisenberger and colleagues (Eisenberger, Fasalo & Davis-Lamastro, 1986; Eisenberger, Huntington, Hutchison & Sowa, 1990) have shown the importance of perceptions of how the organization ‘behaves’ towards its employees. Using a social exchange perspective, they argue that absenteeism is most likely to be high when employees feel that the organization is not supporting them. Elaborating on this, we assume that unfairness at work may be an important determinant of absenteeism. Fairness issues may be particularly salient in the present study since the security guards have very little insight in the decision-making about the organization of their work (i.e. assignment to clients, scheduling of working hours, and the replacement of ill colleagues). Perceptions of unfairness can be easily triggered as security guards may, for instance, wonder whether their colleagues also have to work during weekends and whether their working hours are registered accurately by superiors.

In the present study we focus on the relative value of perceived unfairness at work as a predictor of future absenteeism over and above more traditional stressors (high job demands and low job control) and previous absenteeism, which is usually considered to be the best predictor of future absenteeism (cf. Martocchio & Harrison, 1993).

Unfairness at Work and Absenteeism

Two main categories of fairness are distinguished: distributive fairness, the evaluation of outcomes received in the exchange relationship with the organization, and procedural fairness, the fairness of allocation processes or the way superiors arrive at decisions in general (e.g., Cropanzano & Greenberg, 1997). Several fairness rules have been proposed, defined as individual's beliefs that a distribution of outcomes or a process is fair when it satisfies certain criteria (e.g., Gilliland, 1993; Leventhal, 1980). For instance, an outcome is judged as unfair if it is lower than it should be, compared to some referent (cf. Folger & Cropanzano, 1998; Homans, 1961). According to equity theory (Adams, 1965), which guided many previous studies of distributive fairness in organizations, individuals expect that the amount they invest in and gain from a relationship should be proportional to what another person invests and gains. Whether a procedure or process is judged as (un)fair may depend on the structuring of the decision-making context (e.g., procedures should be applied consistently to persons and over time, Leventhal, 1980) and the interpersonal treatment from superiors (e.g., superiors should be honest, Tyler & Bies, 1990).

Although it has been empirically well documented that feelings of unfairness are important determinants of employees' deviant attitudes and behaviors at work, such as sabotage and employee theft (see for example reviews by Cropanzano & Greenberg, 1997; Folger & Cropanzano, 1998), unfairness is not often connected to absenteeism. Moreover, studies that have been conducted are limited, since they usually focus on inequity (distributive unfairness) rather than procedural unfairness. These studies have shown that employees who felt relatively disadvantaged were more frequently absent than those who perceived equity at work (e.g., Dittrich & Carrell, 1979; Geurts, Buunk & Schaufeli, 1994). As far as we know, only one study connected procedural fairness to absenteeism. Gellatly (1995) found a negative relationship between interactional unfairness (i.e. unfair

interpersonal treatment from superiors) and absenteeism in a study among hospital workers. Unfortunately, these studies do not allow a comparison of the impact of both fairness measures on absence behavior. Although distributive and procedural unfairness are considerably related to each other (cf. Organ & Ryan, 1995), we assume that both have unique relationships to absenteeism, which may be explained by ‘withdrawal’ as well as ‘stress’ processes.

‘Withdrawal’

Previous studies that studied unfairness and absenteeism seem to start mainly from the idea that unfairness is considered to be an aversive work condition that makes that employees temporarily do not want to work (‘withdrawal’-explanation). Using Adams’ equity theory (1965), absenteeism as a reaction to distributive unfairness is usually regarded as an equity restoring mechanism: by being absent, employees lower their inputs without changes in their main outcome (salary). Additionally, Adams stated that employees by being absent may temporarily ‘leave the field’ (i.e. break off the exchange relationship). Absenteeism as a withdrawal-reaction to unfairness may thus be interpreted as withdrawal from work obligations, to lower the inputs in the exchange relationship, or as withdrawal from the organization, to weaken the exchange relationship with the organization (cf. work withdrawal and job withdrawal, Hanisch & Hulin, 1990).

Although Adams mentioned ‘leaving the field’ as a possible reaction to inequity, we believe that procedural unfairness particularly may cause withdrawal from the organization. Compared to distributive unfairness, procedural unfairness appears to evoke primarily organization-oriented responses (e.g., low trust in superiors) probably because the way in which decisions are usually made provides information about an organization’s capacity to act fairly (e.g., Sweeney & McFarlin, 1993). Perceived procedural unfairness has been shown to elicit several forms of withdrawal attitudes, such as propensity to turnover (Dailey & Kirk,

1992) and reduced commitment to the organization (Sweeney & McFarlin, 1993). Absenteeism as a consequence of procedural unfairness may thus be chiefly interpreted as a way of weakening the bond with the organization. This reasoning fits well with Gellatly (1995) who found that the relationship between interactional fairness and absenteeism was completely mediated by affective commitment, suggesting that procedural unfairness indeed lowers the employee's attachment to the organization and eventually evokes physical withdrawal from the organization. Thus, in line with a 'withdrawal'- explanation, we predict that:

Distributive Unfairness has a direct, positive effect on absenteeism, even when controlling for the impact of job demands, job control and previous absenteeism (Hypothesis 1).

Procedural Unfairness has an indirect, positive effect on absenteeism through its negative impact on affective commitment, even when controlling for the impact of job demands, job control and previous absenteeism (Hypothesis 2).

'Stress'

The second explanation for absenteeism, the 'stress'-explanation, focuses on the employee's reduced ability to go to work, due to experienced health problems caused by stressful work conditions. In only one study on absenteeism, perceived unfairness has been regarded as a stressor that impairs the employees' health. Hendrix and Spencer (1989) found that the most important predictors of absenteeism, flu and a cold, were related to distributive unfairness (pay inequity). However, several studies (e.g., Van Horn, Schaufeli & Enzmann, 1999; Bakker, Schaufeli, Sixma, Bosveld & Van Dierendonck, 2000) -- which did not focus on absenteeism -- showed that employees who indicated to invest more in the relationship with clients or the organization than they received in return had higher levels of burnout.

Considerably less attention has been paid to procedural unfairness as a predictor of stress reactions although a similar relationship has been recently suggested by Schmitt and Dörfel (1999). They found in a study among 295 factory employees that procedural unfairness was related to the number of days employees felt sick at work and self-reported sickness absence.

Both distributive (inequity) and procedural unfairness may foster stress reactions but the underlying processes may differ somewhat. Following propositions from cognitive dissonance theory (Festinger, 1957), Adams argued that the presence of inequity (distributive unfairness) creates tension in individuals. Although he mentioned several means to reduce inequity (e.g., lowering investments, leaving the field), employees may not always be in the position or otherwise capable to actually eliminate inequity. For instance, strict job prescriptions for the security guards in the present study may hinder lowering of investments. Persisting tension and distress as a result of inequity may increase employees' arousal level (Markovsky, 1988) and make them more susceptible to diseases (Hendrix & Spencer, 1989)

As a consequence of procedural unfairness, employees will probably more than when they perceive inequity realize that the unfair treatment is structural and that superiors are responsible for the unfairness. Since unfair procedures reduce chances at obtaining fair outcomes in the long run (Brockner & Siegel, 1996), employees may develop feelings of hopelessness. Moreover, they may become upset and angry (cf. Weiss et al., 1999) which may prompt some to take action to stop the unfairness (i.e. conflicts) wasting lots of energy. It can be speculated that particularly energy is spent by employees who used to be proud of being a member of the organization (cf. group-value theory, Lind & Tyler, 1988) and who hope that things may become fairer in the future. In addition, procedural unfairness may negatively affect employees' self-worth (cf. Smith, Tyler, Huo, Ortiz & Lind, 1998) as they may infer from their bad treatment by superiors that they are judged unvalued members of the organization. Low self-esteem has been related to several health complaints (e.g., Ganster &

Schaubroeck, 1991) and may impede coping with (other) work stressors. Thus, in line with ‘stress’- explanations, we predict that:

Distributive and Procedural Unfairness have an indirect, positive effect on absenteeism through their impact on health complaints, even when controlling for the impact of job demands, job control and previous absenteeism (Hypothesis 3).

The three hypotheses are summarized in Figure 1. Note that the present study investigates whether unfairness is predictive of future absenteeism over and above more traditional work-related stressors and past absenteeism. Job demands, job control as well as past absenteeism are thus presumed predictors too and included in the model as well. For reasons of clarity, these variables are not depicted in Figure 1.

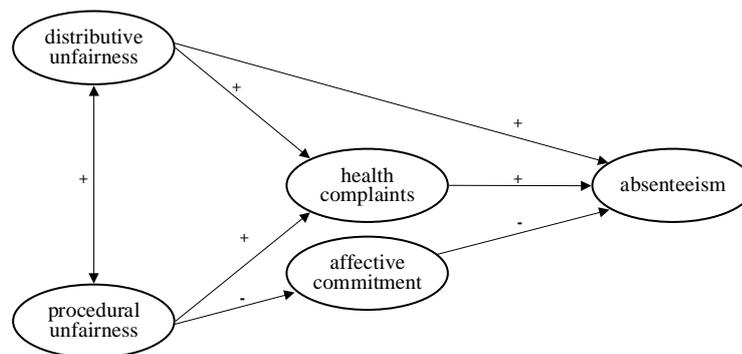


Figure 1. The Unfairness - Absenteeism Model.

Method

Respondents and Procedure

Questionnaires were sent to all male employees ($N = 946$) of one district of a security firm in Belgium. A total of 605 security guards filled out and returned the questionnaire (response = 64%). It was decided to delete the data of the participants who had sent back incomplete questionnaires, reducing the sample size to 514 employees. The mean age of the security guards was 42 years ($sd = 10$) and mean organization tenure was seven years ($sd = 4.5$). Their daily work activities primarily concern the guarding of company offices, public buildings, and institutions. The research was based on voluntary participation. Respondents were asked to fill out a questionnaire concerning their 'perception of work'. In advance, we had put a code on each questionnaire that allowed us to connect employees' responses to their registered absence frequency rates. The anonymity and confidentiality of the data was emphasized. This procedure, which was beforehand adopted by management and the employees council, was described in staff magazines and in a letter accompanying the questionnaire.

Measures

Absenteeism data were retrieved from the company's computerized registration system. We used absence frequency measures – the number of absence spells – which have been frequently used in other studies on absenteeism (e.g., Harvey & Nicholson, 1999), and which have less psychometric shortcomings than absence duration (time lost) measures (i.e. Hammer & Landau, 1981). We agree with several authors that both absence frequency and absence duration may include 'voluntary' absences -- that are presumed to refer to employees' desire to avoid work -- as well as 'involuntary' absences (cf. Martocchio & Harrison, 1993). Two absence measures were calculated: employees' frequency of absence spells in the year preceding the questionnaire (previous absenteeism, Time 1; $M = .61$; $sd =$

.88) and employees' absence frequency in the year following the questionnaire (future absenteeism, Time 2; $M = .70$; $sd = .89$). Thus, on average, security guards were absent less than once a year. This low absence rate may be explained by the relatively strict absence policy in Belgium, in which legitimate absences (cf. Johns, 1997; Harvey & Nicholson, 1999) require physician statements.

Health Complaints were assessed using the short-version of the VOEG (Dirken, 1967; Martens, Nijhuis, Van Boxtel & Knottnerus, 1999), a well-validated 23-item Dutch questionnaire that measures psychosomatic health complaints. Participants were asked to indicate with 'yes' or 'no' the experience of health problems in the previous twelve months. Example-items are: "Do you often feel pain in your stomach?" and "Do you often feel nervous?". Afterwards, all answers were coded such that higher scores referred to more health complaints. The internal consistency of the scale was good, Cronbach's alpha = .87.

Affective Commitment was assessed with a 5-item sub-scale of a questionnaire that originally includes three components of organizational commitment (Meyer & Allen, 1990). We used a validated Dutch translation of this questionnaire (De Gilder, Van den Heuvel & Ellemers, 1997; Ellemers, De Gilder & Van den Heuvel, 1998). An example-item is: "I feel emotionally attached to this organization" (1 = not at all, 5 = to a large extent). Cronbach's alpha of the affective commitment scale was .90.

Distributive Unfairness was assessed with two self-constructed scales referring to inequity (e.g., Adams, 1965). Both scales include five items and focus on material and social outcomes, respectively. Pilot interviews among representatives of the sample revealed that particularly salary as a material outcome and appreciation by superiors as a social outcome were relevant for security guards. Guards were asked to compare their situation with colleagues (3 items) and with earlier times (2 items). In the items with colleagues as a comparison referent, 'workload', 'efforts at work', and 'willingness to do something for a

colleague' were used in succession as input-variables (cf. Adams, 1965). 'Workload' and 'difficulty of work' were used as input-variables in the items that included earlier times as a comparison referent. An example-item relating to salary is: "What do you think of your salary, when you compare your workload with your colleagues' workload?". A five-point scale was used, ranging from "in that case I find my salary much too low" to "in that case I find my salary much too high". An example-item relating to appreciation from superiors is: "What do you think of the appreciation you receive from superiors, when you compare the difficulty of your work with the difficulty of your work in earlier times?". Afterwards, items were coded such that higher scores referred to more distributive unfairness. The internal consistency was good for distributive unfairness regarding salary ($\alpha = .83$), as well as for distributive unfairness regarding appreciation from superiors ($\alpha = .82$).

Procedural Unfairness was assessed with two self-constructed scales (each five items) that refer to several procedural fairness rules or principles and are based on earlier work by several authors (e.g., Leventhal, 1980; Thibaut & Walker, 1975; Tyler & Bies, 1990; Moorman, 1991). The first scale measures structural procedural fairness and refers to how the decision-making context is structured. The following items that refer to structural procedural criteria (between brackets) were included: (1) Superiors at [...] act purely out of personal self-interest (bias suppression), (2) At this company, each employee is treated in the same way (consistency), (3) Superiors aim to be well-informed before they take any decisions (accuracy), (4) At this company, employees' complaints are taken seriously (correctability); At [...], due consideration is given to employees' viewpoints (consideration of views). Employees had to indicate to what extent these statements were characteristic for their organization on a five-point scale (ranging from "1" = not at all, to "5" = to a large extent).

The second scale measures social or interactional procedural fairness and refers to the quality of interpersonal treatment employees receive from their superiors. Employees were

asked to answer the following questions about the way they are treated by superiors: (1) Do superiors inform you in time about changes in work? (timely feedback); (2) Do superiors provide you with a good explanation if something turns out wrong for you? (account giving); (3): Do superiors treat you in a respectful way? (standing); (4) Do superiors show that you are valuable for the organization? (standing); (5) Do you feel that superiors communicate in an honest and straightforward manner? (openness). Employees had to indicate which answer best reflects their opinion on a five-point-scale ranging from 1 = 'not at all' to 5 'to a large extent'. Afterwards, items were coded such that higher scores referred to more procedural unfairness. The internal consistency was good for structural ($\alpha = .81$) as well as social ($\alpha = .86$) procedural unfairness.

Job Demands were assessed with two scales based on a reliable and validated Dutch questionnaire (Van Veldhoven & Meijman, 1994; De Jonge, Bosma, Peter & Siegrist, 2000). Both scales consist of five items, and each scale measures somewhat different quantitative aspects of workload. The first scale refers to content and amount of work tasks, for example: "Do you have to accomplish many work tasks?" The internal consistency was moderate ($\alpha = .64$). The second scale refers to time pressure. An example-item is: "Do you have problems with the work pace?" ($\alpha = .73$). Participants responded on a four-point scale ranging from (1) "never" to (4) "always".

Job Control was assessed with two scales, each including three items, that were also based on Van Veldhoven and Meijman's (1994) questionnaire. The first scale indicates employees' control regarding job content and solving of job-related problems, for instance: "Are you allowed to decide by yourself how to perform your job?" Cronbach's alpha was .60. The second scale indicates employees' control regarding the timing of work tasks. An example-item is: "Are you allowed to decide by yourself the order of your daily work activities?" ($\alpha = .72$). Participants used the same answer categories as for job demands.

Analyses

All three hypotheses were tested simultaneously with structural equation modeling (SEM) analyses, using the AMOS computer program (Arbuckle, 1997). The hypothetical model contains twelve manifest variables. The correlation coefficients between the variables are displayed in Table 1. As can be seen, intercorrelations between the two distributive fairness measures on the one hand and the two procedural fairness measures on the other are of moderate magnitude. As expected, intercorrelations between both measures of distributive fairness and intercorrelations between both measures of procedural fairness are considerably higher. We intended to construct latent variables of distributive and procedural unfairness, which was indeed possible because of these high correlations. According to the same line of reasoning, we decided to construct latent variables of job demands and job control. Health complaints and affective commitment are included as manifest variables in our model. According to Jöreskog and Sörbom (1993), it is acceptable to include manifest instead of latent variables if these are indicated by reliable and validated instruments. The analyses included a comparison of two competing models, which can be described as follows:

1. The Direct Effects Model, that only includes direct paths from job characteristics (job demands and job control) and unfairness (distributive and procedural) to T2 - absence frequency, and from health complaints, affective commitment and T1 absence frequency to T2 - absence frequency.
2. The Indirect Effects Model, in which job characteristics (job demands and job control) and unfairness (distributive and procedural) influence absence frequency only indirectly, through health complaints and affective commitment.

In the present series of SEM-analyses, the adjusted goodness-of-fit index (AGFI, GFI, Jöreskog & Sörbom, 1993), the incremental fit index (IFI; Bollen, 1989), the non-normed fit index (NNFI; Bentler & Bonett, 1980), the comparative fit index (CFI; Bentler,

1990), and the root mean square error of approximation (RMSEA, Jöreskog & Sörbom, 1993) are utilized. In general, models with fit indices larger than or equal to .90 and an RMSEA smaller than .08 indicate a good fit. Chi-square goodness-of-fit statistics are used to compare different competing models.

Results

Descriptive Statistics

Table 1 shows the mean values, standard deviations, and intercorrelations of the variables included in this study². Among others, this Table shows that distributive unfairness as well as procedural unfairness significantly relates to psychosomatic health complaints and affective commitment. Furthermore, it can be noticed that psychosomatic health complaints and retrospective absenteeism correlate significantly and positively with prospective absenteeism.

Table 1. Means, Standard Deviations, and Intercorrelations of all Variables included in the Study, N = 514

Variable	SD	1	2	3	4	5	6	7	8	9	10	11	12	
1. Work Load <u>Content & Amount</u>	1.97	.40	-											
2. Work Load <u>Time Pressure</u>	1.86	.48	.76**	-										
3. Low Job Control <u>Content & Problem Solving</u>	2.52	.67	.12**	.13**	-									
4. Low Job Control <u>Timing Work Tasks</u>	2.78	.74	.17**	.24**	.64**	-								
5. Distributive Unfairness <u>Salary</u>	3.56	.50	.35**	.33**	.06	.17**	-							
6. Distributive Unfairness <u>Appreciation superiors</u>	3.40	.46	.33**	.30**	.16**	.24**	.61**	-						
7. Procedural Unfairness <u>Structural</u>	3.49	.88	.12**	.15**	.20**	.20**	.33**	.44**	-					
8. Procedural Unfairness <u>Social (interactional)</u>	3.49	.89	.15**	.20**	.21**	.23**	.32**	.44**	.75**	-				
9. Health Complaints	4.89	4.67	.26**	.30**	.16**	.16**	.31**	.29**	.26**	.28**	-			
10. Affective Commitment	2.78	.97	-.04	-.06	-.19**	-.15**	-.15**	-.09	-.33**	-.38**	.18**	-		
11. Absence Frequency Retrospective	.61	.88	.13**	.14**	-.03	.04	.17**	.10*	.11*	.15**	.33**	.00	-	
12. Absence Frequency Prospective	.70	.89	.08 (.08)	.06 (.06)	-.03 (.02)	-.02 (.00)	.08 (.14*)	.05 (.09)	.06 (.08)	.05 (.09)	.24** (.26**)	-.08 (-.10*)	.29** (.30**)	-

Note. ** p < .01, * p < .05, correlations between the brackets refer to the reduced subsample

Model Testing

Table 2 summarizes the results of SEM - analyses of the two competing models. As can be seen, two fit indices – the AGFI and the NNFI - of the first model (Direct Effects

Model) are below .90, indicating a sub-optimal fit. Moreover, the RMSEA-value is higher than .08. Browne and Cudeck (1993) suggest that a value of .05 of the RMSEA indicates a close fit and that values above .08 represent reasonable errors of approximation in the population. Remember that the first model (M₁) includes only direct paths from job design measures (job demands and job control) and unfairness (distributive and procedural) to absence frequency and from psychosomatic health complaints and commitment to absence frequency. Thus, results suggest that indirect paths (from job design and unfairness to health complaints and commitment) have to be included in the model in order to find an acceptable fit between the model and the data. Indeed, the chi-square difference test shows that the fit of the second model (that included only indirect paths) is significantly better than the fit of the first model, Delta $\chi^2(4) = 155.53$, $p < .001$. Moreover, all values of the fit indices of the indirect effects model indicate a close fit between model and the data.

Table 2. Goodness-of-fit Indices of Competing Structural Models, N = 514

Model	χ^2	df	AGFI	RMSEA	IFI	NNFI	CFI
M ₀ : Null Model	2051.55	66	.47	.24	--	--	--
M ₁ : Direct Effects Model	246.88	43	.88	.10	.90	.84	.90
M ₂ : Indirect Effects Model	91.35	39	.95	.05	.97	.96	.97
M ₃ : Revised Model	105.45	44	.94	.05	.97	.96	.97

Note. χ^2 = chi-square; df = degrees of freedom; AGFI = adjusted goodness-of-fit index; IFI = incremental fit index; NNFI = normed fit index; CFI = comparative fit index.

More detailed examination of the AMOS-output of the Indirect Effects model (M₂) revealed that, regarding the effects of the mediator variables on absence frequency, the relationship was significant for psychosomatic health complaints, but not for commitment. Furthermore, results show that - as hypothesized - only procedural unfairness shows a substantial relationship with commitment. Surprisingly, there is a positive relationship (not very strong, but significant) between distributive unfairness and commitment. In addition, job demands, distributive unfairness, and procedural unfairness show positive relationships with

psychosomatic health complaints as expected. There is no significant path between job control and health complaints. The significant relationships are in the expected direction.

On the basis of the results of the two competing models a Revised Model (M₃) was built that is similar to the Indirect Effects Model (M₂) but excludes the non-significant paths. Since the positive correlation between distributive unfairness and commitment is most probable a method artifact (Maassen & Bakker, 2000), considering the negative intercorrelation between these variables (see Table 1), this path was deleted as well. This Revised Model is not significantly worse than Model 2 (Delta χ^2 (4) = 7.36, n.s.) and is preferred because it is more parsimonious and gives a clearer picture of the paths that do contribute to explaining variance in mediator and criterion variables. Amos provides information of the amount of variance (R²) that is explained in the endogenous variables by the modeled paths (i.e. structural equation relationships). Figure 2 shows that the revised final model explains 15% of the variance in psychosomatic health complaints, 19% in commitment, and 10% in prospective absence frequency.

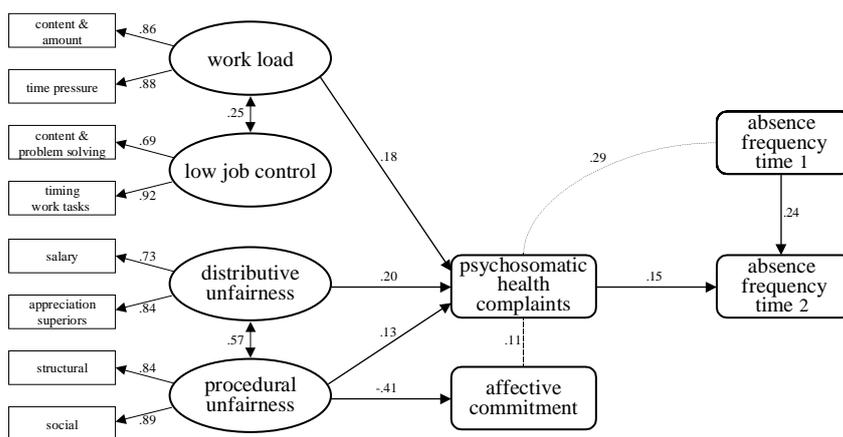


Figure 2. Standardized Solution of the Unfairness - Absenteeism Model, N = 514. **Note.** For reasons of clarity, the following correlations between error terms have not been included in the figure: distributive unfairness - low job control (.28), procedural unfairness - low job control (.29), procedural unfairness - workload (.21), and distributive unfairness - workload (.45).

As can be seen from Figure 2, Hypothesis 1 is not confirmed. There is no direct relationship between distributive unfairness and prospective absence frequency. Hypothesis 2, predicting that procedural unfairness influences prospective absenteeism through its impact on affective commitment, is also not supported. Although procedural unfairness is, as expected, negatively related to affective commitment, there is no significant relationship between affective commitment and prospective absence frequency. In fact, results from the present study only confirm Hypothesis 3, that stated that (1) distributive as well as procedural unfairness correlate positively with psychosomatic health complaints, and (2) two types of unfairness influence prospective absence frequency through their influence on psychosomatic health complaints. In addition, the model shows that prominent job stressors (i.e. workload and low job control) and retrospective absenteeism do not make the effects of unfairness disappear. Moreover, job stressors do not have a stronger impact on psychosomatic health complaints and on affective commitment compared to both fairness indices. Thus, over and above traditional stressors, unfairness directly influences psychosomatic health complaints and affective commitment, and indirectly influences prospective absence frequency.

Additional Analyses: Mediation?

Strictly speaking, we found support for an indirect effect between unfairness and absenteeism, through psychosomatic health complaints, instead of a mediating effect of psychosomatic health complaints (Baron & Kenny, 1986). That is, the independent variables in our study (the fairness measures) are only marginally and not significantly related to the dependent variable: prospective absenteeism. Results suggest that psychosomatic health complaints are the most important predictor of prospective absenteeism in our study, and that unfairness at work may foster the development of these health complaints.

An explanation for the fact that we found no significant correlations between work characteristics and prospective absenteeism may lie in the distribution of absence data. Similar to absence profiles of other companies (e.g., Fisser, Middel & Vinke, 1991) there seem to be two groups in the present study. About 90% of our sample consists of employees that were between 0 and 5 times absent for a short, moderate or long period (mean absence duration = 5 days) and about 10% of our sample consists of employees that were only 1 time absent for a very long period: more than 6 weeks (mean absence duration = 104 days).

Inclusion of respondents that have one very long absence period may lower correlations between work attitudes - such as perceived unfairness - and employees' frequency of absence spells. That is, regardless of the specific reasons of this long absence spell - motivational or non-motivational, due to work (e.g., burnout) or not (e.g., broken leg) - it is simply impossible for employees to report more frequently sick because of work problems if they are already absent. Moreover, one may wonder whether this group is able to make judgments about the current course of events at work, as they have been at home for such a long period.

