

Organizational Justice: Evidence of a New Psychosocial Predictor of Health

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In today's rapidly changing work life, organizational justice may become increasingly important to employees.^{1,2} Justice includes a procedural component (the extent to which decision-making procedures include input from affected parties, are consistently applied, suppress bias, and are accurate, correctable, and ethical) and a relational component (polite, considerate, and fair treatment of individuals).^{3,4} Prior research shows that perceived justice is associated with people's feelings and behaviors in social interactions,^{5–8} but its effects on health are unknown. We therefore examined the contribution of procedural and relational justice to employee health.

METHODS

Study Sample

We used employers' records to identify all 5342 hospital employees (880 men and 4462 women) in the service of the 7 hospitals in 1 of the 23 health care districts in Finland in the beginning of 1998. Altogether, 4076 employees (76%; 506 men and 3570 women) responded to a questionnaire on justice and other variables. The mean age of the respondents was 42.6 years (range=19–63); 7% were doctors (162 men and 142 women), 50% nurses (124 men and 1914 women), 14% x-ray and laboratory staff (21 men and 532 women), 12% administrative staff (49 men and 436 women), and 17% maintenance, cleaning, and other staff (150 men and 546 women).

Measures

Scales of procedural justice (7 items; range of scale=1–5; mean score of responses=2.8; SD=0.7; $\alpha=.90$) and relational justice (6 items; range of scale=1–5; mean score of responses=3.5; SD=0.9; $\alpha=.81$) were adopted from Moorman⁷ (Figure 1). Both scales have been associated with organizational commitment, job satisfaction, and retaliation,^{6,8,9} and they were moderately interrelated ($r=0.30$).

Objectives. This study examined the justice of decision-making procedures and interpersonal relations as a psychosocial predictor of health.

Methods. Regression analyses were used to examine the relationship between levels of perceived justice and self-rated health, minor psychiatric disorders, and recorded absences due to sickness in a cohort of 506 male and 3570 female hospital employees aged 19 to 63 years.

Results. The odds ratios of poor self-rated health and minor psychiatric disorders associated with low vs high levels of perceived justice ranged from 1.7 to 2.4. The rates of absence due to sickness among those perceiving low justice were 1.2 to 1.9 times higher than among those perceiving high justice. These associations remained significant after adjustment for behavioral risks, workload, job control, and social support.

Conclusions. Low organizational justice is a risk to the health of employees. (*Am J Public Health.* 2002; 92:105–108)

The outcome variables were self-rated health, minor psychiatric morbidity, and recorded absence due to sickness (sickness absence). Poor health was indicated by health ratings less than good ($n=766$).^{10–12} Minor psychiatric morbidity was assessed with the

12-item version of the General Health Questionnaire ($\alpha=.80$); cases were those that scored 4 or higher on the questionnaire ($n=920$).^{13–15} Self-certified and medically certified sick leaves in 1997 and 1998 were obtained from employers' registers. Self-certified

Scale of procedural justice

Please indicate the degree to which you agree or disagree with the following statements as they apply to the procedures used at the hospital you work in. Use the following scale: from 5 = strongly agree to 1 = strongly disagree.

1. Procedures are designed to collect accurate information necessary for making decisions.
2. Procedures are designed to provide opportunities to appeal or challenge the decision.
3. Procedures are designed to have all sides affected by the decision represented.
4. Procedures are designed to generate standards so that decisions can be made with consistency.
5. Procedures are designed to hear the concerns of all those affected by the decision.
6. Procedures provide useful feedback regarding the decision and its implementation.
7. Procedures are designed to allow for requests for clarification or additional information about the decision.

Scale of relational justice

Please answer the following questions about the general behavior of your supervisor at work. Use the following scale: from 5 = strongly agree to 1 = strongly disagree.

1. Your supervisor considered your viewpoint.
2. Your supervisor was able to suppress personal biases.
3. Your supervisor provided you with timely feedback about the decisions and their implications.
4. Your supervisor treated you with kindness and consideration.
5. Your supervisor showed concern for your rights as an employee.
6. Your supervisor took steps to deal with you in a truthful manner.

