

Discrimination and Well-Being in Organizations: Testing the Differential Power and Organizational Justice Theories of Workplace Aggression

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Abstract People may be subjected to discrimination from a variety of sources in the workplace. In this study of mental health workers, we contrast four potential perpetrators of discrimination (managers, co-workers, patients, and visitors) to investigate whether the negative impact of discrimination on victims' well-being will vary in strength depending on the relative power of the perpetrator. We further explore whether the negative impact of discrimination is at least partly explained by its effects on people's sense of organizational justice, and whether the strength of mediation varies according to the source of discrimination. Using survey data from 1,733 UK mental health workers, a structural equation model was designed to test these hypotheses following a bootstrap approach. Discrimination from all sources was related to well-being, with that from managers having the strongest effects. The results support an explanation of the effect of discrimination on well-being in terms of organizational justice perceptions for discrimination from managers and from visitors, but less so for discrimination from co-workers or from patients. The study highlights the importance of differentiating amongst sources of

discrimination at work and the salience of organizational justice perceptions in explaining the effects of discrimination from some sources.

Keywords Discrimination · Workplace aggression · Organizational justice · Well-being · Job satisfaction · Mediation analysis · Mental health workers

Introduction

Discrimination, the prejudicial treatment of an individual based on membership of a certain group or category, is likely to have negative effects on its victims' well-being and health. Workplace discrimination can range from the systematic denial of people's rights on the grounds of their gender, religion, ethnicity, age, sexual orientation or other criteria, to more informal verbal abuse which makes reference to such characteristics.

The literature concerning workplace discrimination (e.g., Goldman et al. 2006; Gutek et al. 1996) has developed relatively separately from literature concerning other forms of negative acts that are perpetrated against organizational members, such as workplace violence, bullying, incivility, abusive supervision, and customer verbal abuse. These other acts have themselves been traditionally studied separately (e.g., Andersson and Pearson 1999; Cortina 2008; Dormann and Zapf 2004; Einarsen and Raknes 1997; Johnson 2009; Lutgen-Sandvik et al. 2007; Raynor 1997; Ryan et al. 2008). Recently, there have been calls for researchers to study such processes generically under the umbrella of 'workplace aggression', defined as "negative acts that are perpetrated against an organization or its members and that victims are motivated to avoid" (Hershcovis and Barling 2010, p. 24). Such acts have in common that they are likely to have

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adverse affects on well-being. Allied to the development of the holistic approach to aggression has been an emphasis on explaining variation in the relationship between aggression and well-being in terms of (a) power differentials between aggressors and their targets, and (b) justice perceptions.

Calls for an integrated study of aggression have tended not to include discrimination (e.g., Hershcovis 2011), which is distinct from other types of aggression, as the victim is targeted specifically because he or she is a member of a particular group, a factor usually beyond the target's control. However, as a negative act that a victim would wish to avoid, discrimination clearly falls under the definition of aggression. In this paper we explore how recent theoretical developments in the aggression literature might apply to discrimination in the workplace. We first consider these developments and extend them in important ways before presenting an empirical study of discrimination to assess their relevance to this neglected area within the aggression literature. In so doing we make contributions to the understanding of both discrimination and the more general workplace aggression.

The first key contribution of the paper is to build on research that has investigated power differentials to identify variations in the effects that discrimination from different sources has on its victims. The emphasis in previous research has been on the distinction between insiders and outsiders to the organization, with the implication that because people inside the organization (e.g., managers, co-workers) have greater power over the victim, aggression from these sources will have a larger impact on the victim's well-being and job satisfaction compared with people outside the organization (e.g., customers, clients). Distinctions between organizational insiders have also been made with respect to aggression; in line with the power thesis, managerial aggression is argued to have stronger negative effects compared with co-worker aggression (Hershcovis and Barling 2010). However, these distinctions have not yet been applied to discrimination. Moreover, organizational outsiders do not form a homogenous group and there are likely to be power differences between types of outsiders (e.g., between customers who repeatedly spend a great deal in a store versus those who make a one-off, smaller purchase). Yet no research has examined whether any form of aggression, including discrimination, from different types of outsiders has distinct effects. The first aim of this paper is then to test the relative effects of discrimination from different sources, distinguishing between two types of organizational insiders and two types of outsiders.