Following this reasoning, further analyses were carried out to examine (1) whether the correlations may be higher in a reduced sample ($n= 466$) that excludes respondents with one very long period of absence, and (2) whether support is found for a mediating effect of psychosomatic health complaints in this sub-sample. As can be seen in Table 1 (i.e. correlations between brackets), in this sub-sample correlations between work attitudes - unfairness and commitment - and prospective absence frequency do slightly increase. These results suggests that perceived unfairness is somewhat less predictive of absence frequency for the sample as a whole that included employees with 1 very long absence spell. Further analyses revealed that relationships in the reduced sample are all mediated by psychosomatic health complaints, thus again confirming Hypothesis 3.

Discussion

The central aim of this study was to investigate the extent to which perceptions of unfairness at work contribute to explaining the absence behaviors of employees over and above effects of other unfavorable work conditions and previous absenteeism. In order to shed some light on an employees' motives to be absent as a consequence of perceived unfairness, two mediating processes as well as a direct relationship were tested in our model. Consistent with absence explanations derived from earlier studies (e.g., Johns, 1997), we assumed that perceived unfairness at work may be (1) a reason to temporarily withdraw from the organization, as employees do not want to be at work, and (2) a stressor that evokes stress symptoms, as a result of which employees are less able to attend to work. In line with the 'withdrawal'- explanation, a direct relationship was predicted between distributive unfairness and absenteeism, and an indirect relationship was predicted between procedural unfairness and absenteeism, through affective commitment. In line with the 'stress'-explanation, we predicted that the relationship between both unfairness measures would be mediated by health complaints. SEM-analyses did only support an indirect relationship between unfairness and absenteeism, through psychosomatic health complaints. These findings thus support a 'stress'-explanation and suggest that (1) employees feel stressed or ill from perceived unfairness, and (2) this motivates them to report sick as the work situation disables them.

In addition to the theoretical contribution mentioned above, the present study provides evidence for the contention that different components of the fairness concept are important for predicting absence behavior. Our findings expand previous research on the health of employees (e.g., Bakker et al., 2000) and their absenteeism (e.g., Gellatly, 1995; Geurts et al., 1994) that did not include different aspects of the fairness concept simultaneously, and was usually limited to perceived inequity. Specifically, we found that material and social distributive unfairness as well as structural and social (interactional) procedural unfairness

explain health complaints of the security guards and indirectly affect their absenteeism. Thus, not only employees' perception that received salary and appreciation are comparatively too low, but also their perception that superiors make decisions in an unfair way foster the development of psychosomatic health complaints. We believe that employees get tensed and eventually weaken their immune system (Hendrix & Spencer, 1989) if they do not receive fair outcomes in return for their investments. The perception that an unfair treatment is imbedded in the policy of the organization, may lead to feelings of hopelessness, anger at superiors, and protests against the system and/or it may negatively affect employees' self-worth. Persisting tension, distress, investments to improve organizational fairness and worries about one's value at work may be exhausting and lead to psychosomatic health complaints. Future research is needed to further investigate specific processes underlying a relationship between different types of fairness and impaired health.

Our findings also demonstrate that perceived unfairness at work contributes to the explanation of future absence behavior over and above the impact of previous absenteeism and traditional work-related stressors. More specifically, unfairness measures explained a unique proportion of the variance in health complaints (i.e. the only significant predictor of absenteeism) even when (high) job demands and (low) job control were included in the model as well. Thus, stressful work conditions that make employees report sick include not only unfavorable job designs or characteristics of work tasks but also an unfair treatment of employees by the organization. In line with earlier studies showing that absenteeism is higher when employees feel that the organization is not supporting them (Eisenberger et al., 1986, 1990), our findings suggest that it is important to consider employees' evaluations of their relationship with the organization. Apparently, employees have certain expectations of 'social behaviors' of the organization towards its employees - including a fair treatment - and feel and report more frequently sick if they experience that the organization falls short of these

expectations. This viewpoint agrees with theories on psychological contracts that emphasize the importance of the employee's beliefs regarding terms and conditions of the exchange relationship with the employer, and that generally state that violation of the psychological contract negatively influences the employee's attitudes, feelings, and behaviors (e.g., Rousseau & Parks, 1993).

Interestingly, results revealed that high job demands and low job control do moderately correlate with both distributive and procedural unfairness. These relationships were not predicted, but may not be so surprising however. It is, for instance, likely that employees' perceptions that job demands are too high or job control is too low coincide with their feeling that the organization does not treat its employees in a fair way. That is, demanding work conditions may evoke negative thoughts about the organization concerning fairness issues, such as "the organization is only driven by self-interest" or "considering my workload in comparison to my colleagues' workload, the appreciation I receive is much too low". However, despite the probability that traditional work stressors may influence fairness judgments (or the other way around), the present study demonstrates that both made unique contributions to explaining health complaints and indirectly absenteeism.

Out of line with the 'withdrawal'-explanation and inconsistent with earlier studies (e.g., Gellatly, 1995; Geurts et al., 1994), neither a direct relationship between distributive unfairness and absence frequency, nor a mediating relationship between procedural unfairness and absence frequency (through affective commitment) was found. Although employees, who perceive procedural unfairness, report -- as predicted -- to be less committed to the organization, which may be viewed as psychological withdrawal, this apparently did not motivate them to physically withdraw from work by being absent. Thus, it seems that results of our study do not agree with the idea that employees also report sick if they do not suffer from health complaints but just want to withdraw from work and the organization. It

can be speculated that psychological withdrawal rather than predicting the security guards' absenteeism mediates a possible relationship between perceived unfairness and voluntary turnover, a relationship that has been suggested in previous research (Dailey & Kirk, 1992; Dittrich & Carrell, 1979, Finn & Lee, 1972).

Why didn't we find support for our so-called 'withdrawal'-explanation? A possible explanation is that this particular occupational group, security guards, is a special group in that they not only find themselves in an exchange relationship with the organization (i.e. the security firm) but also with the client (i.e. the company that needs security). As their absences also inconvenience the client, security guards may only report sick when they are really feeling ill. They may demonstrate other behavior than absenteeism – behavior that only affects the organization - to express their displeasure with unfair treatment by the organization. For instance, they may withhold participation in organizational events, protest against management, or take away organizational properties (e.g., Greenberg, 1993).

A second explanation for the fact that we only found support for the stress-explanation may have to do with the absence policy in Belgium. Absence researchers have emphasized the importance of social factors, as many studies have shown that employees' individual decisions to report sick are to a considerable extent influenced by the social context, such as absence norms and policies (e.g., Chadwick-Jones, Nicholson & Brown, 1982; Gellatly, 1995; Johns & Xie, 1997). As employees in Belgium are only excused to be absent if absences are legitimated by a medical confirmation from their physician, it may have been difficult for the security guards in the present study to report sick without having any health complaints. An underestimation of effects may be a consequence of this relatively strict absence policy. Indeed, it can be noted that in the present study absence figures are relatively low and that correlations between all psychological factors - perceived unfairness as well as traditional work-related stressors - and absenteeism are relatively low as well.

Thus, the possibility exists that employees do want to be absent because of perceived unfairness and without having any health complaints, but that the absence policy holds them back from actually doing this.

An interesting and often cited study by Smith (1977) gives empirical evidence for the idea that situational constraints may lead to higher correlations between work-attitudes and behavior when that behavior is more under the control of the employee. Smith examined the relationship between work attitudes and work attendance (the opposite of absenteeism) of managerial employees in Chicago and New York on a specific day in a natural field setting. It was predicted that in Chicago -- suffering from a snowstorm -- work attitudes would be more strongly related to attendance behavior than in snow-free New York. Since occasional absenteeism -- such as a heavy snowfall -- was not subject to financial penalty and is relatively free of social and work-group pressure, it can be viewed as being under the general control of the individual. Indeed, results showed that correlations between attitude measures and attendance in Chicago were highly significant (r ranged from .36 to .60; $p < .05$), whereas in New York none of these correlations reached significance. Referring to these results, it would be interesting to test our model in organizations with more tolerant absence policies to investigate whether we find more support for the 'withdrawal'-explanation.

The present study has some limitations. First, the analyses in the current study are correlational and thus do not confirm causality. Thus, our use of expressions such as 'impact' and 'effect' is strictly speaking not entirely correct. Since work perceptions measures and psychosomatic health complaints were measured simultaneously, results of the present study are tentative until confirmed by a longitudinal study. However, two strong points of the present study are that we used absence frequency figures collected during the year following the questionnaire, and that absence data were retrieved from the company's computerized

registration system. Thus, our procedure avoided some common method variance problems most cross-sectional studies suffer from.

A second limitation is that we only tested our model among a specific group of professionals, namely male security guards in Belgium. Earlier research has provided evidence for at least parts of the model (i.e., the relationship between distributive unfairness and health complaints, and between distributive unfairness and absence frequency) in studies among other occupational groups (e.g., Geurts et al., 1994), but a test of the entire model in other samples still stands out. The results thus need to be replicated in other occupational groups and cultures, and in a population that also includes females, to establish external validity of the conclusions. That is, different groups (i.e. differences in culture, gender, job position, organization branch) may differ in absence norms (cf. Harvey & Nicholson, 1999; Johns & Xie, 1997) as well as in the value they attach to (violation of) specific fairness rules (cf. Steiner & Gilliland, 1996). These differences may influence the relationship between perceived unfairness and absenteeism.

Despite these limitations, the present findings may have implications for future research and practice. In a nutshell, this study shows that different components of the fairness concept are important for predicting security guards' absence behavior and well-being in general (affective commitment and psychosomatic health complaints). Building on this knowledge, interventions may be designed to improve relationships between employees and the organization by trying to prevent violation of fairness criteria. For example, to reduce perceived distributive unfairness, it is important that employees perceive a balance between their investment and outcomes (cf., Adams, 1965). Superiors may try to improve this balance by discussing employees' view of their investments (i.e., is working during weekends viewed as an additional investment or as part of the normal work task?), what they exactly expect in return, and whether the organization is willing and able to meet these expectations (cf.

psychological contract, Rousseau & Parks, 1993). Furthermore, as comparison processes (with colleagues and earlier times) play a role in employees' evaluation of the balance (e.g., Homans, 1961), superiors may regularly keep up with the investments and outcomes of individual employees in order to give them fair rewards, especially when rewards are scarce (i.e., during economic downturns) and when individuals' investments change (i.e., during times of mergers or changed job specifications).

In reducing perceived procedural unfairness, superiors may improve the way decisions are made in the organization as well as the interpersonal treatment employees receive when these decisions are made. From earlier studies we know that it is possible to make organizational procedures more fair (e.g., Cropanzano & Greenberg, 1997). Superiors could try, for instance, to be (more) consistent and accurate (e.g., Leventhal, 1980) in making decisions and may increase employees' insight in the way decisions are made. Furthermore, it is important that superiors be straight-forward and open in their communication to employees and be able to give them the feeling that they are respected members of the organization. The prevention of perceived unfairness at work will thus require a serious effort from superiors. However, it will eventually be profitable for organizations since this increases the chance of reducing absence which can be a very costly problem for employers (e.g., Harvey & Nicholson, 1999).

Footnote

¹ It has been argued that employees may report sick in a preventive way, before actually having stress symptoms (see for example Johns, 1997). This type of absenteeism is more positively referred to as 'proactive withdrawal behavior'. Using the expression 'withdrawal' in a stress context points to the fact that reporting sick may be - regardless of its specific reasons - denoted 'withdrawal' if viewed as employees' decision to keep distance from work

and the organization. In the present article, 'withdrawal' refers to how it is usually used in withdrawal-models for absenteeism - referring to employees' avoidance of aversive work circumstances - and not to employees' decision to stay home because of health reasons.

²Neither distributive unfairness and procedural unfairness nor job demands and job control produced an interaction on absenteeism.

Chapter 4

Stress and Withdrawal as a Consequence of Perceived Unfairness at Work:

Towards a Refined Model of Unfairness at Work

Many studies have shown that employees' perceptions of unfairness regarding organizational outcomes and processes can be rather detrimental to organizations. For example, perceptions of being unfairly treated at work have been related to absenteeism and personnel turnover (Dittrich & Carrell, 1979), poor job performance (Pfeffer & Langton, 1993), stealing (Greenberg, 1993) and workplace deviance in general (Bennett & Robinson, 2000). However, only a few studies have focused on employees' impaired well-being as a consequence of unfairness at work, which may eventually give rise to the aforementioned dysfunctional behaviors (see Weiss, Suckow & Cropanzano, 1999, for a similar argument).

Two main categories of fairness are distinguished in the literature: distributive fairness, the evaluation of outcomes received in the exchange relationship with the organization, and procedural fairness, the fairness of allocation processes or the way superiors arrive at decisions in general (e.g., Cropanzano & Greenberg, 1997). The central aim of the present longitudinal study among security guards is to examine perceptions of unfairness in relation to stress reactions and psychological withdrawal. Perceptions of unfairness may well play a role among security guards since they generally have little insight in the decision-making about the organization of their work (e.g., assignment to clients, scheduling of working hours). We will argue that perceived distributive unfairness is primarily predictive of stress reactions (exhaustion and psychosomatic health complaints), whereas procedural unfairness is predictive of both stress reactions and psychological withdrawal (cynicism, poor affective commitment, and thoughts about leaving the organization). Stress and psychological withdrawal, in turn, are expected to promote absenteeism and turnover. This model of unfairness at work is depicted in Figure I.

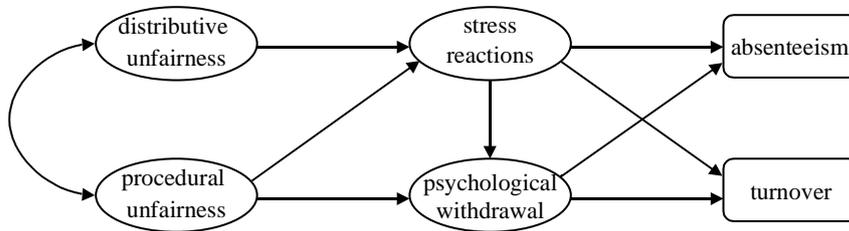


Figure 1. Hypothesized Model of Unfairness and Impaired Well-Being

Organizational Fairness

Employees' judgment of being unfairly treated refers to their perception that some ethical standards regarding moral behavior (i.e. fairness rules) have been violated (Folger & Cropanzano, 1998). For instance, an outcome is judged as unfair if it is lower than it should be, compared to some standard or referent (cf. Folger & Cropanzano, 1998; Homans, 1961). According to equity theory (Adams, 1965) that has guided most distributive fairness research, individuals expect that the amount they invest in and gain from a relationship should be proportional to what another person invests and gains. Whether a procedure or process is judged as (un)fair depends on the structuring of the decision-making context (e.g., procedures should be applied consistently to persons and over time; Leventhal, 1980) and on the interpersonal treatment from superiors (e.g., superiors should be honest; Tyler & Bies, 1990).

Fairness is one of the facets employees consider to judge the quality of their relationships with the organization or with representatives of the organization (e.g., superiors or the management; cf. Cropanzano & Greenberg, '97). Although dysfunctional relationships at work in general have been identified previously as stressors that may negatively affect

employees' health and well-being (Danna & Griffin, 1999), the specific role of perceived unfairness as a potentially stressful aspect within these relationships needs more attention.

Perceived Unfairness and Stress Reactions

Previous fairness research on stress reactions particularly focused on inequity, thus on perceived unfair outcomes. Some studies have shown that employees who indicated to invest more in exchange relationships than they received in return, had higher levels of burnout, in particular of emotional exhaustion (e.g., Bakker, Schaufeli, Demerouti, Janssen, Van der Hulst & Brouwer, 2000; Bakker, Schaufeli, Sixma, Bosveld & Van Dierendonck, 2000). In another study, pay inequity was associated with the prevalence of the flu and a cold (Hendrix & Spencer, 1989). Less attention has been paid to procedural unfairness as a possible predictor of stress reactions. Recently, Schmitt and Dörfel (1999) found that perceived procedural unfairness was related to the number of days factory employees felt sick at work and to their self-reported sickness absence. Unfortunately for the purpose of the current study, they did not include distributive unfairness in their study, which makes it difficult to compare the relative contribution of distributive and procedural unfairness - that are known to be considerably related (cf. Organ & Ryan, 1995) - to explaining stress reactions.

There are good conceptual grounds for justifying a relationship between both types of unfairness and stress reactions although the underlying processes may differ to a certain extent. Following propositions from cognitive dissonance theory (Festinger, 1957), Adams argued that the presence of inequity (i.e. receiving other - usually lower - outcomes than it should be considering one's investments) creates tension and distress, and that individuals are motivated to restore equity. To reduce inequity, employees may, for instance, choose another comparison person (i.e. cognitive coping), 'leave the field' (turnover), lower their own investments (e.g., reduced job performance, absenteeism) or enlarge their own rewards (e.g., steal company properties) in the exchange relationship with the organization. Inequity has

indeed been related empirically to voluntary personnel turnover, absence frequency, employee theft, etc. (Cropanzano & Greenberg, 1997). From a stress-perspective, these behaviors can be viewed as ‘problem-focused coping’ with unfairness (cf. Latack & Havlovic, 1992).

Despite these means to reduce inequity, employees may not always be in the position or otherwise capable to actually eliminate inequity. For instance, most security guards in the present study lack education to perform other jobs and may not be able to leave the organization. In addition, strict job prescriptions may hinder their lowering of investments. In other words, employees may not always find effective ways to reduce feelings of inequity. This implies that the tension continues, which may increase employees’ arousal level, and may eventually negatively affect their immune system (cf. Hendrix & Spencer, 1989).

When employees perceive procedural unfairness (i.e. unfair decision-making processes, such as using unreliable sources to arrive at decisions, favoritism, self-interest and dishonesty of superiors), they may more than when they perceive distributive unfairness realize that superiors are responsible for the unfairness (cf. Folger & Cropanzano, 1998). Employees may become angry and upset (Weiss et al., 1999), for instance because unfair processes reduce chances at obtaining fair outcomes in the long run (cf. Brockner & Siegel, 1996) or just because of moral orientations and social responsibilities (cf. Montada, 1998). As a consequence, they may have difficulties to relax at home. In addition, employees may attempt to stop the unfairness (i.e. discussions with colleagues, conflicts with superiors, sabotage regulations, go on strike, etc.), which may be exhausting. Furthermore, some studies have shown that under certain conditions procedural unfairness negatively affects employees’ self-esteem (e.g., Smith, Tyler, Huo, Ortiz & Lind, 1998) as employees may infer that they are no valuable members of the organization. Low self-esteem, in turn, may impede coping with (other) work stressors. In sum, we predict that:

Distributive and procedural unfairness foster feelings of exhaustion and the development of psychosomatic health complaints (Hypothesis 1).

Perceived Unfairness and Psychological Withdrawal

Besides stress reactions, the current study views psychological withdrawal as an indicator of employees' impaired well-being at work. Psychological withdrawal¹ is in the present study defined as employees' distant attitudes towards their work and the organization, characterized by cynicism, poor affective commitment and thoughts about leaving the organization (cf. Geurts, Schaufeli & De Jonge, 1998; Geurts, Schaufeli & Rutte, 1999; Shaffer & Harrison, 1998; Shepard, 1972). Thus, employees who psychologically withdraw have lost interest in their work, show little involvement in the organization, and think about working at another company. Perceived unfairness may directly influence psychological withdrawal as well as indirectly. Starting with the latter, we assume that stress reactions fostered by perceived unfairness may evoke psychological withdrawal. That is, according to Leiter's (1993) process model of burnout, feelings of exhaustion evoke cynical attitudes towards work as employees attempt to gain emotional distance from their job as a way of coping with stress (cf. escape/emotion-focused coping, Latack & Havlovic, 1992). This model has been supported in empirical studies (e.g., Bakker et al., 2000; Cordes, Dougerthy & Blum, 1997). We believe that besides emotional exhaustion, other stress reactions may evoke cynicism as well. Moreover, stress reactions may also trigger other forms of psychological withdrawal than cynicism, such as poor affective commitment and thoughts about leaving the organization. That is, when employees focus on their stress level, they may realize that this particular workplace is 'not the place to be'. In other words, we predict that:

Stress reactions fostered by distributive and procedural unfairness have a direct, positive effect on psychological withdrawal (Hypothesis 2).

In addition to a coping response to experienced stress reactions, we assume that psychological withdrawal will be a direct consequence of perceived unfairness. That is, employees do not need to suffer from health complaints before they distance themselves from work. Employees may immediately turn their back on the organization, if they – for example, because of previous experiences work - totally blame the organization for the unfairness and have no hope that things may become fairer in the future.

We assume that particularly as a result of procedural unfairness employees blame the organization and lose hopes at receiving a fair and respectful treatment in the future. According to Folger and Cropanzano (1998), people may in general be held more accountable - thus more to blame - for the means they choose (processes) than for the ends (outcomes) that result. In addition, in case of violation of distributive fairness – receiving other outcomes than one should - it is often unclear who is to blame (employees may even blame themselves). However, it is evident that superiors or other representatives of the organization are accountable for the use of unfair procedures or for an incorrect interpersonal treatment, since they make the decisions and treat employees in a certain way.

In addition, the way in which decisions are usually made at work – which is central in procedural fairness issues – says something about an organization's capacity to treat employees fairly (Folger & Konovsky, 1989; Sweeney & McFarlin, 1993). Whereas employees may view unfair rewards as incidental (“this time I receive less appreciation, because my boss is in a bad mood, but next time I'll get the appreciation that I deserve”) unfair procedures are more viewed as structural characteristics of an organization (“it's the companies' policy to appreciate full-timers more than part-timers”). In other words, employees may primarily lose hope at receiving a fair treatment in the future because of unfair procedures. Taken together, we believe that particularly as a result of procedural unfairness employees turn their back on the organization by developing distant attitudes.

Indeed, empirical studies have shown that procedural unfairness relates more than distributive unfairness to negative attitudes towards the organization such as poor organizational commitment and turnover intention (i.e. forms of psychological withdrawal), whereas distributive unfairness relates more to employees' personal consequences such as pay and job satisfaction (e.g., Cropanzano & Greenberg, 1997; Dailey & Kirk, 1992; Sweeney & McFarlin, 1993). To date, there are hardly (if any at all) studies in which procedural unfairness has empirically been related to cynicism, although Andersson (1996) has suggested the existence of such a relationship. In sum, we predict that:

Procedural unfairness has a direct effect on psychological withdrawal (Hypothesis 3).

Stress reactions and Psychological Withdrawal as Predictors of Absenteeism and Turnover

Employees' impaired well-being at work may not only be dysfunctional for themselves but may give rise to behaviors that are detrimental to employers as well. A secondary aim of the present study is to examine whether stress reactions and psychological withdrawal play a mediating role in the relationship between perceived unfairness on the one hand, and absenteeism and turnover on the other hand (see Dittrich & Carrell, 1979; Jones, 1998; Tepper, 2000). Absenteeism and turnover are often interpreted as a way to reduce inequity (by lowering ones inputs or by leaving the field; e.g., Adams, 1965; Geurts, Buunk & Schaufeli, 1994) and – thus – to prevent tension and distress. However, we believe that absenteeism and turnover can also be interpreted as a consequence of employees' impaired well-being because of perceived unfairness at work.

Moreover, in studies focusing on work conditions other than unfairness, absenteeism and personnel turnover are usually regarded as consequences of employees' impaired well-being at work. Research based on stress-theories (cf. Cooper & Robertson, 1999; Johns, 1997) assumes that employees report sick because they are not able to cope with certain work

conditions and develop stress symptoms, or that they are absent or leave the organization to prevent long-term illness. However, the majority of prior research regards absenteeism and turnover as behavioral withdrawal from aversive work conditions (cf. Johns, 1997; Hulin, 1991). Within this tradition, job dissatisfaction but also poor commitment and withdrawal cognitions – in the present study regarded as ‘psychological withdrawal’ – have been related to absence and/or turnover behavior. In other words, it is reasonable to assume that absenteeism and turnover are consequences of employees’ stress reactions and psychological withdrawal.

Recent studies support our assumption that stress reactions and/or psychological withdrawal mediate the relationship between unfairness and absence and turnover behaviors. Taris and others (Taris, Schaufeli, De Boer, Caljé & Schreurs, 2000) found in a longitudinal study among 998 Dutch teachers that the relationship between inequity and self-reported sickness absence largely disappeared after controlling for health complaints. Furthermore, although being absent resulted in a decrease of investments in a relationship, it also decreased the perceived benefits gained from this relationship. The authors conclude that being absent is ineffective for restoring equity and that it is farfetched to interpret absenteeism primarily as an attempt to restore the equity balance.

Findings of other studies suggest that the relationship between unfairness on the one hand and absenteeism and turnover on the other is mediated by psychological withdrawal. For instance, Gellatly (1995) found that the relationship between interactional fairness (i.e. social procedural fairness) and absence frequency was completely mediated by affective commitment. Studies that related unfairness to actual turnover usually hypothesize and find that this relationship is primarily mediated by turnover intention (cf. Aquino, Griffeth, Allen & Hom, 1997; Hendricks, Robbins, Miller & Summers, 1998). However, it can be reasoned that psychological withdrawal as a consequence of unfairness precedes the intention to leave

the organization and actual turnover (i.e. behavioral withdrawal). Indeed, in another recent study (Geurts et al., 1999) the relationship between inequity and turnover intention was mediated by commitment (psychological withdrawal). The authors speculated that thoughts about leaving the organization involves a long-term, affective process in which ones' attachment to the organization is evaluated. Thus, employees may develop distant attitudes as a result of perceived unfairness and may further weaken the bond with the organization by deciding to leave the organization. Taken together, we hypothesize that:

The relationship between Unfairness at work and Absenteeism and Turnover is mediated by Stress reactions and Psychological Withdrawal (Hypothesis 4).

Direction of Relationships

A limitation of previous field studies applying unfairness to employees' outcomes is that most analyses are cross-sectional and thus do not confirm causality. The present study attempts to enlarge our insight in the direction of the relationship between unfairness and employees' outcomes by using a two-wave panel design, which enables to examine some alternative causal hypotheses, such as reversed and reciprocal causation (cf. Zapf, Dormann & Frese, 1996). The central assumption in our model (Figure I) is that perceived unfairness leads to stress and psychological withdrawal. Although a reversed sequence may not seem very obvious, there are reasons to believe that a reversed process is plausible as well. That is, it has been suggested in cross-sectional research (e.g., Geurts et al., 1994) that subjective health complaints foster the perception of inequity (distributive unfairness). According to the authors, health complaints are considered to be such a high cost or investment by employees, that benefits provided by the company are no longer considered equitable. More generally, it is possible that stressed and detached employees assess their environment more negatively and thus perceive their work situation increasingly as unfair (cf. Beck, 1972).