FIGURE 1—Scales used to rate levels of perceived organizational justice.

TABLE 1—Odds Ratios (ORs) and 95% Confidence Intervals (CIs) of Poor Self-Rated Health and Minor Psychiatric Disorders, by Level of Organizational Justice

	Poor Self-Rated Health, OR (95% CI)			Minor Psychiatric Disorders, OR (95% CI)		
	Adjusted for Demographics ^a	Adjusted for Demographics and Behavioral Risks ^b	Adjusted for Demographics, Behavioral Risks, and Other Psychosocial Factors ^c	Adjusted for Demographics ^a	Adjusted for Demographics and Behavioral Risks ^b	Adjusted for Demographics, Behavioral Risks, and Other Psychosocial Factors ^c
Men						
Procedural justice						
1 (high)	1	1	1	1	1	1
2	1.62 (0.75, 3.47)	1.61 (0.72, 3.63)	1.21 (0.48, 3.07)	2.27 (1.01, 5.12)	2.55 (1.09, 5.99)	2.35 (0.92, 6.01)
3	1.75 (0.75, 3.49)	1.81 (0.88, 3.74)	1.39 (0.60, 3.19)	2.50 (1.18, 5.29)	2.38 (1.09, 5.21)	1.66 (0.69, 3.99)
4 (low)	2.35 (1.18, 4.66)	2.07 (1.00, 4.28)	1.84 (0.81, 3.19)	4.20 (2.04, 8.67)	3.73 (1.74, 8.00)	2.28 (0.96, 5.42)
Relational justice						
1 (high)	1	1	1	1	1	1
2	0.69 (0.33, 1.44)	0.64 (0.29, 1.39)	0.66 (0.28, 1.53)	1.16 (0.55, 2.44)	1.30 (0.59, 2.89)	0.90 (0.38, 2.09)
3	1.15 (0.55, 2.42)	1.01 (0.45, 2.25)	1.00 (0.40, 3.19)	1.59 (0.74, 3.43)	1.69 (0.73, 3.89)	1.03 (0.42, 2.56)
4 (low)	1.80 (0.85, 3.82)	1.43 (0.63, 3.18)	1.30 (0.53, 3.19)	2.38 (1.10, 5.14)	2.46 (1.07, 5.69)	1.40 (0.56, 3.46)
Women						
Procedural justice						
1 (high)	1	1	1	1	1	1
2	1.54 (1.20, 1.99)	1.69 (1.30, 2.21)	1.76 (1.32, 2.35)	1.40 (1.11, 1.78)	1.41 (1.11, 1.81)	1.32 (1.01, 1.73)
3	1.51 (1.17, 1.95)	1.63 (1.25, 2.15)	1.56 (1.16, 2.08)	1.96 (1.55, 2.47)	1.94 (1.53, 2.46)	1.84 (1.42, 2.39)
4 (low)	1.70 (1.29, 2.75)	1.79 (1.35, 2.37)	1.55 (1.13, 2.12)	2.33 (1.83, 2.97)	2.26 (1.76, 2.89)	1.89 (1.44, 2.49)
Relational justice						
1 (high)	1	1	1	1	1	1
2	1.21 (0.93, 1.57)	1.23 (0.94, 1.62)	1.09 (0.83, 1.46)	0.99 (0.79, 1.26)	1.03 (0.81, 1.38)	0.97 (0.75, 1.26)
3	1.37 (1.03, 1.80)	1.40 (1.05, 1.85)	1.18 (0.87, 1.59)	1.45 (1.15, 1.86)	1.49 (1.15, 1.91)	1.30 (1.01, 1.70)
4 (low)	1.74 (1.33, 2.27)	1.66 (1.26, 2.22)	1.24 (0.92, 1.68)	2.05 (1.61, 2.60)	2.10 (1.64, 2.68)	1.65 (1.27, 2.15)

^aAge and income.^bSmoking, alcohol consumption and sedentary lifestyle, and body mass index.^cWorkload, job control, and social support.

sickness absences were 3 days or less, while medically certified absences, for which a physician's examination and a medical certificate were always required, were more than 3 days.^{16–18}