The second key contribution of this paper is the proposal that perceptions of organizational justice, procedural and distributive, act as mechanisms through which aggression influences its victims' well-being and job satisfaction. Only

two previous studies have investigated organizational justice as a mediator of the effects of aggression, but neither of these studies considered aggression from organizational outsiders, as they studied supervisors (Tepper 2000) and co-workers (Duffy et al. 2006). Consequently, no research has explored whether organizational justice mediates the relationship between aggression from a variety of sources of well-being and job satisfaction. Hence, it is unclear whether the strength of mediation might differ according to the source of aggression. With respect to discrimination more specifically, although research on discrimination in the workplace has considered its consequences for victims' well-being and job satisfaction (e.g., Brown et al. 1999; Corning 2002; Crocker and Major 1989; Williams and Williams-Morris 2000) and, to a lesser extent, justice perceptions (e.g., Goldman 2001, 2003), no study has examined whether the latter mediates the former relationship. The second aim of the paper is then to assess whether organizational justice perceptions mediate the effects of workplace discrimination from different sources on victims' well-being and job satisfaction.

The study we present is based on data from the Service Delivery and Organization National Survey of Mental Health Workers in the UK and is concerned with discrimination directed towards mental health workers from two types of insiders, managers and co-workers, and from two types of outsiders, patients and their visitors. The sample is especially appropriate for studying discrimination as the workforce is highly mixed in terms of gender, ethnicity, and age, and the level of violence and abuse is thought to be higher in mental health settings than in most other employment settings (Healthcare Commission 2006). In addition, concerns about ensuring the well-being of staff and patients are particularly salient in mental health settings (Cowman and Bowers 2008; Lelliott and Quirk 2004) and more generally the health sector, and are expressed in a variety of ways including in the induction, supervision and appraisal of staff.

Theoretical Focus and Hypothesized Relationships

Workplace discrimination is considered to be a stressor (e.g., Bowling and Beehr 2006; Hershcovis and Barling 2010), such that those exposed to it may suffer a variety of negative consequences. Applying the classic psychological stressor-strain theory (Lazarus et al. 1985), detriments to victims' well-being may arise as a result of appraisals about the nature and source of the discrimination, which cause emotional and physiological arousal and, in turn, psychological strain symptoms. Negative impacts on attitudes (e.g., job satisfaction) may also be expected (Hershcovis and Barling 2010). Research has provided evidence

of these negative consequences of discrimination on well-being and job satisfaction, as well as the effects of other forms of aggression for victims (e.g., Bowling and Beehr 2006; Hershcovis and Barling 2010) and we would expect discrimination to have negative effects on well-being and job satisfaction. We thus test the following hypothesis:

Hypothesis 1a Discrimination will be associated with lower levels of well-being and job satisfaction.

Power of the Perpetrator

Literature on workplace aggression considers how the intensity of victims' reactions to aggression varies, depending on its source and particularly the power of the perpetrator of the aggression relative to the victim. When considering sources, researchers have typically distinguished between insiders: organizational members with employment contracts, and outsiders: customers, clients, and members of the public who have commercial or service contracts with the organization (LeBlanc and Barling 2005). The power of these perpetrators may be based on one or more of the following: the legitimacy of their role, coercion (relating to one's ability to punish), ability to reward and recompense others, their expertise and specialist knowledge, and their likeability (referent power, French and Raven 1959). Applying these concepts of power, insider aggression will, theoretically, have a stronger negative impact on victims because of the relative power of insiders. They have legitimate power, greater ability and opportunity to reward and punish the victim, are likely to have more specialist knowledge, and may be liked by other members of the organization; whereas outsiders have less legitimate power, specialist knowledge, ability and opportunity to reward and punish, and are unlikely to have the opportunity to bond with other organizational members. Results of a recent meta-analysis comparing the relative effects of insider versus outsider aggression have borne out this prediction (Hershcovis and Barling 2010).

However, insiders and outsiders are not homogeneous groupings. Rather, there are meaningful differences in the power of subgroups within these categories that might influence the relative effects of aggression. In particular, researchers have contrasted aggression originating from managers or supervisors with aggression from co-workers. Managers or supervisors have more legitimate (role-based) power than co-workers, being further up the organizational hierarchy, and have a greater ability to reward and punish victims, for example, by giving them undesirable jobs or even terminating their job contracts. This power base may also mean that victims will feel less able to respond to discrimination from managers by drawing attention to it or

confronting the perpetrator. As expected, the few studies that have compared aggression from internal sources report manager aggression having stronger negative effects on victims (Hershcovis and Barling 2010; Hershcovis et al. 2010). However, co-workers may have high expert and referent power, the latter being particularly important as it is likely "to affect the presence and quality of social relationships within the group" (Hershcovis and Barling 2010, p. 28), and thus co-worker aggression is still likely to have negative implications. This again is shown in the studies on this topic (e.g., Hershcovis et al. 2010).