Method

Respondents and Procedure

In 1997, questionnaires were sent to all male employees ($N = 946$) in one district of a Belgian security firm. A second, mailed questionnaire was sent in 1998. Respondents were both at Time 1 and Time 2 asked to fill out a similar questionnaire concerning 'the perception of work'. In advance, we had put a code on each questionnaire that enabled us to connect employees' T1 responses to T2 responses. In addition, the personnel department provided us with a file including the same codes with absence and turnover figures between the two waves. The personnel department did not have access to individual employees' questionnaire responses, and we did not have access to employees' names and addresses. In other words, the complete file included no personal information of the respondent, and respondents could not be identified. This procedure was agreed upon by the management and the workers council and was described in a letter accompanying the questionnaire and in three staff magazines in the year before the survey. The research was based on voluntary participation. Employees who had beforehand problems with the connection of absence and turnover figures to questionnaires could decide to remove the code from their questionnaire. The anonymity and confidentiality of the data was emphasized.

A total of 605 security guards filled out and returned the questionnaire (response = 64%). Seventeen respondents removed the code from their questionnaires or sent back almost empty questionnaires, reducing the sample size to 588. A total of 334 security guards filled out and returned the second questionnaire (response = 57%). The sample that participated in both waves of data collection ($N = 334$) did not differ significantly (F 's < 1, *n.s.*) from the sample that only participated at T1 ($N = 254$) regarding all variables included in the study as well as background variables (gender, age, and organizational tenure). The mean age of the respondents was 42 years ($sd = 10.14$). Organizational tenure ranged from less than one year

to 24 years ($M \cong 7$ years; $sd = 4.40$). The daily work activities of these employees primarily concern the guarding of company offices, public buildings and institutions.

Measures

Distributive Unfairness was assessed with two scales that were constructed on the basis of equity theory (Adams, 1965; De Boer, Bakker, Syroit & Schaufeli, 2002). Both scales include five items and focus on material and social outcomes, respectively. Pilot interviews among representatives of the sample revealed that particularly salary as a material outcome and appreciation from superiors as an social outcome were relevant for security guards. Guards were asked to compare their situation with colleagues (3 items) and with their own situation in earlier times (2 items). In the items with colleagues as a comparison referent, ‘workload’, ‘efforts at work’, and ‘willingness to do something for a colleague’ were used in succession as input-variables (cf. Adams, 1965). ‘Workload’ and ‘difficulty of work’ were used as input-variables in the items that included earlier times as a comparison standard. An example-item relating to salary is: “What do you think of your salary.... when you compare your workload with your colleagues’ workload?”. A five-point scale was used, ranging from “in that case I find my salary much too low” to “in that case I find my salary much too high”. An example-item relating to appreciation from superiors is: “What do you think of the appreciation you receive from superiors.....when you compare the difficulty of your work with the difficulty of your work in earlier times?”. Afterwards, items were coded such that higher scores referred to more distributive unfairness.

Procedural Unfairness was assessed with two other scales with five items each (De Boer et al., 2002). More specifically, five items refer to the following structural fairness principles (cf. Leventhal, 1980; Thibaut & Walker, 1975): consistency (procedures should be applied consistently across persons and over time), bias-suppression (personal self-interest should be minimized), accuracy (decisions should be based on high-quality information),

correctability (opportunities should exist to reverse decisions) and process control/representativeness (various interests should be taken into account). In addition, five items refer to social fairness principles ('interactional fairness') such as standing (i.e. being treated with dignity and respect), openness, account-giving (clear and adequate explanations for decisions should be provided) and timely feedback about work changes (e.g., Tyler & Bies, 1990). An example of a structural item, referring to the accuracy rule, is: "Superiors try to be well-informed before they take any decisions." Employees had to indicate to what extent they thought that these statements were characteristic for their company (1= not at all, 5= to a large extent). The second scale measures social procedural fairness principles (i.e. timely feedback, account giving, standing, openness) – or 'interactional' fairness - and refers to the quality of interpersonal treatment employees receive from their superiors (cf. Moorman, 1991; Tyler & Bies, 1990). An exemplary item, measuring openness, is: "Do you feel that superiors communicate in a honest and straight-forward manner?" (1 = not at all, 5 = to a large extent). Items were coded such that higher scores referred to more procedural unfairness.

Stress Reactions

Psychosomatic Health Complaints were assessed using the VOEG, a validated 23-item Dutch questionnaire used to indicate subjective health complaints (Dirken, 1967; Martens, Nijhuis, Van Boxtel & Knottnerus, 1999). Participants were asked to indicate with 'yes' or 'no' the experience of health problems in the previous twelve months. Example-items are: "Do you often feel nervous?", "Is your nose regularly all stuffed up?", "Do you often have pain in the back?", "Do you often have pain in your chest or heart region?", and "Do you often feel pain in your stomach?". Although all 23 VOEG-items refer to subjective health complaints, some researchers have found different factors using varimax-rotation (cf.

Joosten & Drop, 1987) which can be interpreted as different types of health complaints (e.g., cardio-vascular problems, weariness, stomach complaints).

Exhaustion was measured with a subscale of the Maslach Burnout Inventory – General Survey (MBI-GS; Schaufeli, Leiter, Maslach & Jackson, 1996) and includes five items. Exemplary items are: "I feel emotionally drained from my work" and "I feel tired when I get up in the morning and have to face another day on the job (0 = never, 6 = always/daily).

Psychological Withdrawal

Cynicism was just as exhaustion measured with a five-item subscale of the MBI-GS (Schaufeli et al., 1996). Exhaustion and cynicism are both considered to be core symptoms of burnout (e.g., Maslach, Schaufeli & Leiter, 2001). Exemplary items are: "I have become less interested in my work since I started this job" and "I've noticed that I keep too much distance from my work" (0 = never, 6 = always/daily).

Affective Commitment was assessed with a 5-item subscale of a questionnaire that measures organizational commitment (Meyer & Allen, 1990). Affective commitment is characterized by positive feelings of identification with, attachment to, and involvement in, the work organization. We used a validated Dutch translation of this questionnaire (De Gilder, Van den Heuvel & Ellemers, 1997; Ellemers, De Gilder & Van den Heuvel, 1998). Example-items are: "I feel emotionally attached to (name of the organization)" and "I feel at home at (name of the organization)" (1= not at all, 5= to a large extent). Afterwards, all answers were coded such that higher scores referred to poor affective commitment.

Thoughts about leaving was assessed with a self-constructed 3-item scale. The items are: "Every now and then I think about leaving.... (name of the organization)", "I'm thinking for some while about working at another company", "I have plans to seek work outside (name of the company) next year" (1= I totally disagree, 7 = I totally agree).

Absenteeism data were retrieved from the company's computerized registration system. Based on earlier studies (e.g., Harvey & Nicholson, 1999), we decided to use an absence frequency index. This measure has less psychometric shortcomings than absence duration (time lost) indices (e.g., Hammer & Landau, 1981). In the present study, absence frequency refers to employees' amount of absence spells in the year between the two surveys (1997-1998). The mean absence frequency was .68 (sd = .90). This low absence rate may be explained by the relatively strict absence policy in Belgium, in which legitimated absences (cf. Harvey & Nicholson, 1999; Johns, 1997) require physician statements.

Turnover data were also retrieved from the company's computerized registration system. Only five employees voluntarily left the organization during the year between the two waves.

Strategy of Analysis

The dimensional structure of the 20 unfairness items has been examined in a previous study (De Boer et al., 2001). Multi-group confirmatory factor analysis in three organizations (total N = 1011) showed that the fit between model and data particularly improved when a distinction was made between distributive and procedural principles. Distinctions within distributive principles (material versus immaterial) and within procedural principles (structural versus social or 'interactional') improved the fit, but to a lesser extent. Indeed, consistent with other empirical studies (e.g., Konovsky & Cropanzano, 1991), in particular the two procedural dimensions were found to be highly related. The two distributive dimensions were less related but also still substantially high. Therefore, in this study we decided to model a latent distributive unfairness variable that is indicated by material and social distributive unfairness and a latent procedural unfairness variable that is indicated by structural and social procedural unfairness. In the present study, explorative and confirmatory factor analyses were used to assess the dimensionality of the presumed latent constructs stress

reactions and psychological withdrawal.

The Unfairness model (see Figure 1) was tested with structural equation modeling (SEM) analyses in three parts, using the AMOS computer program (Arbuckle, 1997). First, we tested the entire model by analyzing the survey data of 1997 (T1; $n = 514$) and the absence frequency and turnover figures referring to the period in-between the two waves (1997-1998). Next, the model was tested cross-sectionally using the survey data of 1998 (T2; $n = 334$), thus without future absenteeism and turnover. In other words, Hypotheses 1 to 3 were tested at two time-points and Hypothesis 4 was tested at one time-point. Finally, a cross-lagged panel design was created to get some insight in lagged effects and causal inferences (cf. De Jonge & Dormann, 2000; Zapf, Dormann & Frese, 1996). A cross-lagged panel takes stability of all variables into account (i.e. T1 scores on each of the T2 variables are controlled for) as well as T1 covariances. Moreover, this design enables to test the Unfairness \rightarrow Stress Reactions/ Psychological Withdrawal sequence as well as the reversed sequence, the Stress Reactions/ Psychological Withdrawal \rightarrow Unfairness sequence.

To evaluate the structural model, we followed Bollen's (1990) recommendation to interpret multiple indices of model fit. In the present series of SEM-analyses, the goodness-of-fit index (GFI, Jöreskog & Sörbom, 1993), the incremental fit index (IFI; Bollen, 1989), the non-normed fit index (NNFI; Bentler & Bonett, 1980), the comparative fit index (CFI; Bentler, 1990) and the root mean square error of approximation (RMSEA; Steiger, 1990) are utilized. In general, models with fit indices larger than or equal to .90 and an RMSEA smaller than or equal to .08 are considered to indicate a reasonable fit (Browne & Cudeck, 1993). However, these decision rules do not always lead to appropriate decisions and should be considered only as rules of thumb (Marsh & Hau, 1996). According to a recent article of Hu and Bentler (1999) a cutoff value close to .95 for NNFI, IFI and CFI and a cutoff value close

to .06 for RMSEA are needed before it can be concluded that there is a relatively good fit between the hypothesized model and the observed data.

Absenteeism and turnover measures are usually highly skewed, which violates the multivariate normality assumption of maximum likelihood (ML) estimation typically used with structural equation modeling.² Moreover, ML estimation assumes that variables are continuous instead of dichotome. Turnover is a dichotome variable (0 = did not leave the organization between 1997 and 1998; 1 = left the organization between 1997 and 1998). Asymptotically Distribution Free (ADF) estimation is an appropriate alternative to overcome these problems (Hox, 1999). However, very large samples (sometimes over 5000 respondents) are needed (cf. Hoogland & Boomsma, 1997), which makes this analysis not applicable to the present study. Therefore, to check the appropriateness of our findings, results derived from ML estimation are compared with results derived from logistic regression to analyse turnover data (cf. Jones, 1998) and Poisson regression to analyze absence frequency data (cf. Smulders & Nijhuis, 1999). Logistic regression is similar to linear regression but is suited to models where the dependent variable is dichotomous. Poisson regression assumes that the data have a Poisson distribution which implies that low values (0, 1, 2) are frequently observed and high values are rarely observed, which is usually the case with absence data.

Results

Factor Analyses

Stress Reactions. The items used to assess exhaustion and psychosomatic health complaints (PHC) were factor analyzed simultaneously. Using varimax rotation, we found support for six factors. As expected, the exhaustion items were clearly distinguished from the PHC-items. In addition, we found that five VOEG-factors emerged (cf. Joosten & Drop, 1987) that we mentioned as follows: (1) weariness/nervousness (8 items), (2) pain in

chest/heart (4 items), (3) stomach complaints (3 items), (4) sneeze/cough (4 items), and (5) pain in bones/muscles (4 items). Confirmatory factor analysis of the 28 ‘stress’-items assessing the six first-order latent constructs (i.e. emotional exhaustion and the five VOEG-factors) which load on a second-order latent construct “stress reactions” yielded a reasonable fit at both T1 and T2 (see Table 1). All items loaded only on the intended constructs.

Table 1.

Goodness-of-fit Indices of Confirmatory Factor Analyses, N = 588 (Time 1) and N = 334 (Time 2)

Data	Models	χ^2	df	GFI	IFI	NNFI	CFI	RMSEA
T1, N = 588	M ₁ : “Stress Reactions”	805.90	344	.91	.93	.92	.92	.05
	M ₀ : Null model	6463.33	378	.34	---	---	---	.17
	M ₁ : “Psychological Withdrawal”	393.21	62	.90	.93	.91	.93	.10
	M ₀ : Null model	4584.85	78	.34	---	---	---	.31
T2, N = 334	M ₁ : “Stress Reactions”	710.23	344	.86	.91	.90	.91	.06
	M ₀ : Null model	4393.20	378	.31	---	---	---	.18
	M ₁ : “Psychological Withdrawal”	204.48	62	.91	.94	.93	.94	.08
	M ₀ : Null model	2558.68	78	.33	---	---	---	.31

Note. χ^2 = chi-square; df = degrees of freedom; GFI = goodness-of-fit index; IFI = incremental fit index; NNFI = non-normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

Psychological Withdrawal. The items used to measure cynicism, affective commitment and thoughts about leaving the organization were factor analyzed as well. Using varimax rotation, we found support for the three dimensions. Confirmatory factor analysis of the 13 ‘psychological withdrawal’-items assessing the three first-order latent constructs (i.e. cynicism, affective commitment, and thoughts about quitting) which load on a second-order latent factor “psychological withdrawal” yielded a reasonable fit at both T1 and T2 (see Table 1). Again, all items loaded only on the intended constructs.

Descriptive Statistics

Table 2 shows the mean values and standard deviations of the variables included in the present study. As can be seen from this table, there are some small, but significant changes over time in the experience of stress reactions and psychological withdrawal. More

specifically, after one year, the security guards reported somewhat higher levels of exhaustion ($p < .01$), cynicism ($p < .05$) and thoughts about leaving ($p < .01$).

Table 2.

Means and Standard Deviations of Variables Included in this Study, N = 334

	Time 1		Time 2	
	M	SD	M	SD
1. Distributive unfairness (material) ¹	3.57	.48	3.55	.53
2. Distributive unfairness (immaterial) ¹	3.41	.45	3.41	.48
3. Procedural unfairness (structural)	3.52	.88	3.53	.87
4. Procedural unfairness (social)	3.52	.91	3.60	.86
5. Weariness/nervousness	.26	.29	.27	.30
6. Pain in chest/heart	.09	.22	.11	.23
7. Stomach complaints	.26	.39	.27	.41
8. Sneeze/cough	.17	.29	.16	.27
9. Pain in muscles/bones	.27	.30	.29	.31
6. Emotional Exhaustion *	1.02	1.01	1.14	1.06
7. Cynicism *	1.45	1.05	1.56	1.07
8. Poor affective commitment	2.74	.94	2.79	.94
9. Thoughts about leaving *	1.98	1.49	2.16	1.53

Note.¹ Most employees perceive under-reward or equity. Less than 3 % of the employees felt slightly over-rewarded at T1 and T2. * Significant difference between T1 and T2 at the $p < .05$ level.

Table 3 shows the intercorrelations and reliability coefficients of the variables included in this study. Except for absence frequency and turnover that are related to employees' T1 responses ($N = 588$), this table presents the results of the employees that participated in both waves ($N = 334$). As can be seen, absence frequency is only significantly related to psychosomatic health complaints. Turnover is related to distributive and procedural unfairness, stomach complaints, and particularly to cynicism and thoughts about leaving the organization.

Table 3.

Intercorrelations and internal consistencies (Cronbach's alphas – on the diagonal) of the variables included in this study, N = 334

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
Time 1																														
1. Distributive rules (material)	(.82)																													
2. Distributive rules (immaterial)	.65	(.82)																												
3. Procedural rules (structural)	.33	.47	(.81)																											
4. Procedural rules (social)	.32	.48	.77	(.87)																										
5. Weariness/nervousness	.23	.26	.29	.29	(.81)																									
6. Pain in chest/heart	.16	.22	.16	.16	.51	(.78)																								
7. Stomach complaints	.17	.16	.16	.17	.43	.33	(.88)																							
8. Sneeze/cough	.16	.14	.16	.13	.33	.18	.22	(.70)																						
9. Pain in bones/muscles	.20	.19	.13	.18	.51	.40	.36	.29	(.68)																					
10. Emotional Exhaustion	.31	.35	.24	.26	.57	.35	.28	.25	.38	(.89)																				
11. Cynicism	.29	.36	.40	.35	.35	.19	.15	.17	.19	.55	(.71)																			
12. Poor affective commitment	.10*	.12	.35	.38	.14	.05*	.11	.14	.03*	.22	.36	(.90)																		
13. Thoughts about leaving	.19	.24	.30	.32	.32	.11	.16	.14	.13	.33	.43	.35	(.94)																	
14. Absence frequency ¹	.08*	.05*	.05*	.04*	.22	.15	.15	.11	.12	.05*	.00*	.05*	.06*																	
15. Turnover ¹	.10	.11	.11	.09	.03*	.04*	.13	.04*	.02*	.05*	.15	.08*	.20	.10																
Time 2																														
16. Distributive rules (material)	.61	.43	.34	.31	.25	.16	.09*	.13	.25	.29	.29	.08*	.21																	
17. Distributive rules (immaterial)	.49	.55	.40	.37	.29	.20	.09*	.13	.21	.31	.36	.10*	.26																	
18. Procedural rules (structural)	.32	.42	.68	.64	.31	.19	.22	.19	.15	.27	.34	.31	.27																	
19. Procedural rules (social)	.29	.41	.58	.64	.21	.15	.13	.16	.13	.25	.27	.32	.28																	
20. Weariness/Nervousness	.24	.20	.24	.21	.69	.38	.39	.31	.43	.47	.34	.13	.28																	
21. Pain in chest/heart	.14	.18	.12	.12	.51	.68	.39	.21	.40	.35	.19	.02*	.17																	
22. Stomach complaints	.09*	.10*	.03*	.05*	.31	.18	.63	.20	.26	.22	.24	.07*	.19																	
23. Sneeze/cough	.19	.19	.11	.11	.27	.19	.19	.60	.18	.26	.19	.13	.21																	
24. Pain in bones/muscles	.17	.14	.20	.22	.40	.36	.24	.26	.55	.30	.21	.05*	.15																	
25. Emotional Exhaustion	.27	.30	.26	.25	.46	.28	.28	.30	.28	.73	.52	.23	.33																	
26. Cynicism	.18	.29	.37	.33	.28	.15	.10*	.15	.14	.41	.62	.32	.33																	
27. Poor affective commitment	.10*	.14	.37	.36	.22	.11	.16	.17	.06*	.31	.37	.71	.35																	
28. Thoughts about leaving	.15	.23	.32	.32	.29	.11	.14	.15	.10*	.31	.32	.36	.72																	

Note. All correlations are significant at the $p < 0.5$ level, except those marked with an asterisk.

¹ Absence frequency and turnover is related to employees' T1 questionnaires (N = 588).

Test of the Unfairness Model

The complete hypothetical model (see Figure 1) was tested using the T1 questionnaire data, and the data regarding absenteeism and turnover registered between the two waves. In addition, the first part of our model was tested using the T2 questionnaire data (and not absenteeism and turnover). The complete model consists of fifteen manifest variables and four hypothetical constructs or latent variables. The four latent variables – distributive unfairness, procedural unfairness, stress reactions and psychological withdrawal – are each estimated by manifest variables (i.e. the scales developed on the basis of factor-analyses). Error-terms of the manifest variables emotional exhaustion and cynicism were allowed to correlate because exhaustion and cynicism are both considered to be burnout-dimensions and are both measured by the MBI-GS (e.g., Schaufeli et al., 1996). Items with identical rating scales have often measurement errors that are correlated (Byrne, 1989). An explanation for this covariation is that a person who fills out a questionnaire shows the same response bias for items within a scale.

Results of the SEM-analyses indicate that our hypothetical model (M_1) fits quite well to the data. Table 4 shows that all fit-indices are above .95 and that the RMSEA is below (T1) or equal to (T2) the cutoff-value of .06. All of the hypothesized relationships in the theoretical model are significant at the $p < .05$ level except the relationships between T1 stress reactions and turnover ($\beta = -.07$, n.s.) and between T1 psychological withdrawal and absence frequency ($\beta = -.06$, n.s.). Thus, absence frequency is uniquely predicted by stress reactions whereas turnover is uniquely predicted by psychological withdrawal. Logistic regression and Poisson regression analyses did not contradict these results. The logistic regression analysis indicated that only psychological withdrawal (factorscore of cynicism, affective commitment and thoughts about quitting) significantly contributes to the prediction of voluntary turnover ($b = 1.08$, $p < .05$). Poisson regression revealed that only stress reactions significantly contribute to the prediction of absence frequency ($t = 5.02$; $p < .001$).

Table 4.

Goodness-of-fit Indices of Competing Fairness Models, $N = 588$ (Time 1) and $N = 334$ (Time 2)

Data	Model	χ^2	df	GFI	IFI	NNFI	CFI	RMSEA
<u>T1, N = 588¹</u>	M ₁ : Hypothesized	179.66	82	.96	.96	.95	.96	.05
	M ₂ : Alternative	174.53	77	.96	.96	.95	.96	.05
	M ₀ : Null model	2569.37	105	.53	---	---	---	.20
<u>T2, N = 334</u>	M ₁ : Hypothesized	122.53	59	.95	.96	.95	.96	.06
	M ₂ : Alternative	121.34	58	.95	.96	.95	.96	.06
	M ₀ : Null model	1665.08	78	.45	---	---	---	.24

Note. χ^2 = chi-square; df = degrees of freedom; GFI = goodness-of-fit index; IFI = incremental fit index; NNFI = non-normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

¹ T1 models include objective absence and turnover figures registered during the year in-between both waves.

As an additional test of the model, the hypothetical model was compared with an alternative model. In both the T1 model as well as the T2 model, a path was added from distributive unfairness to psychological withdrawal. Furthermore, in the T1 model, that includes absence frequency and turnover, direct paths were added from distributive unfairness and procedural unfairness to absenteeism and turnover. Table IV shows that these

additional paths hardly modified the fit indices. Moreover, closer expectation of the output showed that all alternative paths were non-significant. Accordingly, the alternative relationships did not significantly affect the fit of the model to the data at T1 (Delta χ^2 (5) = 5.13, n.s) and T2 (Delta χ^2 (1) = 1.19, n.s).

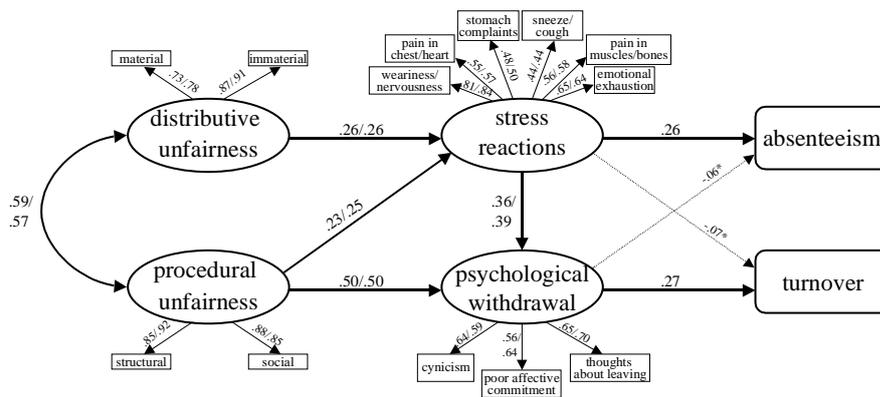


Figure 2. Model of Unfairness and Impaired Well-Being, Standardized Solution, N Time 1 = 588 (before slash), N Time 2 = 334 (after slash)

Figure 2 shows the standardized solution of the Unfairness model. Relationships between T1 variables (1997, $n = 588$) are depicted before the slash; relationships between T2 variables (1998, $n = 334$) are depicted behind the slash. In addition, the figure shows relationships between T1 stress reactions and psychological withdrawal and prospective absence frequency and voluntary turnover in the year between the two surveys (1997-1998). Error covariances between emotional exhaustion and cynicism at T1 ($r = .41$) and at T2 ($r = .46$) are not depicted in the figure. Taken together, both at T1 and T2, results largely support the hypothesized unfairness model. Distributive as well as procedural unfairness are related to stress reactions, that is, emotional exhaustion and psychosomatic health complaints (i.e. weariness/nervousness, pain in chest/heart, stomach complaints, sneezing/coughing, pain in

bones/muscles), thus supporting Hypothesis 1. Hypothesis 2 is confirmed as well: stress reactions are related to psychological withdrawal. In addition, consistent with Hypothesis 3, procedural unfairness is a predictor of psychological withdrawal. As can be seen in Figure II, procedural unfairness affects both stress reactions and psychological withdrawal, but is particularly related to psychological withdrawal. Finally, results support Hypothesis 4 by showing that the relationship between perceived unfairness on the one hand and absenteeism and turnover on the other is mediated by employees' impaired well being. Interestingly, we found that the relationship between unfairness and absenteeism is only mediated by employees' stress reactions, and the relationship between unfairness and voluntary turnover is only mediated by employees' psychological withdrawal.

Direction of Relationships

In the second part of the analyses, the two waves of data-collection (1997 and 1998, $N = 334$) were used to get more insight in the direction of relationships. Unfortunately, spurious path and error values of stability coefficients were obtained (i.e. negative variances) regarding the latent constructs 'stress reactions' as well as 'psychological withdrawal' (i.e. T1 psychological withdrawal \rightarrow T2 psychological withdrawal), presumably because of high interrelationships between T1 and T2 manifest variables (see Table 3). Modification indices revealed that paths between all indicators of this construct (manifest variables) had to be added (e.g., T1 emotional exhaustion \rightarrow T2 emotional exhaustion). This suggests that unique qualities of T1 manifest variables regarding stress and withdrawal could not be excluded from a model that predicts T2 variables. Therefore, we decided to use statistically simpler models that include manifest variables instead of the latent variables 'stress reactions' and 'psychological withdrawal'. However, because we know from the separate analyses at T1 and T2 that there exist moderate to strong relationships between manifest variables within the presumed latent constructs ('stress reactions' and 'psychological withdrawal'), we allowed

T1 covariances and T2 error covariances³ between manifest ‘stress reactions’ variables and manifest ‘psychological withdrawal’ variables.