We measured covariates by using the following standard criteria: age, sex, income, smoking status (never smoker, $n=2797$; former smoker, $n=557$; current smoker, $n=582$), alcohol consumption¹⁹ (low consumption: 40 g or less of pure alcohol per week, $n=3090$; high consumption: more than 280 g for men and more than 190 g for women, $n=396$), sedentary lifestyle (less than half an hour of fast walking per week; $n=2135$),²⁰ and body mass index (<25 kg/m², $n=3813$; 25–30 kg/m², $n=$

1179; >30 kg/m², $n=350$). Psychosocial factors were workload^{21,22} (4 items; range = 1–5; mean = 3.5; SD = 0.9; $\alpha = .85$), job control²³ (9 items; range = 1–5; mean = 3.6; SD = 0.7; $\alpha = .84$), and social support²⁴ (6 items; range = 0–30; mean = 12.0; SD = 5.3; $\alpha = .79$).

Statistical Analysis

Justice and other psychosocial measures were divided into quartiles and treated as categorical variables. Associations of justice variables with self-rated health and minor psychiatric morbidity, determined by logistic regression analysis, were expressed as odds ratios. We studied associations of justice variables with sickness absences by using Poisson

regression and rate ratios. Ninety-five-percent confidence intervals were calculated and adjustments were made for demographics, behavioral risks, and established psychosocial factors.

RESULTS

There were no differences between age groups or sexes in the evaluation of procedural justice (for men, mean = 3.62, SD = 0.93; for women, mean = 3.60, SD = 0.95) or relational justice (for men, mean = 2.7, SD = 0.82; for women, mean = 2.79, SD = 0.72), but employees with high income perceived significantly lower levels of procedural justice than other employees ($\chi^2_3 = 46.10$; $P < .001$).

Among men, low procedural justice was associated with a 2-fold risk of poor self-rated health and an almost 4-fold risk of minor psychiatric disorders, but the associations were not significant after adjustment for other psychosocial factors. Among women, associations between procedural justice, self-rated health, and minor psychiatric disorders were significant irrespective of adjustments (Table 1).

Low relational justice was associated with about a 2-fold risk of poor self-rated health and minor psychiatric disorders, although in the fully adjusted models only the association with minor psychiatric disorders among women remained significant (Table 1).

Procedural justice and relational justice were significantly associated with self-

certified and medically certified sickness absence. The association of relational justice with medically certified sickness absence was significantly stronger among men than among women ($P < .01$). There were no interactions between sex and procedural justice (Table 2).

DISCUSSION

Organizational justice was associated with health among both men and women across most of the health outcomes studied; this was true not only for those in the medical professions but also for those with administrative and maintenance jobs, after adjustment for other psychosocial factors.

Relational justice was a stronger predictor of sickness absence for men than for women. This difference, however, might reflect not only a difference between the sexes but also the fact that hospital occupations are gender related. For example, over 50% of the physicians were men, whereas over 93% of the nurses were women. Organizational justice may have different meanings for members of highly ranked occupations related to management than for shop-floor employees.²⁵ The size differences between the male and female samples may also have affected the detected differences in significance between sexes.

Our results may shed light on the effects of other psychosocial models of organizational behavior. Hemingway and Marmot²

TABLE 2—Rate Ratios (RRs) and 95% Confidence Intervals (CIs) of Sickness Absence, by Level of Procedural and Relational Justice