More specifically, we built and compared three nested models to test different causal hypotheses: (1) The Hypothetical model, assuming that distributive unfairness and procedural unfairness at T1 influence employees’ stress reactions at T2 (exhaustion, weariness/nervousness, pain in chest/heart, stomach complaints, sneezing/coughing, pain in muscles/bones), and that procedural unfairness at T1 influences employees’ withdrawal attitudes at T2 (that is, cynicism, poor affective commitment and turnover intention); (2) The Reversed model, assuming that T1 stress reactions influence T2 distributive unfairness and T2 procedural unfairness, and that T1 withdrawal attitudes influence T2 procedural unfairness; (3) The Reciprocal model, that assumes that unfairness leads to stress reactions and psychological withdrawal and vice versa.

Table 5 shows the fit of the three competing models. As can be seen, the fit-indices of all three models are satisfactory, which indicates that cross-lagged paths are less important for the explanation of T2 variables than stability paths and interrelationships at T1 and at T2. The worst relative fit is found for the Reversed model; its chi-square value is about 53 points higher than that of the Hypothesized model with equal degrees of freedom. In addition, the fit of the Reversed model is significantly worse than the fit of the Reciprocal model, $\Delta \chi^2(15) = 71.36, p < .05$. Finally, results reveal that the Reciprocal model is not significantly better than the Hypothesized model, $\Delta \chi^2(15) = 18.07, n.s.$ Taken together, these findings indicate that our hypothetical model – in which T1 unfairness is assumed to influence T2 stress and psychological withdrawal – gives the best description of the structure in the data.

Table 5.

Cross-lagged Panel Analyses: Goodness-of-fit Indices of Competing Models, N = 334

Data	Models	χ^2	df	GFI	IFI	NNFI	CFI	RMSEA
N = 334	M ₁ : Hypothesized	395.66	199	.92	.96	.93	.96	.05
	M ₂ : Reversed	448.95	199	.91	.95	.91	.95	.06
	M ₃ : Reciprocal	377.59	184	.92	.96	.93	.96	.06
	M ₀ : null	5052.19	325	.29	---	---	---	.21

Note. χ^2 = chi-square; df = degrees of freedom; GFI = goodness-of-fit index; IFI = incremental fit index; NNFI = non-normed fit index; CFI = comparative fit index; RMSEA = root mean square error of approximation.

Closer examination of the AMOS-output revealed that the hypothesized paths from procedural unfairness at T1 to all withdrawal variables at T2 (that is, cynicism, lack of affective commitment and turnover intention) are significant (all p 's < .05). However, only a few paths from T1 unfairness to T2 stress reactions are significant. Specifically, the coefficients of the paths from T1 distributive unfairness to T2 weariness/nervousness and T2 sneezing/coughing are significant (p 's < .05). In addition, paths from T1 procedural unfairness to T2 emotional exhaustion and T2 pain in muscles/bones are significant (p 's < .05). Paths from T1 distributive unfairness and procedural unfairness to the other T2 stress variables were non-significant. In addition, all coefficients of the paths in the reversed direction (i.e. paths from T1 stress reactions and withdrawal variables to T2 distributive and procedural unfairness) were non-significant. Thus, in general the data seem not to contradict the underlying assumption in our hypothetical model (Figure 1) that perceived unfairness influences stress reactions and psychological withdrawal instead of the other way around. Figure 3 shows the standardized solution of the hypothetical model. For reasons of clarity, only the significant paths-coefficients are depicted. [T1 covariances and T2 error-covariances are not depicted. See Table 2 for correlations between variables at separate timepoints.]

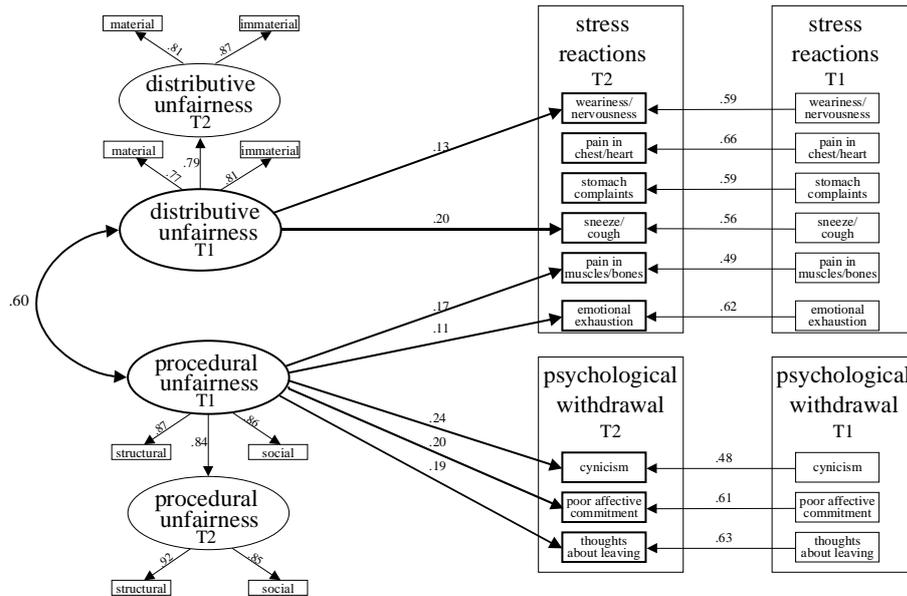


Figure 3. Cross-lagged Panel Analysis, Model of Unfairness and Impaired Well-Being. Significant Paths in Standardized Solution of Hypothesized Direction, $N = 334$

Discussion

The present longitudinal study among security guards tested a model in which unfairness at work was related to stress reactions and psychological withdrawal. Our central hypothesis was that distributive unfairness would only be predictive of stress reactions (i.e. exhaustion and psychosomatic health complaints), whereas procedural unfairness would be predictive of both stress reactions and psychological withdrawal (i.e. cynicism, reduced affective commitment, and turnover intentions). Stress reactions and psychological withdrawal, in turn, were hypothesized to be predictors of absenteeism and turnover.

Results of a series of structural equation analyses provided strong support for the proposed unfairness model. First, the full model was largely supported by an analysis of a combination of 1997 questionnaire data and absenteeism and turnover figures that were registered by the personnel department between 1997 and 1998. However, we found that the relationship between unfairness and absenteeism was only mediated by employees' stress reactions and that the relationship between unfairness and voluntary turnover was only mediated by employees' psychological withdrawal. In addition, the validity of the first part of

the model was confirmed using 1998 questionnaire data (without absenteeism and turnover). Three main conclusions may be drawn from these findings. First, distributive unfairness is exclusively related to employees' experience of stress. Second, procedural unfairness affects both stress reactions and psychological withdrawal in employees, but is particularly related to psychological withdrawal. Third, the relationship between perceived unfairness and absenteeism and turnover is mediated by employees' impaired well-being.

Perceived Unfairness and Stress Reactions

Previous studies that focused on the relationship between unfairness at work and stress reactions (e.g., Bakker et al., 2000; Schmitt & Dörfel, 1999) did not include different aspects of the fairness concept simultaneously. For instance, previous studies that connected fairness to burnout particularly focused upon inequity (i.e. distributive unfairness). Although distributive and procedural fairness were to a considerable extent related to each other in the present study (.59 at T1 and .57 at T2; see also Organ & Ryan, 1995), results showed that they clearly have unique relationships with stress reactions. Probably, the fact that employees realize that superiors are responsible for unfair decision-making processes as well as the structural character of procedural unfairness contribute to the development of stress reactions. That is, in addition to tension and distress (Adams, 1965) as a result of inequity (i.e. receiving other outcomes than it should be), employees may have difficulties to relax at home and waste lots of energy because they are upset and angry as a result of procedural unfairness. In addition, they may become less self-confident because of the bad treatment by the organization, which may impede coping with (other) work stressors (cf. Smith et al., 1998).

Using cross-lagged panel analysis, we also demonstrated that T1 distributive unfairness influenced employees' experience of weariness/nervousness at T2 and the prevalence of sneezing and coughing at T2, even after controlling for T1 stress reactions. In addition, T1 procedural unfairness influenced employees' feelings of exhaustion and pain in

muscles or bones at T2. In other words, perceived unfairness explained some of the variance of employees' stress reactions one year later, which cannot be ascribed to employees' previous level of stress reactions. Thus, perceived unfair rewards and unfair decision-making processes appear to have some negative long-term influence on employees' state of health. Results suggest that, in order to prevent (long-term) illness or disability, workplace interventions should not only aim at reducing distributive unfairness (Van Dierendonck, Schaufeli & Buunk, 1998), but also at reducing procedural unfairness.

Our results only partly confirmed that distributive and procedural unfairness influence employees' stress reactions. That is, although T1 perceptions of unfairness influenced some T2 stress reactions, several T2 stress reactions were not influenced by distributive and/or procedural unfairness, after controlling for T1 stress reactions. On the other hand, there was also no support for reversed causation (the alternative hypothesis) in which T1 stress was assumed to increase distributive and procedural unfairness at T2. Thus, in general, the data seem not to contradict the underlying assumption in our hypothetical model that perceived unfairness influences stress reactions and psychological withdrawal instead of the other way around. However, there exists particularly simultaneous relationships (at the same point in time) between fairness perceptions and stress reactions.

An explanation for the fact that we found only limited evidence for the assumption that unfairness influences stress reactions is that the time lag between the two surveys – one year – does not entirely coincide with the time in which perceived unfairness fosters stress reactions in employees (cf. Zapf et al., 1996). Another explanation is that the stability of most stress scores was rather high, especially regarding the frequency of pain in the chest heart region (path coefficient = .66). Apparently, security guards' health hardly changed within a year, which makes it very difficult to find possible effects of other variables. On the other hand, the stability of fairness scores was even higher (.79 and .84), which might be an

alternative explanation for the fact that we found no support for a reversed process in which impaired well-being leads to perceptions of unfairness. We recommend that future studies experiment with shorter and longer time intervals to further enlarge our insight in the exact relationship between perceived unfairness and the development of stress complaints.

Perceived Unfairness and Psychological Withdrawal

As expected, we found that employees' stress reactions fostered by perceived unfairness at work were related to psychological withdrawal. Following Leaters' (1993) process model of burnout, we believe that employees attempt to gain distance from their work as a way of coping with stress. Although both distributive and procedural unfairness were related to employees' stress reactions, it was clearly demonstrated that only procedural unfairness was directly related to employees' psychological withdrawal (cynicism, poor affective commitment, turnover intention). Thus, as expected and in line with previous fairness research, we found that procedural fairness is more than distributive fairness related to reactions towards the organization (e.g., Sweeney & McFarlin, 1993). Results seem to suggest that, to withdraw from work and the organization psychologically, employees have to notice the structural character of their unfair treatment. They may realize that the probability is very low at receiving valued outcomes or a fair treatment in general in this specific organization. It can be speculated that particularly employees who believe that things may become fairer in the future, and who used to be proud of being a member of the organization will spend a lot of energy to change unfair processes (cf. group-value theory, Lind & Tyler, 1988). In contrast, employees who turn their back on the organization, probably lost hopes that things will go more fair in the future and may condemn superiors or 'the organization' for the unfair treatment.

Interesting with a view to the actual work practice, results reveal that the relationship between procedural unfairness and psychological withdrawal is considerably strong. At both

time points separately, path coefficients were .50, suggesting that procedural fairness is quite important for the security guards' attachment to work and the organization at large. In addition, cross-lagged panel analyses showed that procedural unfairness explained some of the variance in cynicism, reduced affective commitment and turnover intention one year later. Since the (average) level of procedural unfairness did not change significantly within a year, this may point to a cumulating process in which employees develop increasingly distant attitudes if work situations do not improve.

Stress Reactions and Psychological Withdrawal as Predictors of Absenteeism and Turnover

A secondary aim of the present study was to examine whether relationships between (1) perceived unfairness and (2) absenteeism and turnover are mediated by employees' impaired well-being. Our findings demonstrated that these relationships were indeed largely mediated by employees' well-being. However, we found that different aspects of well-being were responsible for the prediction of actual turnover and absence rates. That is, employees' absenteeism was only predicted by experienced stress complaints, whereas voluntary turnover was predicted by psychological withdrawal. Thus, it seems useful to include (different) measures of employees' impaired well being in studies that try to get more insight in the development of employees' behaviors. Moreover, although it is often assumed that similar processes explain absenteeism and turnover (cf. Johns, 1997), the present study suggests that different processes may underlie absenteeism and turnover.

Theoretical Contributions

Prior research revealed that employees' perceptions of unfairness predict outcomes that can be rather detrimental to organizations (i.e. employee theft, deviant behaviors, turnover, absenteeism). Often these behaviors are viewed as a way of coping with unfairness. However, only a few studies focused on employees' impaired health and well being as a consequence of unfairness at work. Findings of the present study suggest that, in order to get

a more comprehensive picture of the possible consequences of perceived unfairness at work, it is fruitful to pay attention to negative personal consequences for employees as well. Focusing on how unfairness affects employees' health and well-being may also give more insight in the processes that lead to behaviors that are detrimental to the organization. For instance, absenteeism and turnover are often viewed as a way to restore perceived inequity (Adams, 1995; Geurts et al., 1994) and - thus - to prevent tension and distress. However, our findings reveal that absenteeism and turnover may also be viewed as a consequence of employees' impaired well-being as a result of perceived unfairness (see also Taris et al., 2000). Moreover, the fact that we found a relationship between unfairness and employees' impaired health suggests that employees are not always able to (successfully) cope with perceived fairness. It would be interesting to examine in future studies to what extent people perform (problem-focused) coping responses, and whether coping responses moderate the relationship between perceived unfairness and employees' impaired well-being.

This study contributes to the stress literature as well. The stress-literature has previously emphasized that supervisors can have a negative impact on subordinates' health and well-being in various ways (Danna & Griffin, 1999). For instance, lack of social support from superiors has been related to employees' burnout (Lee & Ashforth, 1996). The present study contributes to this literature by suggesting that employees' perception that superiors violate ethical standards regarding moral behavior (i.e. fairness rules) can have a negative impact on employees' health and well-being as well. Thus, more insight is provided in which specific superior behaviors may foster stress reactions in subordinates. Future research on employees' well-being at work may extend the leadership literature with theories on organizational fairness (cf. Pillai, Shriesheim & Williams, 1999; Scandura, 1999).

Limitations and Implications

Our research is not without limitations. A first limitation is that we tested our model among a specific group of employees, namely Belgian male security guards. Results thus need to be replicated in other occupational groups, among males and females, to establish external validity of the conclusions. The validity of our model would particularly increase when results regarding absenteeism and turnover were replicated in populations with higher absence and turnover rates. That is, specific absence norms in our sample (i.e. the strict Belgian absence policy) may have influenced our results (e.g, Johns, 1997). Moreover, our sample included only five employees that voluntary left the organization, thus results depend heavily on these five employees. However, it remains striking that in our sample psychological withdrawal – and not stress reactions – was a significant predictor of voluntary turnover. A second limitation is that we used manifest ‘stress’ and ‘withdrawal’ variables in the cross-lagged panel analyses. The fact that we could not utilize the full advantage of structural equation modeling with latent variables in the cross-lagged panel design may have had some influence on our findings. Third, we could not examine some of the more specific underlying processes responsible for stress and withdrawal. For instance, concepts such as tension, self-esteem, and hope were used to describe and explain some of the processes but were not actually measured.

Despite these limitations, the present study has several implications for practice and future research. In a nutshell, our findings show that perceptions of unfairness negatively affect employees’ well being (i.e. stress reactions and psychological withdrawal) at work, which, in turn, has negative consequences for employees’ behavior towards the organization. Our results suggest that the two types of fairness trigger somewhat different processes. Whereas both distributive unfairness and procedural unfairness are related to stress reactions that in turn predict absenteeism, only procedural unfairness affects psychological withdrawal,

which leads to turnover. Particularly the strong relationship between procedural unfairness and psychological withdrawal may encourage superiors to make organizational processes more fair or to increase employees' insight in these processes. Our findings suggest that such interventions may lead to a reduction of stress and an increase in attachment to the organization, which leads to reduced absenteeism and personnel turnover.

Footnotes

1. In previous research, the concept of "psychological withdrawal" has been measured in several ways and is, as far as we know, not clearly defined in the literature. In an older study of Shepard (1972) on alienation, (social) psychological withdrawal refers to an instrumental work attitude (i.e. focus is on rewards that lie outside the work activity, such as money) and to an attitude in which work activity (e.g., success in work career) is relatively unimportant for employees' self-evaluation. In addition, researchers use the term to refer to withdrawal cognitions such as turnover intention (e.g., Hanisch & Hulin, 1990; Shaffer & Harrison, 1998). Others use the term 'behavioral withdrawal' to refer to turnover intention and use 'psychological withdrawal' to refer to reduced organizational commitment (e.g., Geurts, Schaufeli & Rutte, 1999). In addition, studies on burnout and workstress regard depersonalization and cynicism as a form of psychological withdrawal (e.g., Geurts, Schaufeli & De Jonge, 1998). Some scholars even substitute 'substance use' for psychological withdrawal (e.g., Gupta & Jenkins, 1984). In other words, there seems to be no clear definition of psychological withdrawal. Nevertheless, a common element of psychological withdrawal seems to be that it refers to employees' distant attitudes (thoughts or feelings) towards work.
2. If results are only moderately skewed, ML estimations provides nevertheless an unbiased estimation unless samples exceed 400 respondents (Hoogland & Boomsma, 1997). According to Kendall and Stuart (1958), when the skewness-measure approaches 2 and

when the kurtosis-measure is greater than 5, there is considerable skewness and leptokurtosis. In the present data, absence frequency is skewed (skewness: 1.43; kurtosis: 2.44) but not beyond these boundaries, and voluntary turnover is highly skewed (skewness: 11.24; kurtosis: 124.73).

3. Since T2 variables are endogenous or dependent variables, the covariance between these variables is modeled as a covariance between the residual error terms (cf. Bollen, 1989; Jöreskog & Sörbom, 1993).

Chapter 5

How Distributive and Procedural Unfairness Predict Absenteeism

Since absenteeism costs companies a vast amount of money, implies stagnation of the workflow, and increases the workload of employees (Pop, Gierveld, Karis, 2002), it is important to understand the underlying processes leading to non-attendance. The present study focuses on two types of organizational unfairness as possible causes of absenteeism, namely distributive and procedural unfairness. Distributive unfairness is the perceived unfairness of received outcomes, such as receiving a salary that is too low considering one's investments (Adams, 1965). Procedural unfairness is the perceived unfairness of decision-making procedures (Leventhal, 1980) and the perceived unfairness of the interpersonal treatment by superiors (e.g., dishonesty, showing no respect to employees). The latter type of unfairness has also been described as interactional unfairness (Tyler & Bies, 1990). Both distributive and procedural unfairness are regarded to be important for people's fairness experiences at work and may trigger different psychological processes responsible for absenteeism.

Perceived Unfairness and Absenteeism

The fairness literature has proposed two different explanations for a relationship between unfairness and absenteeism. First, research in the tradition of Adams' equity theory (Adams, 1965) has generally favored a withdrawal explanation (Geurts, Schaufeli & Rutte, 1999) employees report sick because an unfair distribution of outcomes undermines their motivation to attend work. According to equity theory, individuals expect that the amount they invest in and gain from a relationship should be proportional to what another person invests and gains. If an individual receives, for instance, a salary that is lower than it should be, (s)he may feel inequitably treated by the organization. In this tradition, absenteeism is usually regarded as an equity-restoring mechanism: by being absent, employees lower their

investments (no job performance) without changes in their main outcome (salary). Several studies have indeed supported this withdrawal hypothesis (Johns, 1997), and found a positive relationship between distributive unfairness (i.e. inequity) and absenteeism [e.g., Geurts et al., 1999]. In addition, Gellatly (1995) has shown that the relationship between interactional (i.e. procedural) unfairness and absenteeism was completely mediated by affective commitment, suggesting that unfairness leads to psychological withdrawal and eventually evokes physical withdrawal from the organization. This is also consistent with Adams' (1995) contention that, by being absent, employees temporarily 'leave the field' in order to escape from the unfair work situation.

The second explanation for a relationship between unfairness and absenteeism can be derived from stress research. Stress-theories propose that employees report sick because they are not able to cope with certain working conditions and, therefore, develop stress symptoms (cf. Johns, 1997). Some previous fairness studies suggest that perceived unfairness may foster the development of stress symptoms in employees as well. For instance, empirical relationships have been found between distributive unfairness (inequity) on the one hand, and burnout (e.g., Bakker, Schaufeli, Sixma, Bosveld & Van Dierendonck, 2000) and flu symptoms (Hendrix & Spencer, 1989) on the other hand. These findings suggest that employees who invest more in the relationship with their organization than they receive in return, experience more health complaints. Some recent studies suggests that procedural unfairness also fosters stress reactions (e.g., Elovario, Kivimaeli & Vahtera, 2002). Unfortunately, these studies did not include distributive unfairness, which makes it difficult to compare the relative contribution of distributive and procedural unfairness. Taken together, these findings show that unfairness relates to stress reactions, which suggests that stress reactions may mediate the relationship between unfairness and absenteeism.

In sum, the fairness literature has proposed two different explanations for a

relationship between unfairness and absenteeism, namely a withdrawal explanation and a stress explanation. Unfortunately, most previous fairness studies that include measures of absenteeism favor one of the two explanations, namely a withdrawal-explanation, and did not investigate the hypothesis that stress reactions mediate relationships between unfairness and absenteeism. We could locate only two studies that made an exception to this rule. One study among Dutch teachers showed that direct relationships between inequity and (self-reported) absenteeism largely disappeared after controlling for health complaints (Taris, Schaufeli, De Boer, Schreurs & Caljé, 2000). Another study among Belgian male security officers (De Boer, Bakker, Syroit & Schaufeli, 2002) included measures of distributive and procedural unfairness, stress reactions and psychological withdrawal, and prospective absenteeism. The results showed that stress reactions (i.e. psychosomatic health complaints) played a mediating role in the relationship between perceived (distributive and procedural) unfairness and absenteeism. Psychological withdrawal (assessed with an affective commitment measure) did not mediate this relationship, and did not explain unique variance in absenteeism.

The Present Study

The current study among Dutch employees working in the food processing industry is a replication and extension of De Boer et al. (2002) who investigated the relationship between unfairness and absenteeism in Belgium. In the latter country, employees are only excused to be absent if absences are legitimated by a medical confirmation from a physician. It is therefore conceivable that support for the stress explanation (and not for the withdrawal explanation) is attributable to the strict absence policy: employees were not able to report sick without having any health complaints. Indeed, several studies have shown that absence behavior is to a considerable extent influenced by the social context, such as absence norms and policies (e.g., Gellatly, 1995). In contrast to their Belgian colleagues, Dutch employees do not need a medical confirmation from their physician to be absent. This implies that Dutch

employees are – in theory – able to report sick without having any health complaints. Thus, the present study aims at testing the hypothesized stress process, as well as an alternative direct relationship between unfairness and absenteeism, and an indirect relationship between unfairness and absenteeism, through psychological withdrawal.

More specifically, we have four hypotheses. First, we hypothesize that both distributive and procedural unfairness have unique, positive relationships with stress reactions (exhaustion and health complaints). Following equity theory (Adams, 1965), it is assumed that distributive unfairness fosters stress reactions because people get tensed when they receive lower outcomes than expected considering their own and others' investments. Procedural unfairness, on the other hand, may foster stress reactions because employees worry about or protest against the use of unfair procedures (e.g., unreliable sources to arrive at decisions, favoritism, self-interest and dishonesty of superiors), wasting lots of energy. In addition, procedural unfairness may negatively affect people's self-esteem as employees may infer from being structurally treated unfairly that they are no valuable members of the organization (see Smit, Tyler, Huo, Ortiz & Lind, 1998). Thus, we hypothesize that distributive and procedural unfairness are both positively related to stress reactions (Hypothesis 1).

Second, perceived unfairness may not only lead to stress reactions but also to the development of distant attitudes or 'psychological withdrawal'. Psychological withdrawal is defined as employees' distant attitudes towards their work and the organization, characterized by cynicism, poor affective commitment and thoughts about leaving the organization. According to our model, perceived unfairness influences psychological withdrawal directly as well as indirectly. Starting with the latter, it is assumed that stress reactions fostered by perceived distributive or procedural unfairness may evoke psychological withdrawal as employees attempt to gain emotional distance from their work as a way of coping with their

stress (Leiter, 1993). Hence, we propose that stress reactions fostered by distributive and procedural unfairness have a direct positive relationship with psychological withdrawal (Hypothesis 2).

Third, in addition to a coping response to experienced stress reactions, psychological withdrawal may also be a direct consequence of perceived unfairness. Employees may immediately (without developing stress complaints) turn their back on the organization, if for example, because of previous work experiences, they have no hope that things may become fairer in the future and totally blame the organization for the unfairness. We assume that particularly procedural unfairness leads to psychological withdrawal, since unfair procedures are more viewed as stable (i.e. unchanging) characteristics of an organization than unfair outcomes (Sweeney & McFarlin, 1993). Moreover, according to Folger and Cropanzano (1998), people are in general more accountable – thus more to blame – for the means they choose (processes) than for the ends (outcomes) that result. Taken together, we hypothesize that procedural unfairness (and not distributive unfairness) has a direct positive relationship with psychological withdrawal (Hypothesis 3).

Fourth, although our model proposes that organizational unfairness leads to both stress reactions and psychological withdrawal, we assume that only stress reactions are responsible for absenteeism. This hypothesis is primarily based on the previously mentioned fairness-study among security officers in which the withdrawal and stress-explanation for absenteeism were examined simultaneously (De Boer et al., 2002). This particular study clearly supported the stress-explanation over a withdrawal explanation for absenteeism. Thus, we hypothesize that distributive and procedural unfairness have an indirect positive effect on absenteeism, through stress reactions (Hypothesis 4). In other words, stress reactions (exhaustion and health complaints) are hypothesized to mediate the relationship between

distributive and procedural unfairness on the one hand, and absenteeism on the other hand. The hypothesized relationships are summarized in Figure 1.

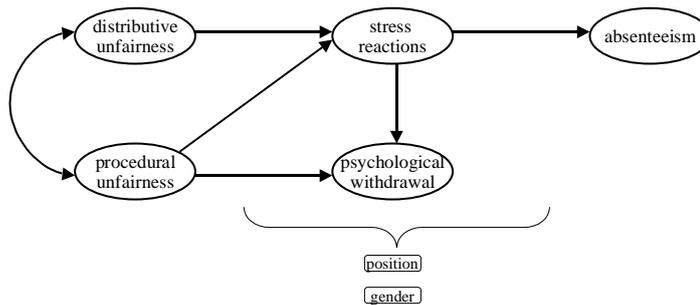


Figure 1. The Unfairness – Absenteeism Model.

Gender and Hierarchical Position. Participants in the current study were working in the food processing industry, and include male and female employees in low (blue-collar workers) and high hierarchical positions (managers, lawyers, technical designers). Since previous research suggests that gender and hierarchical position influence perceptions of unfairness as well as absenteeism, we decided to control for both variables (that is, it is important to test the alternative hypothesis that -- instead of perceived unfairness -- other factors associated with hierarchical position and gender are responsible for higher stress levels or absence rates). For instance, some studies have shown that females and blue-collar workers perceive more procedural unfairness than males and managers (Armstrong-Stassen, 1998). An apparent reason for this is that females and those working in lower hierarchical positions have no access to informal male-dominated communication networks or decision-making processes, respectively. They therefore have to rely on formal procedures to obtain fair outcomes (Powell & Mainiero, 1992). In addition, females and blue-collar workers usually have higher absence rates than males and white-collar workers (Goldberg & Waldman, 2000; Mastekaasa

& Olsen, 1998; VandenHeuvel & Wooden, 1995). This may be related to poorer work circumstances or different values regarding work and health. Thus, the final goal of the present study is to examine whether relationships between unfairness, stress reactions, psychological withdrawal, and absenteeism are affected by gender and hierarchical position.

Method

Participants and Procedure

The sample includes blue-collar (factory) workers as well as white-collar workers (e.g., managers, lawyers, designers) from a Dutch food processing company. Processing and packing are the main activities of the factory workers, whereas most of the white-collar workers perform management tasks. All employees ($N = 430$) received a questionnaire at home, and were kindly asked to fill it out in private. In total, 275 employees returned the questionnaire (response = 64%). However, three months after our survey, one plant of the company was closed down, implying that we had no absence data of the 61 factory workers that were forced to leave the company. Therefore, our final sample includes a group of 214 employees for whom absenteeism data was available. The sample includes 141 blue-collar workers (66%) and 73 white-collar workers (34%). Sixty-nine employees were female (32%). Participants' mean age is 41 years ($sd = 9$ years), and the mean organizational tenure is thirteen years ($sd = 9$ years).

A unique code on each questionnaire allowed us to connect employees' responses to absenteeism data that were retrieved from the company's computerized registration system. The complete data-file included no personal information (i.e. names and addresses) of the participants, and respondents could not be identified. The personnel department did not have access to individual employees' questionnaire responses. This procedure was agreed upon by the management and the workers council and was described in a letter accompanying the questionnaire and in staff magazines in the year before the survey. In this letter, the

anonymity and confidentiality of the data was emphasized. The research was based on voluntary participation.

Measures

Distributive Unfairness was assessed with two scales that were constructed on the basis of equity theory (Adams, 1965; De Boer et al., 2002). Both scales include five items and focus on material (i.e. salary) and social (i.e. appreciation from superiors) outcomes, respectively. Employees were asked to compare their situation with colleagues (3 items) and with their own situation at earlier times (2 items). An example-item relating to salary is: “What do you think of your salary.... when you compare your workload with your colleagues’ workload?”. A five-point scale was used, ranging from “in that case I find my salary much too low” (1) to “in that case I find my salary much too high” (5). An example-item relating to appreciation from superiors is: “What do you think of the appreciation you receive from superiors.....when you compare the difficulty of your work with the difficulty of your work in earlier times?”. Afterwards, items were coded such that higher scores referred to more distributive unfairness.

Procedural Unfairness was assessed with two self-constructed scales (each five items) that refer to several procedural fairness rules or principles and are based on earlier work by several authors (e.g., Leventhal, 1980; Tyler & Bies, 1990). The first scale measures structural procedural fairness and refers to how the decision-making context is structured. The following items that refer to structural procedural criteria (between brackets) were included: (1) “Superiors at [name of the company] act purely out of personal self-interest” (bias suppression), (2) “At this company, each employee is treated in the same way” (consistency), (3) “Superiors aim to be well-informed before they take any decisions” (accuracy), (4) “At this company, employees’ complaints are taken seriously” (correctability); “At [name of the company], due consideration is given to employees’

viewpoints” (consideration of views). Employees had to indicate to what extent these statements were characteristic for their organization on a five-point scale (ranging from “1” = not at all, to “5” = to a large extent).

The second scale measures social or interactional procedural fairness and refers to the quality of the interpersonal treatment employees receive from their superiors. Employees were asked to answer the following five questions: (1) “Do superiors inform you in time about changes in work?” (timely feedback); (2) “Do superiors provide you with a good explanation if something turns out wrong for you?” (account giving); (3): “Do superiors treat you in a respectful way?” (standing); (4) “Do superiors show that you are valuable for the organization?” (standing); (5) “Do you feel that superiors communicate in an honest and straightforward manner?” (openness). Employees had to indicate which answer best reflects their opinion on a five-point-scale ranging from 1 = ‘not at all’ to 5 ‘to a large extent’. Afterwards, items were coded such that higher scores referred to more procedural unfairness.

Stress Reactions

Health Complaints were assessed using the VOEG, a validated 23-item Dutch questionnaire used to indicate subjective health complaints (Dirken, 1967; Martens, Nijhuis, Van Boxtel & Knottnerus, 1999). Participants were asked to indicate with ‘yes’ or ‘no’ the experience of health problems in the previous twelve months. Health-problems vary from weariness/nervousness and sneezing to rheumatic and cardio-vascular problems. Example-items are: “Do you often feel nervous?”, “Is your nose regularly all stuffed up?”, “Do you often have pain in the back?”, “Do you often have pain in your chest or heart region?”, “Do you often feel pain in your stomach?”.

Exhaustion was measured with a subscale of the Maslach Burnout Inventory – General Survey (Schaufeli, Leiter, Maslach & Jackson, 1996) and includes five items.

Exemplary items are: "I feel emotionally drained from my work" and "I feel tired when I get up in the morning and have to face another day on the job (0 = never, 6 = always/daily).

Psychological Withdrawal

Cynicism was just like exhaustion measured with a five-item subscale of the MBI-GS (Schaufeli, Leiter, Maslach & Jackson, 1996). Exemplary items are: "I have become less interested in my work since I started this job" and "I've noticed that I keep too much distance from my work" (0 = never, 6 = always/daily).

Affective Commitment was assessed with a 5-item subscale of a questionnaire that measures organizational commitment (Meyer & Allen, 1990). Affective commitment is characterized by positive feelings of identification with, attachment to, and involvement in the work organization. We used a validated Dutch translation of this questionnaire (De Gilder, Van den Heuvel & Ellemers, 1997; Ellemers, De Gilder & Van den Heuvel, 1998). Example-items are "I feel emotionally attached to [name of the company]" and "I feel at home at [name of the company]" (1= not at all, 5= to a large extent). Afterwards, all answers were coded such that higher scores referred to poor affective commitment.

Thoughts about leaving was assessed with a self-constructed 3-item scale. Example-items are: "Every now and then I think about leaving [name of the company]", "I'm thinking for some while about working at another company" (1= I totally disagree, 7 = I totally agree).

Absenteeism data were retrieved from the company's computerized registration system. Both absence frequency (i.e. amount of absence spells) and time lost (i.e. total of absence days) in the year following the questionnaire were calculated. The mean absence frequency was 1.18 (sd = 1.31). The mean time lost was 15.92 (sd = 34.94). This means that, on average, employees were absent once or twice a year. Their mean time lost during this year was approximately sixteen days.

Strategy of Analysis

The hypotheses were tested with structural equation modeling (SEM) analyses, using the AMOS computer program (Arbuckle, 1997). The hypothetical model consists of eleven manifest variables and five hypothetical constructs or latent variables. Distributive unfairness is indicated by material and social distributive unfairness. Procedural unfairness is indicated by structural and social procedural unfairness. Stress reactions is indicated by health complaints and emotional exhaustion. Psychological withdrawal is indicated by cynicism, poor affective commitment and thoughts about leaving. The fifth latent variable absenteeism is assessed with absence frequency and the time lost index. In addition, error-terms of the manifest variables emotional exhaustion and cynicism were allowed to correlate because both are indicators of burnout and measured by the MBI-GS (Schaufeli et al., 1996). Items with identical rating scales often have measurement errors that are correlated (Byrne, 1989). An explanation for this covariation is that a person who fills out a questionnaire shows the same response bias for items using the same rating scales. To examine the fit between the model and the data, we utilized the goodness-of-fit index (Jöreskog & Sörbom, 1993), the incremental fit index, IFI (Browne & Cudeck, 1993), the non-normed fit index, NNFI (Bentler & Bonnet, 1980), the comparative fit index, CFI (Bentler, 1990), and the root mean square error of approximation, RMSEA (Bentler, 1990). In general, models with fit indices larger than or equal to .90 and an RMSEA smaller than or equal to .08 indicate a reasonable fit between model and data (Browne & Cudeck, 1993).

Results

Descriptive Statistics

Table 1 shows the mean values, standard deviations, intercorrelations and reliabilities of the variables included in the present study. As can be seen, absenteeism is significantly related to stress reactions but also to procedural unfairness and hierarchical position. In

contrast to what previous studies showed, female workers do not have higher absence rates in this sample. Table 1 shows that employees in a low hierarchical position report, in line with the literature, more procedural unfairness. In addition, they feel more emotionally exhausted and are more frequently and longer absent than employees in a high hierarchical position. However, employees in a higher position have more thoughts about leaving the company. Finally, Table 1 shows that – as expected – females perceive significantly more procedural unfairness than males and they are less committed to the organization.

Table 1
Reliabilities, Means, Standard Deviations, and Intercorrelations, N = 214

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Hierarchical Position (1=low, 2=high)	-	-	-												
2. Gender (1=male, 2=female)	-	-	.09	-											
3. Distributive Unfairness (material)	3.63	.49	-.07	.10	(.82)										
4. Distributive Unfairness (immaterial)	3.47	.44	-.11	.04	.46*	(.82)									
5. Procedural Unfairness (structural)	3.60	.73	-.25*	.19*	.17*	.38*	(.74)								
6. Procedural Unfairness (social)	3.40	.81	-.34*	.14*	.32*	.46*	.66*	(.85)							
7. Health Complaints	3.91	3.80	-.03	.01	.06	.13	.12	.22*	(.83)						
8. Emotional Exhaustion	1.69	1.13	-.14*	.01	.15*	.10	.16*	.19*	.63*	(.88)					
9. Cynicism	1.58	1.04	-.07	.03	.24*	.19*	.29*	.37*	.44*	.62*	(.72)				
10. Poor Affective Commitment	2.76	.83	-.09	.18*	.12	.11	.42*	.43*	.14*	.25*	.32*	(.87)			
11. Thoughts about Leaving	2.67	1.71	.20*	-.04	.10	.17*	.13	.12	.09	.09	.26*	.25*	(.92)		
12. Absence Frequency (n spells)	1.18	1.31	-.26*	.05	.02	.08	.19*	.12	.19*	.06	.10	.06	-.09	-	
13. Absence Duration (n days lost)	15.92	34.94	-.18*	.02	.11	-.02	.14*	.07	.19*	.16*	.13	.07	-.10	.45*	-

Note. * Significant at the $p < .05$ level

Test of the Unfairness Model

Results of the SEM-analyses indicate that our hypothetical model (M_1) – that starts from a stress explanation and assumes an indirect relationship between perceived unfairness and absenteeism through stress reactions (see Figure 1) – fits reasonably well to the data.

Most fit-indices are above .90 ($\chi^2 = 85.38$; $df = 37$; $GFI = .94$; $CFI = .92$; $IFI = .92$; $NNFI = .88$) and the RMSEA is below .08 ($RMSEA = .078$). All of the hypothesized relationships in the theoretical model are in the expected direction and significant at the $p < .05$ level, except the relationship between distributive unfairness and stress reactions. This means that Hypothesis 1 is not confirmed because we hypothesized that both distributive and procedural unfairness relate to stress reactions. The results reveal that only procedural unfairness is significantly related to stress reactions ($\beta = .30$). Hypothesis 2 is confirmed, since there is a significant positive relationship between stress reactions and psychological withdrawal ($\beta = .53$). Hypothesis 3 is also confirmed. There is a significant relationship between procedural unfairness and psychological withdrawal ($\beta = .52$). In addition, there is a significant relationship between stress reactions and absenteeism ($\beta = .28$).

Three additional models were tested to investigate mediating processes (Baron & Kenny, 1986). A direct effects model (M_2) that only includes direct paths between (distributive and procedural) unfairness and absenteeism was compared to a model (M_3) in which a path from psychological withdrawal to absenteeism was added to M_2 , and to a model (M_4) in which a path from stress reactions to absenteeism was added to M_2 . In other words, M_3 and M_4 include possible mediators (psychological withdrawal and stress reactions, respectively). Chi-square difference tests reveal that the model that only includes direct paths (M_2) is not significantly worse than M_3 (Delta $\chi^2 (1) = 2.25$, n.s.), but – in line with the hypothesis that stress reactions play a mediating role – is significantly worse than M_4 (Delta $\chi^2 (1) = 4.373$, $p < .05$). Consistently, the results reveal that the relationship between procedural unfairness and absenteeism (M_2) was no longer significant when a path between stress reactions and absenteeism was added (M_4). The direct relationship between distributive unfairness and absenteeism was non-significant in each of the four models. In addition, the results show that there is no significant relationship between psychological withdrawal

and absenteeism. In sum, withdrawal-relationships do not significantly improve the fit of the model to the data in this Dutch sample. In fact, most support was found for a stress-explanation; there is an indirect relationship between perceived unfairness and absenteeism, through stress reactions. This means that Hypothesis 4 is confirmed.

Gender and Hierarchical Position

As a final test of the unfairness model, we examined the extent to which the path-coefficients changed after controlling for gender and hierarchical position. Specifically, we built a new model that includes both background variables in addition to the other model variables. Gender and hierarchical position were allowed to covariate. The first model (M₅) includes – in addition to the hypothesized relationships – paths from gender and hierarchical position to distributive and procedural unfairness ($\chi^2 = 135.76$, $df = 55$, $GFI = .92$, $CFI = .88$, $IFI = .89$, $NNFI = .83$, $RMSEA = .083$). The fit-indices of this model are worse than the fit-indices of the hypothesized model (M₁), which suggests that -- besides unfairness -- gender and position influence stress reactions, psychological withdrawal or absenteeism. In the second model (M₆), paths are added from both background variables to stress reactions, psychological withdrawal and absenteeism ($\chi^2 = 110.39$, $df = 49$, $GFI = .93$, $CFI = .91$, $IFI = .91$, $NNFI = .86$, $RMSEA = .077$). The chi-square difference test reveals that the fit of the model to the data improves significantly when these paths are added, $\Delta \chi^2 (8) = 28.95$ $p < .05$. Specifically, the results show that hierarchical position was negatively related to psychological withdrawal and positively related to absence frequency. The standardized solution of M₂ is depicted in Figure 2. For reasons of clarity, only significant relationships between the control variables and the other model variables are depicted. In addition, the error covariance between emotional exhaustion and cynicism ($\phi = .49$) is not depicted in the figure.

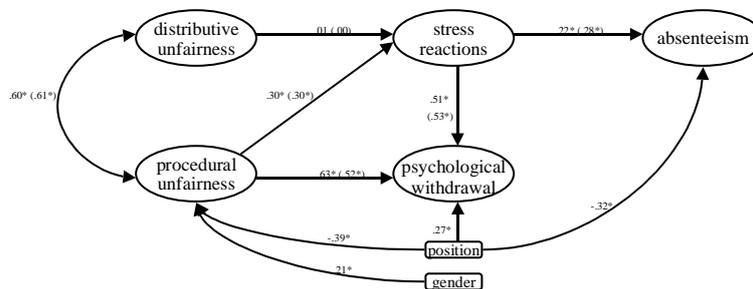


Figure 2. Standardized solution of the Unfairness – Absenteeism Model (after controlling for hierarchical position and gender).

Figure 2 shows that the coefficient of the path from procedural unfairness to stress reactions (.30) does not change when hierarchical position and gender are controlled for. This implies that perceived unfairness fosters stress reactions in all employees. In addition, Figure 2 shows that the relationship between procedural unfairness and psychological withdrawal is somewhat higher (.63) than in a model that does not control for position and gender (.52). As noted before, a higher hierarchical position is associated with a higher score on psychological withdrawal, particularly on thoughts about leaving (see correlations, Table 1). Simultaneously, a higher hierarchical position is associated with lower perceived procedural unfairness. The results suggest that if employees – regardless of their hierarchical position – perceive procedural unfairness, the relationship with psychological withdrawal is considerably strong. Finally, the results support our hypothesis that the relationship between perceived unfairness and absenteeism is primarily mediated by stress reactions. Although hierarchical position is significantly related to absence frequency (that is, employees with a lower position report more often sick), path-values between stress reactions and absenteeism are still significant (.22) and not much lower than in the model that excluded gender and hierarchical position (.28).

Discussion

The focus of the present study was the relationship between perceptions of distributive and procedural unfairness at work and absenteeism. The main purpose was to illuminate employees' reasons to be absent as a consequence of their perception of being treated unfairly by the organization. Specifically, we wanted to examine whether findings of a previous study among male security guards in Belgium (De Boer et al., 2002) – in which support was found for a stress-explanation – could be replicated among employees of a Dutch food processing firm. This sample is more heterogeneous in terms of gender and hierarchical position (blue- and white-collar occupations). The findings of De Boer et al. (2002) were replicated and extended.

Perceived Unfairness and Absenteeism

The present study was conducted in The Netherlands where employees need no official medical confirmation to be absent (as is the case in Belgium). Thus, in theory, Dutch employees could have reported sick without suffering from health complaints. This implies that there was more “room” for possible withdrawal-processes (e.g., to restore equity or to escape from the unfair workplace) in the Dutch sample than in the sample of Belgian employees. However, results revealed that – again – most support was found for a stress-explanation for absenteeism. The best fit was found for a model in which the relationship between unfairness and absenteeism was fully mediated by stress reactions. Relationships that could point to “withdrawal”-processes, such as direct relationships between unfairness (i.e. distributive and procedural) and absenteeism, or a mediating role of psychological withdrawal (cynicism, poor affective commitment, and thoughts about leaving) in the relationship between perceived unfairness and absenteeism, did not significantly improve the fit of the model. In fact, the results suggest that the main reason why employees report sick as a consequence of unfairness is because they developed health complaints.

Perceived Unfairness, Stress Reactions, and Psychological Withdrawal

According to our model and findings (see Figure 1 and 2), both distributive unfairness and procedural unfairness trigger stress-reactions in individuals (i.e. emotional exhaustion and health complaints) that eventually lead to absenteeism. In addition, it was hypothesized that stress reactions as well as procedural unfairness lead to the development of distant attitudes towards work and the organization. As predicted, we found that: (1) procedural unfairness is related to stress reactions, which is, in turn, related to psychological withdrawal; and (2) procedural unfairness is directly and positively related to psychological withdrawal. Thus, employees' perception that the organizations' methods for doing things are unfair (e.g., superiors are biased and not straightforward, use unreliable sources to arrive at decisions or are disrespectful towards their subordinates) results in stress reactions and distant attitudes as a way of coping with stress (Leiter, 1993).

Unexpectedly, we found no significant relationship between distributive unfairness (i.e. unfair outcomes, for instance, receiving less salary or appreciation than it should be) and stress reactions. The results in the present study show that -- although material distributive unfairness is significantly correlated with emotional exhaustion -- there is no relationship with stress reactions in a model that also includes procedural unfairness. In other words, it seems that particularly procedural unfairness (i.e. perceived unfair decision-making processes) plays a role in the development of stress reactions.

Some characteristics of the sample in this study may be responsible for the finding that employees seem to be more "stressed" by procedural unfairness than by distributive unfairness. One possible explanation is that the fairness of decision-making processes is particularly salient in this sample. As previously mentioned, employees were confronted with important and far-reaching changes, such as the closure of one plant. Since prevailing decision-making processes may provide information about future decisions (Sweeney &

McFarlin, 1993), employees are probably particularly upset when procedures are unfair, also when they are not directly affected by unfair decisions themselves. In such circumstances, receiving unfair outcomes may be relatively unimportant to trigger stress reactions or may particularly increase the feeling that organizational processes are unfair. A second possible explanation for the unique contribution of procedural (and not distributive) unfairness to explaining variance in exhaustion and health complaints is that the sample in this study includes females as well as males whereas the Belgian sample included only male employees. Since females are believed to place more importance on processes than on outcomes [35], they may not only perceive more procedural unfairness – as was found in the current study - but may also develop more stress reactions when processes are unfair than when outcomes are unfair. ¹ Of course, these explanations are tentative and need to be confirmed in future studies.

Controlling for Gender and Hierarchical Position

An important aim of the current study was to examine whether the stress-explanation would still stand after controlling for gender and hierarchical position. In line with the literature, females and employees in a lower hierarchical position (i.e. factory workers) experienced more procedural unfairness than males and employees in a higher hierarchical position (Armstrong-Stassen, 1998). In addition, the results revealed that employees in lower hierarchical positions had higher absence rates than employees in higher hierarchical positions (VandenHeuvel & Wooden, 1995). Although hierarchical position was also directly related to absenteeism, we found that the relationship between unfairness and stress reactions and the relationship between stress reactions and absenteeism hardly changed in a model that also included gender and hierarchical position. This supports our assumption that it is actually perceived procedural unfairness that fosters stress reactions, which eventually leads to future absenteeism.

Limitations

The present study is not without limitations. First, we could not examine some of the more specific underlying processes responsible for stress, psychological withdrawal and absenteeism. For instance, concepts such as “tension”, “self-esteem” and “hope” were used to describe and explain some of the processes but were actually not measured. A second limitation is that the analyses in the current study are partly correlational and thus do not confirm causality. Although we assume in our model that perceived unfairness leads to employees’ impaired well-being, we are actually only allowed to conclude that perceived unfairness and employees’ impaired well-being are related. In fact, it is also possible that employees who feel not well perceive their environment more negatively or are more focused on fairness-issues in their environment, particularly if they feel that their situation depends on decisions by others. However, in a longitudinal study on the relationship between perceived unfairness and employees’ impaired well-being, we did find more support for the idea that perceptions of unfairness precede impaired well-being instead of the other way around (De Boer, Bakker, Schaufeli, 2003, Unpublished manuscript). Since one of the requirements of causal inferences is that causes precede consequences in time, we have thus some support for the idea that perceived unfairness leads to impaired well-being instead of the other way around. Two strong points of the present study are that we used absence figures collected during the year following the survey, and that absence data were retrieved from the company’s computerized registration system. Thus, our procedure avoided some common method variance problems most cross-sectional studies suffer from.

Theoretical Implications

Despite these limitations, the present findings have some important theoretical implications. Our findings suggest that the idea that people report sick as a result of unfairness because they do not want to attend work – for instance, in order to restore fairness

or to escape from the unfair situation – needs to be supplemented with the idea that people are less able to attend work because they have developed stress reactions by the unfair workplace. According to Johns (Johns, 1997), different parties attribute different causes to absenteeism. While researchers and employers usually presume that employees are absent to avoid an aversive workplace (researchers) or to display deviant behavior (employers), absent employees themselves assert that they suffer from stress reactions because of the workplace. It seems ‘fair’ enough if researchers would – at least – pay attention to laymen’s interpretation of their own sickness behavior before drawing rather negative conclusions about their absence motives (e.g., unwillingness to attend work).

An explanation for the fact that employees with a low hierarchical position and female workers are usually more focused on procedural fairness is that they have to rely more on the fairness of formal procedures to obtain fair outcomes, for instance because they have no influence on decision-making processes and no access to informal, male dominated communication-networks, respectively (Powell & Maniero, 1992).² Elaborating on this, it may be interesting to examine in future studies the role of feelings of powerlessness in the relationship between perceived unfairness and stress reactions. That is, there is evidence that perceived procedural unfairness is related to feelings of powerlessness (Armstrong-Stassen, 1998). It is possible that being in a powerless situation makes that people – in order to increase their sense of control – particularly focus on their environment and therefore easily ‘detect’ unfair processes. The opposite is also conceivable: people who feel unfairly treated may feel more powerless at work, for instance because unfair procedures usually lead to unfair outcomes. The latter may suggest that particularly feelings of powerlessness trigger the development of stress reactions.

Practical Implications

According to our findings, particularly the reduction of perceived procedural unfairness may reduce stress reactions in individuals and eventually reduce absenteeism. Superiors may try, for instance, to be more consistent (i.e. avoid favoritism) and accurate (i.e. be well-informed) in making decisions and to increase employees' insight (e.g., provide good explanations, listen and react to suggestions of employees) in the way decisions are made (Leventhal, 1980). Furthermore, it is important that superiors be straightforward and open in their communication to employees and be able to give them the feeling that they are respected members of the organization (Tyler & Bies, 1990).

Reduction of perceived procedural unfairness in the organization may not only lead to lower absence rates. For instance, in the current study we find that procedural unfairness is strongly related to psychological withdrawal as well; that is, distant attitudes towards work and the organization, characterized by cynicism, poor affective commitment and thoughts about leaving. Although employers emphasize the problem of absenteeism in organizations, psychological withdrawal may cause problems as well, such as little enthusiasm for new developments, poor job performance and voluntary turnover. Thus, efforts to reduce perceived unfairness at work may have several advantages for both employees and employers.

Footnotes

1. An important aim of the present study is to rule out the possibility that gender is responsible for the relationship between perceived unfairness on the one hand and stress reactions and absenteeism on the other. Here, we suggest a different matter, namely that the strength of relationships between distributive unfairness and stress reactions and between procedural unfairness and stress reactions may be different for male and female workers (Sweeney & McFarlin, 1997). Unfortunately, the sample in the present study is too small to

conduct multi-group analyses to test this assumption. However, recently, we conducted multi-group analyses within a larger sample and the results confirmed our idea that male workers are particularly stressed by distributive unfairness whereas female workers are more stressed by procedural unfairness than males (internal unpublished manuscript). This may (partly) explain why we found a significant relationship between distributive unfairness and stress reactions in the male sample in Belgium but not in the present study that also includes females.

2. The explanation for the finding that females and people in lower hierarchical position usually focus more on fair procedures is an instrumental explanation. That is, it assumes that people have more influence on obtaining or maintaining fair outcomes (e.g., a fair pay or fair credits for one's achievements) when procedures are fair. However, it must be noted that, in particular for gender differences, also other explanations have been mentioned in the literature. For instance, it has been suggested that females are more focused on group-processes than males -- including the fairness of those processes -- as they may have other values, norms and goals in the work situation because of differences in socialization (Sweeney & McFarlin, 1997).