	Self-Certified Sickness Absence, RR (95% CI)			Medically Certified Sickness Absence, RR (95% CI)		
	Adjusted for Demographics ^a	Adjusted for Demographics and Behavioral Risks ^b	Adjusted for Demographics, Behavioral Risks, and Other Psychosocial Factors ^c	Adjusted for Demographics ^a	Adjusted for Demographics and Behavioral Risks ^b	Adjusted for Demographics, Behavioral Risks, and Other Psychosocial Factors ^c
Men						
Procedural justice						
1 (high)	1	1	1	1	1	1
2	1.40 (1.21, 1.77)	1.44 (1.14, 1.82)	1.75 (1.35, 2.27)	1.48 (1.06, 2.07)	1.60 (1.14, 2.23)	1.61 (1.12, 2.32)
3	1.31 (1.05, 1.62)	1.19 (0.95, 1.49)	1.46 (1.13, 1.87)	1.31 (0.99, 1.78)	1.35 (0.99, 1.85)	1.29 (0.90, 1.83)
4 (low)	1.19 (0.96, 1.48)	1.15 (0.93, 1.44)	1.40 (1.08, 1.81)	1.25 (0.92, 1.71)	1.26 (0.91, 1.73)	1.36 (0.95, 1.94)
Relational justice						
1 (high)	1	1	1	1	1	1
2	1.09 (0.87, 1.37)	1.13 (0.89, 1.44)	1.37 (0.91, 1.51)	0.92 (0.66, 1.29)	0.88 (0.62, 1.24)	0.95 (0.66, 1.38)
3	1.45 (1.15, 1.82)	1.42 (1.12, 1.81)	1.43 (1.10, 1.87)	1.09 (0.78, 1.55)	1.07 (0.75, 1.52)	1.25 (0.85, 1.83)
4 (low)	1.91 (1.51, 2.41)	1.91 (1.50, 2.43)	1.92 (1.46, 2.51)	1.82 (1.31, 2.53)	1.68 (1.20, 2.35)	1.83 (1.27, 2.65)
Women						
Procedural justice						
1 (high)	1	1	1	1	1	1
2	1.20 (1.13, 1.28)	1.21 (1.13, 1.28)	1.20 (1.12, 1.29)	1.17 (1.07, 1.28)	1.19 (1.09, 1.31)	1.19 (1.08, 1.32)
3	1.28 (1.20, 1.36)	1.28 (1.20, 1.36)	1.24 (1.16, 1.33)	1.19 (1.09, 1.30)	1.21 (1.11, 1.33)	1.20 (1.09, 1.33)
4 (low)	1.31 (1.24, 1.40)	1.32 (1.24, 1.41)	1.27 (1.18, 1.36)	1.51 (1.38, 1.65)	1.52 (1.39, 1.67)	1.44 (1.30, 1.59)
Relational justice						
1 (high)	1	1	1	1	1	1
2	0.96 (0.90, 1.02)	0.96 (0.90, 1.03)	0.94 (0.88, 1.01)	0.93 (0.85, 1.02)	0.94 (0.86, 1.03)	0.91 (0.83, 1.01)
3	1.11 (1.05, 1.19)	1.10 (1.03, 1.17)	1.07 (1.00, 1.14)	1.05 (0.96, 1.16)	1.05 (0.95, 1.16)	1.01 (0.91, 1.11)
4 (low)	1.20 (1.12, 1.28)	1.15 (1.09, 1.24)	1.07 (1.00, 1.14)	1.38 (1.26, 1.51)	1.30 (1.18, 1.42)	1.18 (1.08, 1.31)

^aAge and income.

^bSmoking, alcohol consumption and sedentary lifestyle, and body mass index.

^cWorkload, job control, and social support.

concluded that only about half of the studies they reviewed supported the role of workload and job control or social support in predicting coronary heart disease. Although organizational justice partly overlaps with these psychosocial factors, it also seems to tap additive elements associated with employee health^{18,26,27}—for example, organizational consistency, accuracy, ethicality, managerial decision making, procedures used, and discrimination in organizations.^{28–30}

The model of effort–reward imbalance³¹ suggests that high effort spent at work combined with low reward in terms of salary, esteem, or job security defines a state of distress that increases health problems. Our findings on procedural justice show that people seem to be affected not only by rewards as such but also by the procedures used to determine how they will be distributed.

Replications with prospective data and with other kinds of organizations and occupational groups are still needed to assess the causality and generalizability of the association between organizational justice and employee health. ■

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Contributors

M. Elovainio, who was the principal author, designed the hypotheses, and conducted the data analysis, is the guarantor for the paper. M. Kivimäki, the copincipal investigator, coordinated the project, designed and collected the data, helped in the data analysis, and contributed to the writing. J. Vahtera helped in the data analysis and advised in the interpretation and presentation of the results.

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