Chapter 6

How the Relationship between Organizational Fairness and Well-being

Differs for Various Groups of Employees

Prior research suggests that there are differences in the importance individuals place on distributive and procedural fairness principles. For instance, males workers seem to particularly value outcome fairness, whereas females seem to particularly value process fairness (e.g., Sweeney & McFarlin, 1997). Such differences in values may lead to differences in the extent to which employees are affected by distributive and procedural unfairness.

In the present study, the question is raised whether gender and expectations about the exchange relationship with the organization influence the relationship between perceived unfairness and employees' well-being. Specifically, we will test a previously developed model (see Figure 1) in which both distributive and procedural unfairness predict stress reactions and in which stress reactions and process unfairness predict psychological withdrawal. Support has been found for this model in previous studies (De Boer, Bakker, Schaufeli, 2002a, 2002b). By additionally incorporating individual differences (i.e. gender and relational expectations) as moderators, we attempt to improve the predictive accuracy of the model.

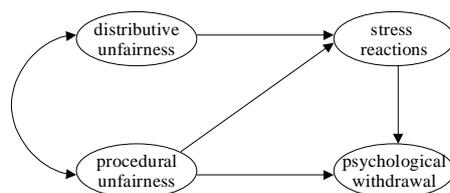


Figure 1. Model of Perceived Unfairness and Impaired Well-Being

Perceived Unfairness and Employees' Impaired Well-Being

According to our initial model (see Figure 1), perceived unfairness influences two aspects of employees' impaired well-being at work: 1) stress reactions, characterized by emotional exhaustion and psychosomatic health complaints, and 2) psychological withdrawal or distant attitudes towards work and the organization, characterized by cynicism, poor affective commitment and thoughts about leaving the organization.

Unfairness and Stress reactions

Two main categories of fairness are distinguished in the literature: distributive fairness, the perceived fairness of outcomes (e.g., salary or appreciation) received in the exchange relationship with the organization, and procedural fairness, the perceived fairness of decision-making processes (e.g., Cropanzano & Greenberg, 1997). Procedural fairness is further distinguished in a structural component that focuses on the fairness of characteristics of (formal) procedures and a social component that focuses on the fairness of communication processes (interactional fairness; e.g., Bies & Moag, 1986). We hypothesized (see Figure 1) and found that both unfair outcomes and unfair processes predict stress reactions (De Boer et al., 2002; 2002b). However, underlying processes may differ to a certain extent, which is described below.

An outcome is judged as unfair if it is lower than it should be, compared to some referent or standard (cf. Folger & Cropanzano, 1998; Homans, 1961). If, for instance, a colleague receives more credits for a similar work achievement, an employee may perceive inequity (Adams, 1965). Equity theory predicts that the presence of inequity creates tension and distress in employees and that employees will be motivated to reduce inequity (Adams, 1965; Festinger, 1957). When the tension continues - for instance, when employees perceive no means to reduce inequity - employees may develop mental and physical health complaints.

Perceived unfair decision-making processes, such as using unreliable sources to arrive at decisions, favoritism, self-interest and dishonesty of superiors, may lead to stress reactions as well. Employees may become upset and angry, for instance because unfair decision-making processes may impede acquiring of valued future outcomes (e.g., a salary-increase), or because of moral reasons (e.g., Montada, 1998; Sweeney & McFarlin, 1993). Furthermore, employees may infer from an unchanging unfair treatment that they are no valuable members of the organization, which can affect their self-esteem (e.g., Smith, Tyler, Huo, Ortiz & Lind, 1998). Low self-esteem, in its turn, has been related to several health complaints (e.g., Ganster & Schaubroeck, 1991) and may impede coping with (other) work stressors.

Unfairness and Psychological Withdrawal

Perceived unfairness not only fosters stress reactions but also leads to the development of distant attitudes or 'psychological withdrawal'. We assume that stress reactions fostered by perceived unfairness evoke psychological withdrawal as employees try to gain emotional distance from their work as a way of coping with stress (cf. Latack & Havlovic, 1992; Leiter, 1993). In addition, employees may turn their back on the organization without developing stress complaints, for instance if they have no hope that things will become fairer in the future and totally blame the organization for the unfairness.

We hypothesized and found that particularly as a result of procedural unfairness employees develop distant attitudes towards the organization (De Boer et al., 2002a, 2002b). An explanation for this result is that employees -- particularly as a result of procedural unfairness -- lose hope at receiving a fair treatment from the organization in the future because unfair processes are more than unfair outcomes viewed as stable characteristics of the organization and provide information about future policies (e.g., Sweeney & McFarlin, 1993). In addition, particularly as a result of procedural unfairness, employees may blame

representatives of the organization since people are generally more to blame for means (decision-making processes) than ends (outcomes) that result (Folger & Cropanzano, 1998).

Gender Differences

The first aim of the present study is to examine how gender influences the relationship between perceived unfairness and employees' impaired well-being. It has been suggested that females and males react differently to distributive and procedural unfairness because they differ in values, orientations, styles and goals, which may be caused by differences in socialization. According to this view, males value status differences, competition, and immediate rewards and may thus be more negatively affected by receiving unfair rewards (e.g., Aries, 1977; Deaux, 1976; Veroff, 1977). In contrast, females focus more on procedural fairness rather than outcome fairness because they value cooperation and harmonious relationships, are more aware of the events that happen to people around them, and avoid formation of status hierarchy (e.g., Kahn & Gaeddert, 1985; Major, 1987). Fair processes increase the probability that each group member gets what (s)he deserves in the long term and stimulate group-harmony (cf. Folger, 1996).

An alternative reason why unfair processes may more negatively affect females than males is that women may have to rely on more formal procedures and systems to obtain various organizational outcomes. Powell and Mainiero (1992) favour this explanation and argue that women have a history of discrimination (e.g., lower pay) and that they are less likely to have access to powerful mentors, and informal, male dominated communication-networks. Fair processes would ensure that each member in the organization will receive fair outcome in the future (cf. Folger, 1996).

The most extensive and well-known study on gender differences clearly showed the hypothesized differences. Sweeney and McFarlin (1997) found in a study among 12.670 federal employees that the relationship between distributive fairness and employees' negative

work attitudes (poor commitment and turnover intention) was stronger for men than for women, while the relationship between procedural fairness and those same outcomes was stronger for women than for men. More recently, Armstrong-Stassen (1998) found that female technicians reported more procedural unfairness and distributive unfairness related to layoffs from ex-colleagues than male technicians. In yet another study, Tata (2000) showed that men were more likely to use distributive principles than procedural justice principles but that women did not differ in their use of distributive versus procedural justice principles. Taken together, these findings suggest that, compared to males, females focus more on procedural fairness and, more generally, on justice-issues that concern the people around them, whereas males focus more on distributive fairness (see, however, Lee & Fahr, 1999).

In the present study, we want to investigate how gender affects our initial model on the relationship between unfairness and well-being (see Figure 1). As far as we know, no previous study about gender differences and fairness focused on stress reactions as a dependent variable or on the specific indicators of psychological withdrawal used in the present study: cynicism, poor affective commitment and thoughts about leaving. Based on the literature and prior findings, we assume that males (compared to females) are more negatively affected when they receive unfair rewards (e.g., when they receive less salary or credits than their colleagues for similar work tasks). In contrast, we assume that females are more negatively affected when organizational processes are unfair (e.g., when characteristics of procedures and communication processes are unfair). More specifically, we assume that gender affects our model (see Figure 1) as follows:

Hypothesis 1a: The relationship between distributive unfairness and stress reactions is stronger for males than for females

Hypothesis 1b: The relationship between procedural unfairness and stress reactions is stronger for females than for males

Hypothesis 1c: ¹ The relationship between procedural unfairness and psychological withdrawal is stronger for females than for males

Relational Orientation

Employees with varying expectations of the exchange relationship may react differently to perceived unfairness. A differentiation can be made between employees high in relational orientation and employees low in relational orientation or with a more 'business-like' orientation (Rousseau, 1990). Employees high in relational orientation have high expectations of the exchange relationship with the organization. These expectations refer not only to what an employee expects from the organization but also to employees' own contributions at work (cf. perceived mutual obligations in psychological contracts, Robinson & Rousseau, 1994). Employees high in relational orientation value not only that which they gain from their employer in the short run but, also, the relationship itself. Their exchange relationship is intended to be long-term and characterized by sentient ties and affective commitment (McLean Parks & Kidder, 1994). In contrast, employees with a 'business-like' orientation expect direct and immediate reciprocity and value especially tangible and material rewards, such as pay. The relationship is not intended to be long-term and what is exchanged has a short-term focus.

The extent to which employees have a relational orientation (i.e. the nature of the psychological contract) seems to play a role in whether employees place more importance on procedural or distributive fairness (McLeanParks & Kidder, 1994). Procedural fairness is considered to be more important for employees high in relational orientation (e.g., Wolfe Morrison & Robinson, 1997). Firstly, the fairness of decision-making processes provides more information than the fairness of outcomes about the future relationship with the organization since processes ('how things are usually going') reflect the organization's capacity and willingness to act fairly (e.g., Sweeney & McFarlin, 1993). Secondly, the social

component of procedural fairness (i.e. interactional fairness) explicitly focuses on the quality of the interpersonal relationship between an employee and the organization (e.g., respectful treatment, openness), which is central for relational contracts. It seems therefore likely that perceived procedural unfairness particularly leads to stress reactions and psychological withdrawal in employees high in relational orientation.

Distributive unfairness may have less impact on employees high in relational orientation (cf. McLeanParks & Kidder, 1994). That is, because reciprocity is long-term in nature for these employees, they will be more confident that they will receive fair outcomes from the organization in the long run (e.g., Wolfe Morrison & Robinson, 1997). In contrast, the focus on direct reciprocity in employees low in relational orientation leads to an calculative and instrumental attitude, whereby employees are primarily concerned with immediate outcomes (McLeanParks & Kidder, 1994). In sum, we hypothesize that:

Hypothesis 2a: The relationship between distributive unfairness and stress reactions is weaker for employees high in relational orientation than for employees low in relational orientation

Hypothesis 2b: The relationship between procedural unfairness and stress reactions is stronger for employees high in relational orientation than for employees low in relational orientation

Hypothesis 2c: ¹ The relationship between procedural unfairness and psychological withdrawal is stronger for employees high in relational orientation than for employees low in relational orientation

Method

Respondents and Procedure

Our sample is a composite sample that includes blue-collar and white-collar workers (e.g., managers, lawyers, designers) from a Dutch food industry firm ($n = 275$), security guards from a Dutch firm ($n = 222$), and security guards from a Belgian firm ($n = 588$). Processing and packing are the main activities of the factory workers and most of the white-collar workers perform management tasks. The daily work activities of the security officers primarily concern the guarding of company offices, public buildings and institutions. The percentage of female employees in each company was too small to perform analyses for each company separately.

Employees received a questionnaire at home, and were kindly asked to fill it out in private. The response was 64% for both the Belgian security firm and the Dutch food industry company, and 35% for the Dutch security firm. The total of usable questionnaires was 1085. About 10 percent of the sample is female (110 employees). Participants' mean age is 40 years ($Sd = 10$ years), and the mean organizational tenure is thirteen years ($Sd = 9$ years).

Measures

Perceived unfairness

Distributive unfairness was assessed with two scales that were constructed on the basis of equity theory (Adams, 1965; De Boer, Bakker, Syroit & Schaufeli, 2002). Both scales include five items and focus on material (i.e. salary) and social (i.e. appreciation by superiors) outcomes, respectively. Employees were asked to compare their situation with colleagues (3 items) and with their own situation in earlier times (2 items). An example-item relating to salary is: "What do you think of your salary.... when you compare your workload with your colleagues' workload?". A five-point scale was used, ranging from "in that case I find my salary much too low" (1) to "in that case I find my salary much too high" (5). An

example-item relating to appreciation from superiors is: “What do you think of the appreciation you receive from superiors.....when you compare the difficulty of your work with the difficulty of your work in earlier times?”. Items were coded such that higher scores refer to more distributive unfairness. The internal consistency was good for material distributive justice ($\alpha = .92$) and for social distributive justice ($\alpha = .90$).

Procedural unfairness was assessed with two other scales with five items each (De Boer et al., 2000). More specifically, five items refer to the following structural fairness principles (cf. Leventhal, 1980; Thibaut & Walker, 1975): consistency (procedures should be applied consistently across persons and over time), bias-suppression (personal self-interest should be minimized), accuracy (decisions should be based on high-quality information), correctability (opportunities should exist to reverse decisions) and process control/representativeness (various interests should be taken into account). In addition, five items refer to social fairness principles (‘interactional fairness’) such as standing (i.e. being treated with dignity and respect), openness, account-giving (clear and adequate explanations for decisions should be provided) and timely feedback about work changes (e.g., Bies & Moag, 1986; Tyler & Bies, 1990). An example of a structural item, referring to the accuracy rule, is: “Superiors try to be well-informed before they take any decisions.” Employees had to indicate to what extent they think that these statements were characteristic for their company (1= not at all, 5= to a large extent). The second scale measures social procedural fairness principles (i.e. timely feedback, account giving, standing, openness) and refers to the quality of interpersonal treatment employees receive from their superiors (cf. Moorman, 1991; Tyler & Bies, 1990). An exemplary item, measuring openness, is: “Do you feel that superiors communicate in a honest and straight-forward manner?” (1 = not at all, 5 = to a large extent). Items were coded such that higher scores referred to more procedural unfairness. The internal

consistency was satisfactory for structural procedural fairness ($\alpha = .76$) and for social procedural fairness ($\alpha = .90$).

Stress reactions

Health complaints were assessed using the VOEG, a validated 23-item Dutch questionnaire used to indicate subjective health complaints (Dirken, 1967; Martens, Nijhuis, Van Boxtel & Knottnerus, 1999). Participants were asked to indicate with 'yes' or 'no' the experience of health problems in the previous twelve months. Previous (explorative and confirmatory) factor-analyses showed that five factors could be distinguished: (1) Weariness/nervousness (8 items, e.g., "Do you often feel nervous?", KR20 = .80); (2) Pain in chest/heart (4 items, e.g., "Do you often have pain in your chest or heart region?", KR20 = .73); (3) Stomach complaints (3 items, e.g., "Do you often feel pain in your stomach?", KR20 = .88); (4) Sneezing/coughing (4 items, e.g., "Is your nose regularly all stuffed up?", KR20 = .69) and (5) Pain in bones/muscles (4 items, e.g., "Do you often have pain in the back?", KR20 = .61).

Exhaustion was measured with a subscale of the Maslach Burnout Inventory – General Survey (MBI-GS; Schaufeli, Leiter, Maslach & Jackson, 1996) and includes five items. Exemplary items are: "I feel emotionally drained from my work" and "I feel tired when I get up in the morning and have to face another day on the job (0 = never, 6 = always/daily). The internal consistency was good ($\alpha = .89$).

Psychological withdrawal

Cynicism was just as exhaustion measured with a five-item subscale of the MBI-GS (Schaufeli et al., 1996). Exhaustion and cynicism are both considered to be core symptoms of burnout (e.g., Maslach, Schaufeli & Leiter, 2001). Exemplary items are: "I have become less interested in my work since I started this job" and "I've noticed that I keep too much distance

from my work” (0 = never, 6 = always/daily). The internal consistency was satisfactory ($\alpha = .72$).

Affective commitment was assessed with a five-item subscale of a questionnaire that measures organizational commitment (Meyer & Allen, 1990). Affective commitment is characterized by positive feelings of identification with, attachment to, and involvement in, the work organization. We used a validated Dutch translation of this questionnaire (De Gilder, Van den Heuvel & Ellemers, 1997; Ellemers, De Gilder & Van den Heuvel, 1998). Example-items are “I feel emotionally attached to (name of the organization)” and “I feel at home at (name of the organization)” (1= not at all, 5= to a large extent). Afterwards, all answers were coded such that higher scores referred to poor affective commitment. The internal consistency was good ($\alpha = .90$).

Thoughts about leaving was assessed with a self-constructed three-item scale. Example-items are: “Every now and then I think about leaving.... (Name of the organization)” and “I’m thinking for some while about working at another company” (1= I totally disagree, 7 = I totally agree). The internal consistency was good ($\alpha = .94$).

Relational orientation

Relational orientation was assessed with a content-oriented measure that was based on Rousseau and DaPalma (1996). This measure addresses the terms and reciprocal obligations that characterize the individual’s psychological contract (Rousseau & Tijoriwala, 1998). “Relational promises by the organization” was measured with five items. Employees had to indicate at a two-points-scale (promised, not promised) what was promised to them by the organization (KR20= .77). Example-items are: “A good work relationship between you and the organization” and “Social support when you’re in trouble”. In a similar way, employees were asked what they (explicitly or implicitly) promised to the organization. Accordingly, ‘relational promises to the organization’ was also measured with five items

(KR20 = .70). Example-items are: “Being committed to developments in the organization” and “Staying at (name of the company)”. The total group ($N= 1085$) was divided using a median-split procedure in a group that had relatively high scores (scores above both medians) on both relational scales (promises by the organization and promises to the organization). This resulted in two groups: a group high in relational orientation ($n = 263$), and a group low in relational orientation ($n = 822$).

Analyses

All hypotheses were tested with multi-group structural equation modeling (SEM) analyses, using the AMOS computer-program (Arbuckle, 1997). The four latent variables in our model (Figure 1) – distributive unfairness, procedural unfairness, stress reactions and psychological withdrawal – are each estimated by manifest variables (i.e. the scales introduced before). Error-terms of the manifest variables emotional exhaustion and cynicism were allowed to correlate because exhaustion and cynicism are both considered to be burnout-dimensions and are both measured with identical scoring categories by the MBI-GS (e.g., Schaufeli et al., 1996). Items with identical rating scales have often measurement errors that are correlated (Byrne, 1989). An explanation for this covariation is that a person who fills out a questionnaire shows the same response bias for items within one instrument.

Critical ratio's, provided by Amos, were used to test the hypothesis that two model parameters are (un)equal. To evaluate the structural model, we followed Bollen's (1990) recommendation to interpret multiple indices of model fit. In the present series of SEM-analyses, the Goodness-of-Fit Index (GFI, Jöreskog & Sörbom, 1993), the incremental fit index (IFI; Bollen, 1989), the Non-Normed Fit Index (NNFI, Bentler & Bonett, 1980), the Comparative Fit Index (CFI; Bentler, 1990) and the Root Mean Square Error of Approximation (RMSEA; Steiger & Lind, 1980) are utilized. According to a recent article of Hu and Bentler (1999) values close to .95 for TLI, IFI and CFI and a value close to .06 for

RMSEA indicate that there is a good fit between the hypothesized model and the observed data.

Results

Gender Differences

Table 1 shows the means, standard deviations, and intercorrelations for males in the left/lower triangle ($n = 975$) and for females in the right/upper triangle ($n = 110$). In addition, Manova ($F = 2254.960$; $df = 13$; $p < .000$) revealed that females perceive significantly more material distributive unfairness ($p < .05$) and structural procedural unfairness ($p < .05$) than males and have higher scores on emotional exhaustion ($p < .01$), lower affective commitment ($p < .05$) and more thoughts about leaving ($p < .05$). Males, in contrast, experience more stomach complaints than females ($p < .01$).

Table 1.
Means, Standard Deviations, and Intercorrelations for Males ($n = 975$) and Females ($n = 110$)

		1	2	3	4	5	6	7	8	9	10.	11.	12.	13.	
		3.73 (.54)	3.46 (.47)	3.76 (.72)	3.52 (.81)	1.63 (1.16)	.24 (.28)	.09 (.18)	.10 (.25)	.16 (.24)	.26 (.29)	1.74 (1.14)	3.12 (.94)	2.99 (1.86)	
1.	Distributive Unfairness (material)	3.60 (.51)	--	.45***	.18	.22*	.23*	.04	.11	.20*	.03	.07	.13	-.09	.06
2.	Distributive Unfairness (immaterial)	3.45 (.47)	.62***	--	.30**	.40***	.21*	-.02	.09	.10	-.02	.07	.20*	-.05	.05
3.	Procedural Unfairness (structural)	3.55 (.84)	.32***	.44***	--	.63***	.24*	.13	.21*	-.02	.08	.32**	.34***	.31**	.19*
4.	Procedural Unfairness (social)	3.52 (.87)	.34***	.46***	.73***	--	.27**	.23*	.36***	-.01	-.01	.32**	.39***	.29**	.25**
5.	Emotional Exhaustion	1.25 (1.11)	.24***	.27***	.22***	.22***	--	.56***	.41***	.28**	.12	.15	.57***	.22*	.25*
6.	Weariness/nervousness	.25 (.28)	.19**	.24***	.23***	.22***	.58***	--	.51*	.15	.23*	.36***	.40***	.02	.28**
7.	Pain in chest/heart	.09 (.22)	.11**	.16***	.12***	.12***	.34***	.49***	--	.19	.27**	.25**	.35***	.08	.17
8.	Stomach complaints	.23 (.37)	.16***	.13***	.13***	.16***	.23***	.42***	.29***	--	.30**	.09	.12	-.09	.10
9.	Sneeze/cough	.18 (.28)	.17***	.18***	.15***	.15***	.24***	.32***	.22***	.26***	--	.11	.21*	.06	.35***
10.	Pain in muscles/bones	.26 (.29)	.11**	.15***	.16***	.17***	.31***	.42***	.31***	.28***	.26***	--	.16	.14	-.06
11.	Cynicism	1.64 (1.74)	.24***	.29***	.37***	.37***	.54***	.36***	.21***	.15***	.16***	.20***	--	.25**	.51***
12.	Poor affective commitment	2.89 (.96)	.16***	.15***	.37***	.41***	.20***	.16***	.07*	.11***	.08**	.07*	.40***	--	.25**
13.	Thoughts about leaving	2.56 (1.79)	.23***	.26***	.34***	.32***	.32***	.21***	.09**	.10**	.09**	.09**	.49***	.46***	--

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

Results of the multi-group SEM-analyses indicate that there is a good fit between the model and the data: fit-indices are near or equal to .95 (GFI = .96; CFI = .95; IFI = .95; TLI = .94) and the RMSEA is below .06. Figure 2 shows the standardized solutions of the model. Results concerning the male group are depicted before the slash; results concerning the female group are depicted behind the slash.

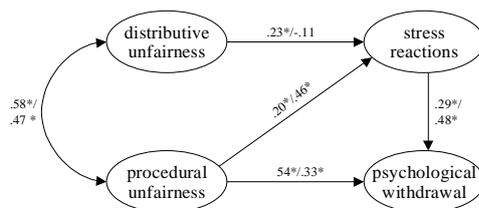


Figure 2. Model of Perceived Unfairness and Impaired Well-Being, Standardized Solution, N Males = 975 (before slash), N Females = 110 (after slash).

Amos provides statistics (i.e. critical ratio's) for testing the hypothesis that two model parameters are (un)equal. According to Hypothesis 1a, the relationship between distributive unfairness and stress reactions is higher for males than for females. In line with our hypothesis, the results confirm that the relationship between distributive unfairness and stress reactions is significantly stronger (CR= -2.446; $p < .05$) for males ($\beta = .23$; $p < .05$?) than for females ($\beta = -.11$, n.s.?). This means that Hypothesis 1a is confirmed. In addition, and as predicted, Figure 2 shows that the relationship between procedural unfairness and stress reactions is stronger for females ($\beta = .46$; $p < .05$) than for males ($\beta = .20$; $p < .05$). However, this latter difference between females and males only appears to be marginally significant

(CR= 1.790). Thus, Hypothesis 1b is not confirmed. Finally, we tested Hypothesis 1c stating that the relationship between procedural unfairness and psychological withdrawal is stronger for females than for males. Figure 2 shows that there is a significant relationship between procedural unfairness and psychological withdrawal in the male group ($\beta = .54$; $p < .01$) as well as in the female group ($\beta = .33$; $p < .05$). At first sight, this relationship even seems to be stronger in the male group than in the female group but the difference appears to be not significant (CR= - 1.619). This means that Hypothesis 1c is rejected.

Differences in Relational Orientation

Tabel 2 shows the means, standard deviations, and intercorrelations for employees low in relational orientation in the left/lower triangle ($n = 822$) and for employees high in relational orientation in the right/upper triangle ($n = 263$). In addition, manova ($F = 3338.884$, $df = 13$, $p < .000$) reveals that – as expected - employees high in relational orientation experience less distant attitudes towards the organization (cynicism, $p < .000$; poor affective commitment, $p < .000$; thoughts about leaving, $p < .000$) and are generally more positive than employees low in relational orientation (all four unfairness measures, $p < .000$; emotional exhaustion, $p < .000$ and weariness/nervousness, $p > .000$).

Table 2.
Means, Standard Deviations, and Intercorrelations for Employees Low (n = 822) and High in Relational Orientation (n = 263)

		1	2	3	4	5	6	7	8	9	10.	11.	12.	13.	
		3.52 (.54)	3.35 (.45)	3.32 (.94)	3.19 (.97)	1.00 (.94)	.17 (.24)	.08 (.20)	.16 (.33)	.16 (.27)	.23 (.29)	1.37 (1.03)	2.48 (.91)	1.83 (1.38)	
1.	Distributive Unfairness (material)	3.64 (.51)	--	.67***	.35***	.44***	.27*	.12*	.01	.08	.20**	.07	.30***	.15*	.24***
2.	Distributive Unfairness (immaterial)	3.48 (.48)	.57***	--	.51***	.58***	.23***	.13*	.14*	.07	.20**	.12	.34***	.23***	.26***
3.	Procedural Unfairness (structural)	3.66 (.78)	.27***	.39***	--	.78***	.31*	.25***	.22***	.12*	.20**	.15*	.41***	.40***	.37***
4.	Procedural Unfairness (social)	3.62 (.80)	.27***	.40***	.68***	--	.28***	.20**	.16**	.09	.18**	.13*	.39***	.43***	.34***
5.	Emotional Exhaustion	1.38 (1.56)	.22***	.26***	.18***	.18***	--	.47***	.30***	.07	.25***	.26***	.50***	.20**	.34***
6.	Weariness/nervousness	.27 (.29)	.17**	.22***	.19***	.20***	.58***	--	.50***	.31***	.29***	.37***	.25***	.13*	.26***
7.	Pain in chest/heart	.09 (.22)	.14**	.16***	.08*	.13***	.35***	.49***	--	.17**	.27***	.28***	.19**	.07	.10
8.	Stomach complaints	.23 (.37)	.17***	.14***	.09**	.15***	.25***	.41***	.30***	--	.30***	.31***	.12*	.04	.10
9.	Sneeze/cough	.19 (.28)	.13***	.14***	.12**	.12***	.21***	.32***	.21***	.25***	--	.24***	.16**	.13*	.15*
10.	Pain in muscles/bones	.27 (.29)	.11**	.14***	.17***	.19***	.29***	.42***	.31***	.25***	.25***	--	.16**	.03	.11
11.	Cynicism	1.73 (1.11)	.19***	.25***	.33***	.35***	.54***	.38***	.22***	.14***	.16***	.20***	--	.35***	.51***
12.	Poor affective commitment	3.05 (.93)	.10**	.07	.32***	.34***	.17***	.10***	.06	.08*	.05	.08*	.37***	--	.33***
13.	Thoughts about leaving	2.85 (1.85)	.18***	.20***	.28***	.27***	.28**	.17***	.08*	.07	.10**	.05	.47***	.42***	--

Note. *** p < .001, ** p < .01, * p < .05

Again, results indicate that there is a good fit between the model and the data (multi-group-analysis: $\chi^2= 312.91$; $df = 118$; $GFI = .96$; $CFI = .95$; $IFI = .95$; $TLI = .94$; $RMSEA = .04$; high in relational orientation: $\chi^2= 107.056$; $df = 59$; $GFI = .94$; $CFI = .96$; $IFI = .96$; $TLI = .94$; $RMSEA = .06$; low in relational orientation: $\chi^2= 205.771$; $df = 59$; $GFI = .96$; $CFI = .95$; $IFI = .95$; $TLI = .93$; $RMSEA = .06$). Figure 3 shows the standardized solution of the model for both groups. Results concerning the low relational group are depicted before the slash; results concerning the high relational group are depicted behind the slash. We tested whether there are differences between the parameters in the group employees low in relational orientation and employees high in relational orientation. In line with Hypothesis 2a, the results reveal that the relationship between distributive unfairness and stress reactions is significantly lower ($CR = -2.551$; $p < .05$) for employees high in relational orientation ($\beta =$

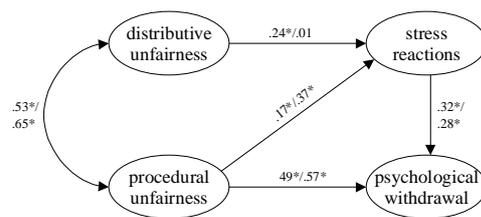


Figure 3. Model of Perceived Unfairness and Impaired Well-Being, Standardized Solution.

\underline{N} Low relational = 822 (before slash), \underline{N} High relational = 263 (after slash).

.01; n.s.) than for employees low in relational orientation ($\beta = .24$; $p < .05$). This means that Hypothesis 2a is confirmed.

Although the results were in the hypothesized direction, the relationship between procedural unfairness and stress reactions is not significantly higher for employees high in relational orientation ($\beta = .37$; $p < .01$) than for employees low in relational orientation ($\beta = .17$; $p < .05$; $CR = 0.459$, n.s). This means that Hypothesis 2b is rejected. Finally, we tested Hypothesis 2c stating that the relationship between procedural unfairness and psychological withdrawal is higher for employees high in relational orientation than for employees low in relational orientation. In line with our hypothesis, the results confirm that the relationship between procedural unfairness and psychological withdrawal is significantly stronger ($CR = .2018$; $p < .05$) for employees high in relational orientation ($\beta = .57$; $p < .01$) than for employees low in relational orientation ($\beta = .49$; $p < .01$). This means that Hypothesis 2c is confirmed.

Discussion

The central aim of the present study was to improve the predictive accuracy of a previously developed model that describes the relationship between perceived unfairness at work and employees' impaired well-being (De Boer et al., 2002a, 2002b). Specifically, we examined the influence of gender and relational orientation (i.e. nature of the psychological contract) on the relationship between distributive and procedural unfairness on the one hand and stress reactions (i.e. exhaustion and several psychosomatic health complaints) and psychological withdrawal (i.e. cynicism, poor affective commitment and thoughts about leaving) on the other. Some hypotheses were supported. This implies that the initial model was successfully extended by incorporating individual differences as moderators.

Gender

Consistent with prevailing ideas about gender differences (e.g., Armstrong-Stassen, 1998; Sweeney & McFarlin, 1997, Tata, 2000), our results suggest that male and female employees differ in their reactions to distributive and procedural unfairness. Specifically, the results reveal that the relationship between distributive unfairness and stress reactions was stronger for men than women. Thus, men showed more feelings of exhaustion and psychosomatic complaints than women in response to distributive unfairness. Interestingly, our findings suggested the opposite pattern regarding the relationship between procedural unfairness and stress reactions: this relationship was marginally stronger for women than men. [However, since this difference was only marginally significant, future research is needed.] These are interesting results, all the more since the moderating role of gender on the relationship between unfairness and stress-reactions was, as far as we know, unknown till the present study. Unexpectedly, no hypothesized gender-differences were found regarding the relationship between procedural unfairness and psychological withdrawal.

An explanation for the fact that we only found partial support for the gender-hypotheses is that there may be an increasing trend towards work value similarity and narrowing of gender differences (Buetell & Brenner, 1986). In a recent study, Lee and Fahr (1999) found that gender did not moderate the relationship between distributive or procedural unfairness and negative work attitudes, such as commitment. In addition, they found that male and female workers were both dissatisfied when feeling disadvantaged in pay. Interestingly, Lee and Fahr (1999) explain their results by the fact that their data is more recently collected (in the '90s) than the data from Sweeney and McFarlin's (1997) study (collected in the '80s).

It is possible that our results also reflect the *Zeitgeist*, which may explain why men and women primarily differ in the development of stress-reactions as a result of unfairness at work. Focusing on societal developments, it can be noticed that, on the one hand, traditional male and female values rapidly change as more women have joined the labor market. On the other hand, however, men are still considerably more than women working in full-time jobs and are the most important breadwinner while women are more than men taking care of social networks (Central Bureau for Statistics, 2000, 2002). Feeling more responsible for acquiring income and status, it may have more negative personal consequences for males when they notice that rewards are unfair (e.g., when colleagues receive more salary or credits for similar work tasks), which may particularly result in more stress reactions. In a similar vein, feeling more responsible for the functioning of social networks, unfair processes may have more negative personal consequences for females (e.g., unfair processes by superiors threaten group-harmony and can lead to insecurity about being a valuable member of social networks, cf. group-value model, Lind & Tyler, 1989).²

Relational Orientation

In addition to the influence of gender, we looked at the influence of the nature of the psychological contract on the relationship between perceived unfairness and employees' impaired well-being. Consistent with our hypothesis, we found that the relationship between distributive unfairness and stress reactions was significantly weaker for employees high in relational orientation than for employees low in relational orientation. In addition, we found - as predicted - that the relationship between procedural unfairness and psychological withdrawal was stronger for employees high in relational orientation than for employees low in relational orientation. However, the relationship between procedural unfairness and stress reactions was unexpectedly *not* significantly stronger for employees high in relational orientation. In sum, the results largely support the idea that the strength of the relationship between unfairness and well-being depends on the nature of the psychological contract.

Why did we find support for a moderating role of relational orientation for the relationship between procedural unfairness and psychological withdrawal but not for the relationship between procedural unfairness and stress reactions? An explanation may be that employees high in relational orientation particularly react more intensely towards the organization -- thus develop more distant attitudes instead of stress reactions -- because the quality of the relationship is central in the perception of their exchange agreement.

Remember that employees high in relational orientation have more often indicated than employees low in relational orientation that the organization promised 'relational things' to them (e.g., 'social support when you're in trouble') and that they themselves promised 'relational things' to the organization (e.g., 'being committed to developments in the organization'). Therefore, they probably invest more in the quality of the relationship and have higher expectations of the organizations' contribution to the quality of the relationship than employees low in relational orientation. Thus, when the organization threatens the

quality of the relationship by unfair decision-making processes, this can be viewed as a severe breach of promise in relational contracts. Consequently, employees may decide to break their promise as well and distance themselves from the organization. In other words, their psychological contract becomes less relational (e.g., McLean Parks & Kidder, 1994).

It is reasonable to assume that employees low in relational orientation (i.e. with a more 'business-like' orientation) have more distant attitudes towards the organization than employees high in relational orientation. This was also true for the employees in the present study. As expected, the results showed that these employees are more stressed by outcome unfairness than employees high in relational orientation. That is, the main reason they are engaged in an exchange relationship with their organization is receiving immediate rewards (e.g., money) in exchange for their work. Therefore, they are likely to be upset when they receive too low outcomes. Employees high in relational orientation, in contrast, are more tolerant when they receive negative outcomes because they are confident that they will get fair outcomes from the organization in the long run (e.g., Wolfe Morrison & Robinson, 1997).

Interestingly, our findings suggest that perceived unfairness plays a role in re-defining psychological contracts, which has been argued by several scholars (e.g., McLean Parks & Kidder, 1984; Wolfe Morrison & Robinson, 1997). Re-definition implies that employees' contributions to the exchange relationship reduce when an employee has made contributions that have not been reciprocated as promised. Consequently, cognitive dissonance (Festinger, 1957) will lead employees to revise the terms of the broken psychological contract. For instance, employees who are very loyal to their company and who expect organizational support in return, may become less loyal when they lack social support from the organization. The present study suggest that - as a consequence of procedural unfairness - employees transform their relational contract into a more 'business-like' contract, which implies that they

no longer believe and invest in a good relationship with the organization and develop more distant attitudes towards the organization.

Responsibility versus Reciprocity?

The results suggest that employees who are both male and engaged in a low relational i.e. business-like contract are particularly stressed by distributive unfairness, whereas employees who are both female and engaged in a high relational contract are particularly stressed by procedural unfairness³. It might be expected that females are *always* more engaged in relational contracts and males *always* more in business-like contracts. This would imply that gender-differences may account for the results regarding relational orientation. However, the results show that this alternative explanation is very unlikely since the group of female employees includes even less employees with a high relational orientation than the group of male employees ($F= 34.801$; $T= 2.508$, $df = 1083$, $p <.01$). This suggests that the impact of the nature of the psychological contract cannot simply be attributed to gender differences.

Another indication of different underlying processes is that our results reveal that employees high in relational orientation develop significantly more distant attitudes towards the organization as a result of process unfairness than employees low in relational orientation, whereas females do not develop more distant attitudes than males. Actually, our results suggest that females may develop more stress reactions than males as a result of procedural unfairness. One possible explanation for these different results may be that females who are 'socialized' - and who may thus feel more *responsible* - to take care of social networks will try to reach their goals at any price before they might distance themselves from the organization. In contrast, employees who act upon the *reciprocity*-principle - which is central in psychological contract theories - may more 'calculative' decide to psychologically

withdraw from the organization if the organization does not meet its promises. Of course, this reasoning is tentative but worthy of future research.

Limitations

The present study has limitations. First, the analyses in the current study are correlational and thus do not confirm causality. Thus, our use of expressions such as ‘impact’ is strictly speaking not entirely correct. Since work perceptions and well-being were measured simultaneously, results of the present study are tentative until confirmed by a longitudinal study. However, we have some evidence from a recent longitudinal study that perceived unfairness influences well-being instead of the other way around (De Boer et al., 2002). Second, although similar measures have been used, our measure of ‘relational orientation’ is not without problems. For instance, Rousseau and Tijoriwala (1998) argue that, given the fact that employment relations have changed, it is likely that once characterized ‘relational’ psychological contracts may have changed as well. In addition, one may question the retrospective nature of our measure (i.e. are employees able to remember their psychological contract terms when they entered the organization?). Third, although we offered several explanations for the results, this study does not provide insight in the reasons why different groups of employees react differently on distributive and procedural unfairness.

Practical Implications

What should employers do to make sure that employees develop neither stress complaints nor distant attitudes towards the organization? Prior research particularly emphasized the role of distributive fairness (i.e. equity) in the prevention of stress, burnout and absenteeism (e.g., Dittrich & Carrell, 1979; Van Dierendonck, Schaufeli & Buunk, 1998). However, among other things, our findings show that distributive unfairness is less important for females and employees high in relational orientation, whereas procedural unfairness affects all kinds of employees. Since organizations include different types of

employees (e.g., males and females, employees low and high in relational orientation) and the trend may continue that more women will join the labor-market, it seems important that superiors pay attention to procedural fairness as well.

According to McLean Parks and Kidder (1994), the more employees perceive distributive or procedural unfairness at work, the less relational their contract becomes, and the more they may engage in anti-role behavior (e.g., theft, negligence, sabotage) instead of extra-role behaviors (e.g., work extra hours, replace colleagues). Thus, reduction of both distributive and procedural unfairness may reduce the development of stress reactions and psychological withdrawal, but may also lead to less negative and aggressive behavior at the workplace.

Footnotes

1. No hypotheses were formulated regarding the relationship between distributive unfairness and psychological withdrawal. According to our model (see Figure 1), which has been supported in prior research (De Boer et al., 2002a, 2002b), psychological withdrawal is primarily influenced by procedural unfairness rather than distributive unfairness. This result was confirmed in the present study as well. There was no significant relationship between distributive unfairness and withdrawal in a model that also includes procedural unfairness (males: $\beta = -.08$, n.s.; females: $\beta = -.03$, n.s.; low relational orientation: $\beta = -.07$; high relational orientation: $\beta = .04$).

2. Another consequence of a higher felt responsibility for social networks may be that females do not easily withdraw from the organization. Remember that we also hypothesized (see Figure 1) and found that stress reactions triggered by unfairness lead to psychological withdrawal, as employees may gain emotional distance from work as a way of coping with stress. It is possible that females primarily withdraw when they have developed stress reactions. This may also explain why we did not find that the direct relationship between

process unfairness and psychological withdrawal is stronger for females. It is possible that females more than males develop distant attitudes because of process unfairness after having developed stress complaints. Indeed, additional analyses reveal that excluding stress reactions from the model reduces 11 percent in the explained variance in psychological withdrawal in the female sub-sample, against only 5 percent in the male sub-sample. Thus, in particular for females, stress reactions partly mediate the relationship between procedural unfairness and psychological withdrawal (Baron & Kenny, 1986).

3. Unfortunately, this assumption could not be tested in the present study because of the composite of our sample (i.e., the group female workers with a high relational orientation is too small).

Chapter 7

Conclusions and General Discussion

In this final chapter, the most important results described in the empirical chapters, and implications for theory and practice will be discussed. In this thesis, the negative consequences of perceived unfairness at the workplace for employees' well-being and absence behavior have been studied. Thus, the focus has been on the impact of perceived immoral leader behavior, behavior that is not regarded 'righteous' by employees (Montada, 1998).

Two Main Research Questions

This thesis tried to answer two main questions. The first question was: What are employees' motives to report sick as a consequence of perceived unfairness at work? The second question was: Does perceived procedural unfairness influence well-being and absenteeism, in addition to distributive unfairness? Recall that distributive unfairness refers to the extent to which people regard the rewards they receive from the organization in return for their work as fair. For instance, an employee may find it unfair to receive more responsibilities at work, while his salary does not increase (cf. lack of equity, Adams, 1965). Procedural unfairness refers to the way in which important decisions are made at the workforce, for instance decisions about workload, work circumstances, work content, or about other issues that concern employees.

Absenteeism as a Consequence of Unfairness at Work: Stress or Withdrawal?

The most obvious reason to be absent may well be that people report sick because they are really ill. For instance, they may suffer from the flu or from back pain, and are, therefore, not able to attend work. The decision to stay at home may then speak for itself and is probably accepted by most employers and company doctors. But what if people feel unfairly treated at work? What may, then, be their most important reason to report sick? Are

these persons actually less able to attend work, for instance, because they developed stress reactions as a consequence of the unfair work situation? Or does absenteeism, in this specific case, has a different meaning? For instance, do these individuals want to temporarily escape from the unfair work situation? Or must absenteeism be viewed as a kind of protest against the unfair work situation? Or, is this temporarily break in their work investments at work a more or less conscious, calculative choice to compensate for negative work aspects (Chadwick-Jones et al., 1982)?

The empirical findings presented in this thesis revealed that, in both the Belgian and the Dutch study, there was a relationship between perceived unfairness and absenteeism through the development of stress reactions (Chapter 3, 4 and 5). Stress reactions were indicated by emotional exhaustion -- feelings of emptiness and extreme tiredness, and by psychosomatic health complaints, varying from 'nervousness' and a 'headache' to 'backpain' and 'stomach disorders'. The results are in line with the stress-explanation for absenteeism (cf. Johns, 1997). The major assumption in the 'stress'-explanation is that employees are temporarily less able to attend work, as they actually have developed stress reactions because of the unfairness.

No evidence was found for withdrawal-explanations for absenteeism. The major assumption in the 'withdrawal'-explanation was that employees report sick because they are temporarily unwilling to attend work because they feel unfairly treated at work: they distance themselves from work and the organization (cf. Johns, 1997). First, no direct relationship was found between unfairness and absenteeism. This result is thus not in line with prior studies who did found a direct relationship and regard absenteeism as a way to calculatively compensate for negative work experiences at work, such as for instance being disadvantaged in pay (Geurts et al., 1994; 1994). Secondly, no support was found for the idea that the relationship between unfairness and absenteeism was mediated by psychological withdrawal.

Psychological withdrawal is defined as a distant attitude towards work and the organization -- characterized by cynicism, poor affective commitment, and thoughts about leaving -- and has been regarded as precursor of actual withdrawal behaviors, such as lateness, unexcused absenteeism, and turnover (Hulin, 1991). Third, no support was found for the prevailing idea in withdrawal-research that absenteeism and turnover are part of a similar withdrawal-process, and that they have similar causes (cf. Johns, 2001). Results revealed namely that voluntary turnover was exclusively preceded by psychological withdrawal (triggered by perceived unfairness), whereas absenteeism was exclusively preceded by stress reactions (triggered by perceived unfairness).

Particularly the replication of the Belgian results in the Dutch setting increased confidence in the stress-explanation. That is, it was assumed that there would be more 'room' for withdrawal-processes in the Netherlands - thus for reporting sick without suffering from health complaints -- since Dutch employees need no official medical confirmation to be absent, in contrast to employees in Belgium. However, also in the Dutch sample, stress reactions triggered by perceived unfairness predicted future absenteeism (see Chapter 5).

In prior research on the relationship between perceived unfairness at work and absenteeism, individuals' stress reactions have been seldom included as a possible mediating variable, despite the fact that in many other studies evidence was found for an empirical relationship between distributive unfairness and stress reactions (e.g., Bakker, Schaufeli, Sixma, Bosveld & Van Dierendonck, 2000; Hendrix & Spencer, 1987; Van Dierendonck, Schaufeli & Buunk, 1998). In the studies presented in this thesis, most support was found for the idea that the main reason why employees, who feel unfairly treated at work, report sick is because they have developed stress reactions.

Below, it will first be discussed which role procedural unfairness plays in the development of stress reactions and psychological withdrawal, and if this role is different

from the role of distributive unfairness. After that, theoretical implications of the finding that particularly stress reactions as a result of unfairness predict absenteeism are discussed.

The Additional value of Procedural Unfairness

Procedural unfairness was included as a new component in the presented research, since it was assumed that perceived unfair processes may contribute to the already known negative impact of unfair outcomes. Recall that procedural unfairness refers to the extent in which individuals regard the 'way in which things' go in the organization as unfair. For instance, in the interviews upfront the empirical studies, an employee questioned the fairness of decisions about the workperformance, since leaders never actually showed up at the workplace (cf. lack of accuracy, Leventhal, 1980). In addition, she found it unfair that some of her colleagues were fired because they did not satisfy to job requirements, whereas shortly after this incident, new employees were hired that not had to fulfill to these job requirements (cf. lack of consistency, Leventhal, 1980). Procedural fairness also concerns the way in which leaders implement decisions (e.g., the extent to which they use good explanations) and how they more generally communicate (e.g., respectful or not) to their personnel (Bies & Moag, 1986). This is considered to be the social component of procedural fairness (Cropanzano and Greenberg, 1997).

Distributive and Procedural Unfairness: A Material and a Social Side

The fairness literature was more or less familiar with the social side of procedural fairness, which has also been referred to as interactional fairness (e.g., Bies & Moag, 1986). A new finding of the research presented in Chapter 2, is that also distributive unfairness can be regarded as a concept with a material and a social side. That is, employees can feel disadvantaged in material rewards, such as salary, but also in social rewards, such as appreciation by superiors. Both material and social items were included in the measurement of distributive and procedural fairness. In general, one could say that material items refer

more to 'the way in which one feels exploited', while social items refer more to 'the extent to which one feels socially deprived' (see also the section Future Directions).

Procedural Unfairness as Precursor of Impaired Well-Being

The key issue in this thesis concerned the investigation of consequences of unfair outcomes on the one hand, and consequences of unfair processes on the other. The findings from all presented studies clearly show that employees do not only experience negative consequences of the receipt of unfair outcomes, but also because of their perceptions of unfair processes. In other words, not only the result of decisions is important for employees' well-being but also the way in which leaders take decisions about work issues. Specifically, indications were found that perceptions of procedural unfairness relates to employees' stress reactions, the most important predictor of absenteeism. In all cross-sectional surveys, employees felt more emotionally exhausted and indicated to suffer more from psychosomatic health complaints when they perceived more procedural unfairness (Chapter 3, 4, 5, and 6). In addition, findings from the longitudinal study revealed that procedural unfairness influenced employees' feelings of exhaustion and some stress reactions (i.e. pain in muscles or bones) a year later, which cannot be ascribed to employees' previous level of stress reactions (Chapter 4). In addition, no support was found for the assumption that impaired well-being causes perceptions of unfairness, instead of vice versa. In sum, results suggest that perceived unfair processes at the workplace has a negative short-term and some negative long-term influence on employees' state of health.

The finding that procedural unfairness is important for the development of stress reactions, is confirmed by recent research of Elovainio, Kivimäki and colleagues (; Elovainio M, Kivimäki M, Vahtera J., 2002; Kivimäki, Elovainio, Vahtera, and Ferrie, 2003). In an impressive cohort study, they showed that perceived fairness of processes was associated with a higher risk of sickness absence, psychiatric morbidity, and self-rated health. Together

with a study of Schmitt and Dörfel (1999), who found that procedural unfairness was related to the number of days factory employees felt sick at work, the results seem to form a new trend that emphasizes the impact of perceived unfair processes on stress reactions.

Although not actually empirically investigated in the studies presented in this thesis, there are good conceptual grounds for justifying a relationship between procedural unfairness and stress reactions. According to self-interest theories that focus on the reason why fairness may be important for individuals, employees particularly value procedural fairness because fair processes increase chances at obtaining fair outcomes in the long run (Thibaut & Walker, 1975). Therefore, employees may become angry and upset (Weiss et al., 1999) when decision-making procedures are unfair. Regardless of their own personal reduced chance to receive fair outcomes, employees may just become very indignant and angry about the fact that leaders use unfair processes, because of moral orientations and social responsibilities (Montada, 1998). These severe negative emotions can result in exhaustion and the development of stress reactions, as employees may have difficulties to relax at home and may attempt to stop the unfair leader behavior (e.g., conflicts with superiors). Finally, according to group-value theory (Lind & Tyler, 1992; Tyler, DeGoey & Smith, 1996), fair treatment indicates that an individual is a respected member of a group (i.e. ingroup member), while unfair treatment serves as notification of marginal group status (i.e. outgroup member). In line with this, research has shown that under certain conditions procedural unfairness negatively affects employees' self-esteem (e.g., Smith, Tyler, Huo, Ortiz & Lind, 1998). Low self-esteem may impede coping with (other) work stressors, and may trigger the development of stress reactions.

Procedural unfairness is not only related to stress reactions but also to other negative implications for employees' well-being. According to the withdrawal-explanation for absenteeism, the relationship between procedural unfairness and absenteeism would be

mediated by psychological withdrawal. Although no support was found for this withdrawal-explanation for absenteeism, procedural unfairness turned out to be considerably strong related to psychological withdrawal in all empirical studies (Chapter 3,4,5 and 6). Employees who psychologically withdraw have become cynical and have lost interest in their work, show little commitment to and involvement in the organization, and think about working at another company. In addition, findings from the longitudinal study revealed that procedural unfairness influenced indicators of psychological withdrawal a year later, and predicted voluntary turnover (Chapter 4). These results suggest that the perception of employees that leaders use unfair organizational processes makes that people lose their hope at a satisfactory future at their company, and distance themselves in mind and feelings from their company.

Different Impact of Distributive and Procedural Unfairness

A contribution of the research presented in this thesis is that it is possible to compare the influence of procedural unfairness on the one hand and distributive unfairness on the other on well-being and absenteeism. It was assumed that procedural unfairness would contribute to impaired well-being and absenteeism, in addition to the already known influence of distributive unfairness (e.g., Dittrich & Carrell, 1979). However, such a result may not be found when it is true that employees do only care about the fairness of processes (e.g., accurate, bias-free, consistent, Leventhal, 1980) because this increases the chance to receive personal fair outcomes (e.g., fair pay). In that case, only unfair outcomes may explain an increase stress reactions. In addition, it may even be questioned whether people are -- at all -- able to distinguish between fair outcomes and fair processes. That is, distributive and procedural fairness may go together in people's mind because employees make inferences about the fairness of procedures based on the perceived fairness of received outcomes (e.g., Folger, 1996).

Unique contribution of procedural unfairness

The findings reveal that there is no support for the above-mentioned alternative assumptions. The results reveal that employees actually distinguish between distributive and procedural unfairness (see Chapter 2). In other words, they seem to regard unfair processes as different from unfair outcomes. In addition, all studies clearly show that procedural unfairness relates to stress reactions and psychological withdrawal, after controlling for distributive unfairness.

Moreover, results suggest that the impact of procedural unfairness on impaired well-being is more stable and robust than the impact of distributive unfairness. First, an effect of procedural unfairness on stress reactions and absenteeism was found in all conducted studies, whereas no relationship was found between distributive unfairness and stress reactions in the Dutch sample (see Chapter 5). Second, results show that procedural unfairness is important in all studied subsamples: males and females, employees with a business-like attitude and employees with a relational attitude. In contrast, distributive unfairness was only important for males and employees with a business-like attitude (see Chapter 6). Finally, the results show that distributive unfairness not at all contributes to psychological withdrawal, whereas procedural unfairness is considerably related to employees' distant attitudes towards work and the organization. In sum, these results suggest that procedural fairness is even more important for employees' well-being than distributive fairness

Theoretical implications

Theoretical models about the impact of unfairness and other negative work circumstances on well-being differentiate between precursors of personal consequences of unfavorable work circumstances (e.g., low job satisfaction, stress reactions, negative feelings) and precursors of negative consequences for the employee-organization relationship (e.g., a negative and cynical attitude towards the organization, low leader appreciation, low trust in the system, low involvement, low attachment, turnover intention). For instance, support has

been found for the Job Demands-Resources Model (Demerouti, Bakker, Nachreiner, Schaufeli, 2001), in which job demands refer to aspects of the job (e.g., workload) that require physical or mental effort, and are therefore associated with certain physiological and psychological costs, such as exhaustion and health complaints. In contrast, job resources refer to aspects of the job that can be regarded as a mean to achieve workgoals, reduce job demands, and stimulate personal growth and development (e.g., social support of leaders), and are associated with disengagement (e.g., low job attachment and low involvement). In addition, organizational fairness research found support for the two-factor-model, that assumes that distributive unfairness is more predictive of personal evaluations, such as job satisfaction, whereas procedural unfairness is more predictive of global and negative evaluations of the organization, such as organizational commitment and trust in leaders (Folger & Konovsky, 1989; Alexander & Ruderman, 1987; Sweeney & McFarlin, 1993; McFarlin & Sweeney, 1992).

Psychological withdrawal (i.e. distant work attitudes) can be regarded as a 'negative consequence for the relationship between an employee and the organization'. According to the two-factor-model, this would imply that in particular procedural unfairness is predictive of psychological withdrawal. This result is in line with the findings presented in this thesis because procedural unfairness turned out to be considerably related to psychological withdrawal, whereas distributive unfairness was not. An explanation for this result is that particularly procedural fairness issues determine the perceived capacity of an organization to treat employees fairly (Sweeney & McFarlin, 1993). That is, unfair procedures are more viewed as stable (i.e. unchanging) characteristics of an organization than unfair outcomes. In addition, leaders may be more to blame for the means they choose (processes) than for the ends (outcomes) that result (cf. Folger and Cropanzano, 1998). Thus, it can be expected that employees psychologically withdraw from the organization as a result of procedural

unfairness, since they have no hope that things may become fairer in the future, and blame the organization for the unfairness.

Stress reactions can be regarded as a 'personal consequence of unfavorable work circumstances'. According to the two-factor-model (e.g., Sweeney & McFarlin, 1993), distributive unfairness is thus particularly predictive of stress reactions and not of psychological withdrawal. This is confirmed by all empirical studies presented in this thesis. Using the language of the Job Demands-Resources Model, distributive unfairness may be more viewed as a job demand requiring mental or physical effort, while procedural unfairness may be more viewed as a job resource that facilitates to reach a certain goal. This also seems to be in line with ideas in the fairness literature. According to Adams (1965), inequity (i.e. distributive unfairness) causes tension in individuals as they experience cognitive dissonance by investing in their work but not receiving fair rewards in return (Festinger, 1957), which they attempt to reduce by changing their behavior or thoughts. Moreover, according to self-interest theories (Thibaut & Walker, 1975), people strive to maximize achieving rewards, and fair processes can be a mean to facilitate this goal.

The finding that also procedural unfairness is related to stress reactions, in addition to distributive unfairness, does not entirely fit in the above-mentioned picture. Apparently, procedural unfairness should not only be regarded as a 'resource' or as a 'mean' to get fair outcomes -- which particularly leads to negative attitudes towards the organization -- but also as a 'demanding stressor' that triggers the development of stress reactions. This may suggest that the reduced chance to receive future fair outcomes, but also moral indignation as a consequence of the use of unfair processes by leaders, or reduced self-esteem, has more negative personal consequences for employees (i.e. for their state of health) than was initially assumed. This means that prior ideas about the nature and consequences of procedural unfairness need to be adjusted.

Dealing with Perceived Unfairness

According to Folkman and Lazarus (1988), people develop stress reactions when they appraise their environment as potentially harmful or threatening, and when they do not make use of effective coping-strategies to deal with stressors. Several studies have found that particularly problem-focused strategies, strategies that attempt to alter the negative environment, are adaptive or beneficial to well-being (Hart & Cooper, 2001). Since the findings presented in this thesis suggest that employees develop stress reactions as a result of both distributive and procedural unfairness, individuals may not always make use of (effective) coping-strategies to deal with perceived distributive and procedural unfairness at work.

Harm to the Individual and to the Organization

The idea that people may not always have effective coping-strategies to deal with perceived unfairness at work, which may lead to individual harm in the form of stress reactions, received little attention in the organizational fairness literature thus far. By far the most attention is paid to the fact that individuals' ways to deal with unfairness at work harm the (relationship with) organization. For instance, new research areas have been programmed to the occurrence of counterproductive behaviors (Bennet & Robinson, 2000; Sacket & DeVore, 2001). Counterproductive behavior refers to 'any intentional behavior on the part of the organization member viewed by the organization as contrary to its legitimate interests' (Sacket & DeVore, 2001, p.145). Perceived unfairness at work is assumed, and has proven, to play an important role in the occurrence of so-called counterproductive behaviors, such as employee theft, sabotage and low productivity (e.g., Greenberg, 1993).

Absenteeism is also usually regarded as a form of 'deviant', 'counterproductive' behavior (Sacket & DeVore, 2001), or as a form of 'withdrawal' behavior (e.g., turnover, lateness, absenteeism): an escape from or adaptation to negative work situations (Johns,

1997; Hulin, 1991; cf. 'neglect', Rusbult, Farrell, Rogers & Mainous, 1988). Prior research on fairness and absenteeism regards absenteeism as withdrawal, or as a way to restore equity (Adams, 1965). That is, by being absent, people do less invest in their work but still receive the same salary (e.g., Geurts et al., 1994; Van Yperen et al., 1996). From a coping-perspective, this restoration of equity by being absent can thus be viewed as an -- at least for the individual -- effective, problem-focused way to deal with inequity, since individuals purposively change the perceived unfair work situation into a fair work situation (cf. Jasso's purposive behavior in reaction to unfairness, 1986). However, the finding that individuals can also be personally damaged by perceived unfairness at work, suggest that people may not always be able to effectively cope with unfairness. In addition, by reporting absent, they may not always have the intention to harm the organization.

The -- beforehand -- labeling of individual (absence) behavior as "counterproductive" or "withdrawal" behavior troubles the understanding of individuals' motives to perform a certain behavior. According to Johns (2001), 'the essential problem with the withdrawal label is that it connotes a single cause or motive to behaviors that are surely complexly determined'. Moreover, Sackett and DeVore (2001), suggest that an antecedent of counterproductive behaviors may actually be employees' experienced stress level at work. Unfortunately, their major discussion of antecedents is mainly based on other possible antecedents, such as personality factors that subscribe individuals' intention to harm the organization (e.g., lack of integrity). In addition, equity-theory is criticized (Donovan, 2001) for its inability to predict why individuals choose a specific behavior (e.g., absenteeism or turnover). Actually, a recent study found no support for Adam's assumption (1965) that employees' motive to be absent is to restore equity (Taris et al., 2000). Specifically, results show that the level of inequity was not at all reduced after employees' had reported sick. Particularly stress reactions as a consequence of inequity were related to employees' absence

behavior. In sum, employees' intention to harm the organization may be overrated as an explanation for absenteeism, whereas their own personal damage as a result of an unfair work situation may be underestimated as a motive to be absent.

Effective Ways to Deal with Unfairness

The findings presented in this thesis reveal that perceived unfairness can lead to negative consequences for both individuals and the organization. An interesting question is then whether employees may develop effective coping-strategies to deal with unfairness at work, which have - at the same time - no negative impact on the functioning of organizations. As was well-remarked by Hart and Cooper (2001, p. 97) 'having happy and satisfied employees is of little value of an organization unless employees are also performing efficiently and productively', and 'having an efficient and productive organization is of little value if this is achieved at the expense of employee well-being'.

Since problem-focused coping -- coping that aims to alter the environment -- is usually regarded as the best coping-strategy of individuals (Danna & Griffin, 1999; Latack & Havlovic, 1992), it probably is most effective for employees to change the unfair work situation in a fair one. This may not be an easy thing to do in practice, because employees are usually simply left to leaders' decisions. However, an interesting study of Korsgaard, Roberson and Rymph (1998) suggest that employees actually can have influence on the extent to which leaders behave fairly towards their employees. Korsgaard and colleagues assumed that an employee who communicates assertively would be more likely to ensure that the leader hears and acknowledges the employee's opinions (cf. voice, Thibaut & Walker, 1975). In addition, employee use of attentive listening, another component of assertiveness, should result in greater explanation of the basis of decisions (cf. accountgiving, Bies & Moag, 1986). A laboratory study indeed demonstrated that appraisers engage in more procedural fair behavior (i.e. interactionally fair behavior) when interacting with an assertive

appraisee than with an unassertive appraisee. These results are promising in a way that individuals may not always be 'victim' of unfair practices by leaders, which may result in the development of stress reactions, but may actually have some influence on the extent to which leaders' use fair communication processes.

The Importance of Fairness Issues in Leader-Employee Exchange Relationships

Not each employee may be able to behave assertively towards its leader, nor may an assertive attitude always be appreciated by leaders. Thus, another 'solution' to prevent impaired well-being and counterproductive behavior of employees is that leaders 'simply behave more fairly'. That is, immoral behavior of employees, is usually triggered by leaders' immoral behavior, namely by their use of unfair policies and practices (Sackett and DeVore, 2001). According to Folger and Skarlacki (1998), leaders sometimes use unfair procedures because they believe that acting in a fair manner will result in a loss of control and influence or in a loss of status or credibility. In addition, they may distance themselves from negative decisions, and prefer to minimize their interactions with individuals who are affected by the decision, to avoid conflicts. This implies they show less consideration to subordinates, which is perceived as unfair by employees. Thus, unfair leader behavior may partly be seen as failing leader behavior.

Fairness and the Success of Leader-Member Exchange Relationships

A central question in theories on leadership is: "what is a good and successful leader?" (Den Hartog and Koopman, 2001). Theories about psychological contracts deal with 'what employees believe the organization is obligated to them, and what they are expected to invest in return' (Rousseau, 1989; Schalk & Rousseau, 2001). Thus, a central element in these two theoretical streams as well as in theories on fairness is how leaders should behave in the eyes of employees. Moreover, according to recent insights fair behavior of leaders partly determines the success of leader-member exchanges.

Schalk and Rousseau (2001), who wrote about psychological contracts, as well as recent leadership theories (cf. leader-member exchanges, Graen & Uhlbien, 1995; need for leadership, De Vries, Roe & Taillieu, 1999), emphasize the value of individual exchange agreements. This means that some individuals expect to receive, for instance, childcare in return for their work investments, whereas others expect, for instance, a cell phone or company car. However, it is argued that a consequence of this individual approach is that employees will not be treated equally or consistently, which may increase perceptions of unfairness (Scandura, 1999; Schalk & Rousseau, 2001). Thus, the presumed good effects of individual and idiosyncratic exchange relationships can be lost if not taking into consideration fairness issues.

In addition, a study of Pillai, Schriesheim and Williams (1999) shows that the success of leadership is caused by the fact that individuals' perceptions of procedural fairness are enhanced. Among other things, Pillai and others found that the relationship between transformational leadership and organizational citizenship (i.e. extra-role behavior) was mediated by procedural fairness. In other words, employees do more invest in the organization when leaders act in accordance to procedural fairness principles (see also Moorman, 1993).

Expectations of Fair Leadership Behavior in Exchange Relationships

An explanation for the failure of leader-member exchange relationships may be that leaders are unaware of employees' expectations about fair leadership behavior in exchange agreements. According to Arnold (1996), less is known about the exact content of psychological contracts. As was just mentioned, individuals may differ in their beliefs about 'what each party owes the other' (e.g., childcare or a mobile phone in return for work). Some aspects of leadership behavior may, however, always be expected by the majority of employees. According to Rousseau and others (Rousseau & Parks, 1993; Schalk & Rousseau,

2001), fairness issues can be viewed as meta-obligations or aspects that each party may take for granted to occur in exchange relationships. The finding, presented in Chapter 2, that perceived violation of procedural fairness principles, such as 'openness and straightforwardness' and 'respect', is considerably related to perceived violation of the psychological contract, may suggest that the part of these so-called taken-for-granted factors in psychological contracts is relatively large. Thus, when leaders do not act in accordance to fairness principles, this may be perceived by employees as a severe breach of the psychological contract.

Individual Needs for Distributive and Procedural Fairness

The trend to emphasize the quality of individualistic leader-employee exchange relationships, may indicate that also the extent to which procedural fairness or distributive unfairness is important partly depends on individual needs and preferences (Wolfe Morrison & Robinson, 1997). The results presented in this thesis seem to subscribe this idea. For example, findings reveal that males and individuals with low relational (i.e. more business-like attitudes towards work and the organization) expectations of the organizational exchange relationship develop more stress reactions when received outcomes are lower than expected (i.e. distributive unfairness) than females and individuals with high relational expectations, who develop particular negative reactions to procedural unfairness. In other words, individuals may differ in the importance they attach to certain types of fairness.

This more individual approach is relatively uncommon in the fairness literature, in which the importance attached to particular fairness principles is usually attributed to differences in the situational and cultural context (cf. Deutsch, 1975; Chen, 1995) instead of to different individual needs or preferences (with an exception of the literature about equity sensitivity, Huseman, Hatfield & Miles, 1983).

Limitations

The research presented in this thesis is not without limitations. A first limitation concerns the fact that analyses were correlational and were mostly based on cross-sectional data. In the majority of the presented studies, work perceptions and well-being measures were thus measured simultaneously, which implies that severe conclusions about causality cannot be made. A strong point is, however, that we used absence frequency figures collected during the year following the questionnaire. Another strong point is that a longitudinal, one-year follow-up, design was used in one study. The findings reveal that, as expected, more evidence was found to support the hypothesis that distributive and procedural unfairness cause impaired well-being instead of the other way around (cf. Kivimaki et al., 2002). Despite these reassuring results, it remains a fact that particularly high stability in fairness perceptions as well as in measures of well-being were found. This may indicate that the time lag (one year) was not entirely appropriate (cf. Zapf et al., 1996), or may point to still another relationship between unfairness and stress reactions than is proposed in our theoretical model (see also future directions).

A second limitation is that perceptions of absence norms and absence values were not included in the research (see others who did include norms and values, e.g., Geurts et al., 1995; Gellatly, 1995). This means that the results can be influenced by the fact that individuals may feel restricted by social norms to report sick without legitimated stress complaints. A good point was our attempt to replicate the results from the Belgian sample in the Dutch sample, where it was assumed that people are less restricted in their decision to be absent. However, the *Zeitgeist* may be changed in a way that also people in the Netherlands feel less 'free' to report sick without a legitimated reason. Although the attention for the negative impact of absenteeism is particularly increased after the data collection (e.g., introduction of the law 'Verbetering Poortwachter'), it remains unknown to what extent

personal and group absence norms may have influenced the results.

A third limitation concerns the measurement of unfairness, particularly distributive unfairness. The choice for equity as a distributive fairness principle (cf. equality, need, Deutsch, 1970) was obvious because this enabled to connect to prior studies that studied absenteeism from an equity-perspective, and considering a recent study showing the universal value of equity at work (Mueller & Weiner, 2000). However, the quality of the exact operationalization of equity can be criticized. Although it can be regarded as a good point that this choice was based on interviews preceding the research, it may be a problem that the measure did not include: negative outcomes (Törnblom and Ahlin, 1998), other outcomes than 'salary' and 'appreciation from superiors' (Foa & Foa, 1976), other reference-points than 'colleagues' and 'earlier times' (Kulik & Ambrose, 1992; Hermkens, 1995), etceteras. Another point is that equity theory assumes that employees would also find it unfair when they are favored above others. The data presented in this thesis showed that very few people actually felt overvalued (only 3%). Although this result is not exceptionally (Folger & Cropanzano, 1998), it raises the question whether distributive unfairness is measured and responsible for the results or just outcome dissatisfaction.¹

A weakness that does not only refer to the research presented in this thesis but fairness studies in general, concerns the issue that it remains difficult to determine to what extent perceptions of unfairness account for the results, or simply 'annoying work circumstances'. It can be regarded a good point that an attempt was made to rule out the latter, by controlling for work load and job control, and by checking whether indeed unfairness measured by the OFP (e.g., violation of fairness principles were related to direct judgments of fairness). However, it would have been better to also control for work factors that can be expected to be

¹ The data support the idea that inequity is actually more than outcome dissatisfaction and that unfairness is responsible for stress reactions. First, all distributive measures are considerably related to procedural unfairness. Second, results from additional analyses showed that the impact of both distributive and procedural unfairness on stress reactions remains unchanged after control of outcome dissatisfaction.

conceptually closer related to the fairness concept, such as, for instance 'employee participation' or 'perceived social support' (cf. Van Veldhoven & Meijman, 1994).

A final limitation, that is mentioned here, concerns the generalizability of the findings. First, the amount of females is relatively small in our samples. Fortunately did the fact that only a few women were involved, probably not affect the results in a way that favors the hypothetical model, since females are usually more negatively affected by unfair processes than by unfair outcomes (Sweeney & McFarlin, 1997). Second, the branches in this research - the security branch as well as the food industry -- are not particularly known for their high sickness or high stress level. Third, an important weakness of the study presented in Chapter 5 is that the sample included only five employees that voluntary left the organization. It must, however, be noted that the explanation of voluntary turnover was not the main purpose in this thesis. Voluntary turnover was mainly included to rule out the alternative explanation that absenteeism and turnover would be predicted by a similar underlying withdrawal-process. Fortunately, enough other evidence was found for the stress-explanation. In sum, it is for the generalizability of the findings desirable to replicate the findings in a sample that includes a high amount of females, and that is characterized by a high sickness and a high voluntary turnover rate.

Future Directions

Despite the limitations, the results give rise to new developments in fairness and stress research. Below, some possible future directions are mentioned briefly.

From Material to Social Fairness Issues

The results in Chapter 2 suggests that not only procedural unfairness has a social side but that also distributive unfairness has a material and social side. People perceive material distributive unfairness when they feel disadvantaged in material rewards, such as pay. They perceive social distributive unfairness when they feel disadvantaged in social rewards, such

as appreciation from superiors. Because the main interest in this thesis was the examination of unfair outcomes on the one hand and unfair processes on the other, no further attention has been paid to the difference in material and social fairness issues. However, since the social side of procedural fairness is more emphasized in the past years (e.g., Moorman, 1993; Hendrix et al., 1998), the social side of distributive fairness may also be more important for individuals than was initially assumed.

The results in Chapter 2 revealed that employees who have problems with the workload particularly feel disadvantaged in material rewards (i.e. salary), whereas employees who have problems with the work content particularly feel disadvantaged in social rewards (i.e. appreciation from superiors). It was argued that it may be more clear for individuals which investments the organization expects in return for material rewards than social rewards (cf. Rousseau & Parks, 1993). Therefore, the chance that employees will feel underpaid increases when tasks that obviously belong to their job are more demanding (e.g., long workdays) than expected. In contrast, the chance that employees feel under-appreciated increases when there is a conflict between what employees and superiors perceive as valuable contributions at work. As a consequence, employees may invest in work tasks that they do actually not like, which may increase their 'subjective' level of investments, or invest in work tasks which are valuable to themselves but are not appreciated by superiors. If this argumentation is true, social distributive unfairness may be particularly salient in situations in which task descriptions are relatively unclear, or where employees are used to a certain freedom in filling-in their job tasks. An example of such a work situation may be the education field (primary and secondary schools but also at universities). It would be interesting to investigate this hypothesis in future research.

From Mediators to Moderators

In this thesis, withdrawal and stress explanations for absenteeism were studied, which implied the examination of different mediating processes (i.e. mediation by psychological withdrawal and no mediation, mediation by stress reactions). In order to get more insight in absence processes as well as employees' impaired well-being, future research could focus on moderator-processes.

For instance, it can be assumed that both employees and employers find it only acceptable when people report sick because of health complaints (Johns, 1997). However, not everybody may report sick when suffering from stress reactions, such as for instance a head ache. Therefore, it is possible that stress reactions in particular cause absenteeism when employees feel unfairly treated by the organization, or that perceived unfairness in particular leads to absenteeism when people suffer from health complaints.

In addition, distributive and procedural unfairness may have combined effects, which have been found in prior research focusing on employee outcomes other than well-being (Brockner & Siegel, 1996). Often the following pattern is found: unfavorable outcomes (e.g., low pay) combined with low perceived process fairness (e.g., inaccurate procedures) lead to more negative work attitudes and behaviors (e.g., job satisfaction) than unfavorable outcomes combined with high perceived process fairness (see, however, Van den Bos, Vermunt & Wilke, 1997). One of the explanations for this result is that it is more clear that the organization (or its representatives) is to blame for unfair outcomes when processes are unfair since the organization is responsible for decision-making processes and unfair processes that may result in unfair outcomes (Folger & Cropanzano, 1998).

Interestingly, recent studies suggest reversed processes when the dependent variable refers to personal consequences for employees (Cropanzano & Greenberg, 1997). For instance, Schroth and Shah (2000) found that employees' self-esteem was more negatively

affected by unfair outcomes when procedures are fair rather than unfair. On the basis of attribution theories (e.g., Zuckerman, 1979), they argue that when procedures are fair, employees cannot blame the organization for receiving unfair outcomes resulting from unfair processes but may instead blame themselves for getting too low outcomes (internal versus external attribution). This may negatively affect their self-esteem. Thus, it may be interesting in future research to study the influence of combined effects of distributive and procedural unfairness on stress reactions.

Perceived Unfairness and the Development of Stress Reactions

The above-mentioned shows that still much is unclear about how perceived unfair distributive and procedural unfairness may lead to the development of stress reactions. For instance, what is exactly appraised as stressful about an unfair work situation, and which coping-strategies do employees have and use to cope with unfairness? In this thesis, possible stress-processes have been described, which could be relatively logically inferred from the existing literature. However, the findings give rise to think about other, more complicated, processes. For instance, the result that the expected relationship between unfairness and stress reactions was particularly found in the cross-sectional studies, and less in the longitudinal study, may imply that perceived unfairness can also be regarded as a 'symptom of individuals' inability to cope with a stressful environment'. That is, it can be expected that when people are less able to set boundaries for themselves or to perform assertive behavior towards leaders (Korsgaard et al., 1998), this increases their (subjective level of, or actual) work investments and perceptions of unfairness. In addition, feelings of powerlessness to cope with the environment will be increased, which may increase feelings of unfairness (cf. Armstrong-Stassen, 1998), as well as the chance to develop stress reactions (cf. Hobfoll, 2002). Longitudinal studies with repeated measures are required to test these more complicated processes.

Practical Implications of the Findings

The findings of this thesis may also have implications for the organizational practice. Results show that not only concrete results from decision-making processes (e.g., an employee does not receive a salary increase) are important for employees' well-being and absence behavior, but also the way in which things are organized, decided and communicated at the workplace (i.e. organizational policies and procedures). The current research has shown that the perceived fairness of organizational processes is important for all investigated groups of employees, whereas the fairness of outcomes is only important for some of the investigated groups (i.e. males and employees low in relational expectations). Since organizations include different types of employees and the trend may continue that more women will join the labor-market, it is thus important that superiors pay attention to procedural fairness as well.

This thesis may as well provide some input for the societal discussion about work stress and absenteeism. Discussions about the high level of work stress (i.e. burnout) and the high absence rate in the Netherlands has started some years ago but are still lively. Regarding absenteeism, it has been suggested that Dutch employees would too easily report sick. They would not really suffer from illness but report sick, for instance, to escape from a work conflict (Spits, 2003). However, research on perceived unfairness at work suggest that absenteeism but also other behaviors that have been qualified as counterproductive for the organization or for society (e.g. theft, violence, sabotage) are preceded by employees' perception that they are not treated 'right' by the organization. In other words, it seems that if an organization behaves immoral in the eyes of employees, then an employee behaves immoral. Moreover -- and probably more important -- the results in this thesis suggest that, at least when employees report sick as a consequence of perceived unfairness, it must not be precluded too soon that the main reason why employees report sick is that they actually suffer

from health complaints.

Since April 2002, the law "Wet Verbetering Poortwachter" is introduced in the Netherlands that implies that both the employee and the employer are hold responsible for absenteeism. On the basis of fairness criteria that determine whether received outcomes or processes are viewed as fair, suggestions can be done how leaders may increase perceptions of fairness at work at work (see Chapter 2). For instance, to increase distributive fairness, it is important that employees perceive a balance between their investments and outcomes (Adams, 1965). Superiors may try to improve this balance by discussing employees' view of their investments (i.e., is working during weekends viewed as an additional investment or as part of the normal work task?), what they exactly expect in return, and whether the organization is willing and able to meet these expectations (Rousseau & Parks, 1993).

It is amongst other things (see Chapter 2) regarded as procedurally fair when decisions are made on the basis of good-quality (accurate) information (e.g., Leventhal, 1980). Detailed information, noted by different and neutral persons at fixed time-points is seen as most accurate (Gilliland, 1998). It is part of the job that leaders sometimes have to communicate bad news to employees. From a fairness perspective, a personal report of the decision-making process is desirable in which a superior carefully explains what has happened (Bies, 1990). In addition, it is important that superiors make their personal excuses if things turn out badly for employees, and that they show empathy with disadvantaged and disappointed employees (Folger & Cropanzano, 1998).

Employees may also take more responsibility for their own well-being, and for the extent to which they suffer from perceived unfairness at work. This may require self-knowledge about one's investments at work and what is expected in return, and the development of an assertive attitude to protest against unfair processes or to actually reduce unfair leader behavior (Korsgaard et al., 1998).

It is important to realize that also with regard to decisions and rules that concern absenteeism, employees may perceive things as unfair. Therefore, it is recommended to reconsider the fulfillment of fairness principles in absence policies (e.g., avoid that employees feel treated 'as a number', inconsistent or inaccurate policies etceteras). A worst-case-scenario which one probably wants to avoid would be that employees develop more stress reactions because of unfair decision-making processes that concern the prevention of absenteeism.

To conclude, the findings presented in this thesis suggest that, in order to make sure that employees stay energetic and healthy but also enthusiastic and attached to their work, it is important to pay not only attention to results of decisions but also to the way in which things are decided at work, and how things are communicated to employees.

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Curriculum Vitae

Elpine Melissa de Boer is geboren op 3 september 1971 te Leiden. In 1989 behaalde zij haar V.W.O. diploma aan het Haags Montessori Lyceum te 's Gravenhage. In september 1989 begon zij aan haar studie psychologie te Amsterdam. In 1995 studeerde zij cum laude af aan de universiteit van Amsterdam (UvA) in de afstudeerrichting Psychologie van Arbeid en Gezondheid. In haar laatste jaar deed zij redactiewerk voor een tijdschrift voor a&o-studenten.

Op 1 januari 1996 werd Elpine aan de Universiteit Utrecht aangesteld als assistent in opleiding bij Sociale en Organisationspsychologie en de Onderzoeksschool voor Psychologie en Gezondheid (P&H). In deze jaren verrichte zij onderzoek, verzorgde onderwijs, volgde P&H-cursussen en maakte deel uit van de aio-raad en de colloquium-commissie. Sinds 1 januari 2002 is zij werkzaam als onderzoeker en projectleider bij het Instituut Werk en Stress te Bilthoven.