Nonetheless, no studies have explicitly tested differences between types of organizational outsiders. There is a growing number of accounts of outsider aggression and its effects. For example, there have been studies of aggression from callers in customer service contact centers (Grandey et al. 2004) and ambulance control rooms (Sprigg et al. 2007), from customers in retail contexts (Ben-Zur and Yagil 2005; Dormann and Zapf 2004), from clients of social workers (Grandey et al. 2007; Niven et al. 2012) and in care settings (Barling et al. 2001; Bussing and Hoge 2004), and from patients in healthcare contexts (Crabbe et al. 2002; Evers et al. 2001), as well as from members of the public towards paramedics (Brough 2005; Niven et al. 2012), police personnel (Hershcovis et al. 2010), and trolley car drivers (Van Dierendonck and Mevissen 2002). However, despite the range of outsiders considered within this literature, none of these studies distinguishes and contrasts the effects of aggression from different types of outsiders. Here, we argue that there are important distinctions between outsiders also reflecting power differences amongst them. Thus we expect aggression from different types of outsiders to have varying effects on victims' well-being and job satisfaction. In particular, we contend that clients or patients in health and social care settings and customers in retail settings will have greater power relative to visitors and members of the public.

Notions such as 'customer sovereignty' and citizens' or patients' rights place an onus on representatives of organizations to treat customers, clients and patients "with courtesy and as if they are right" (Grandey et al. 2007, p. 65) even if those people are acting in an aggressive manner. Thus, the customer, client, or patient is ordained with some degree of legitimate power. Moreover, although it is indirectly derived via, for example, commission-based sales or complaints procedures, customers, clients, and patients also have some power to reward or punish victims of aggression. Indeed, how employees relate to customers, clients, or patients is increasingly given prominence in appraisal and reward systems. Finally, in situations where the perpetrator can develop a more enduring relationship with the organization, as is the case, for example, with a patient who has a long hospital stay, or a long-term client

of a lawyer, accountant or bank, referent power can be developed. As such, while customers, clients, and patients will, on the whole, have less power relative to organizational insiders, they are likely to hold greater power compared with visitors or other members of the public.

Although studies of discrimination have not yet explored whether there are differences in its effects dependent upon the perpetrator, as a type of aggression it is likely that power differences between perpetrators will influence the effects of discrimination on its victims. On the basis of the power-differential thesis, it can be hypothesized that acts of aggression, such as discrimination, from managers are likely to have the strongest negative effects on victims' well-being and job satisfaction, then those from co-workers, then those from customers, clients or patients, and finally those from visitors or other members of the public. Applying this to the healthcare setting in which the current study is conducted, we therefore predict:

Hypothesis 1b Discrimination from managers will have a stronger association with well-being and job satisfaction than that from co-workers; discrimination from co-workers will have a stronger association with these outcomes than that from patients; and discrimination from patients will have a stronger association with these outcomes than that from visitors.

Organizational Justice Perceptions

As well as the intensity of victims' reactions to aggression varying according to the power of the perpetrator of the aggression, the literature on aggression has also considered how justice perceptions will affect the intensity of victims' reactions to aggression, and particularly mediate the aggression-strain relationship. Aggression is, according to this theory, seen by victims as reflecting the organization's treatment of employees (Hershcovis and Barling 2010), and thus following acts of aggression individuals will reappraise their perceptions of justice within the organization. The focus of much of the recent discussion has been on *interpersonal* justice (e.g., Rupp and Spencer 2006), but interpersonal justice is associated with aggression and discrimination by definition, as such negative acts mean people are not treated with the "politeness, dignity, and respect" (Colquitt et al. 2001, p. 427) that characterizes an interpersonally just interaction. Here, we suggest that people's evaluations of discrimination go beyond this definitional association with interpersonal injustice, and that victims of discrimination will attribute their fate to the *organization* itself. In particular, we consider two forms of organizational justice: *procedural* justice and *distributive*

justice, widely accepted to be discrete (Ambrose and Arnaud 2005). Procedural justice concerns the fairness and transparency of the processes by which decisions are made (e.g., decisions about how resources are allocated) and conflicts resolved, while distributive justice is about fairness in the amount of rights or resources a person receives (Colquitt 2001; Greenberg 1987).

Increasingly, as organizations, or at least public and large organizations, make more explicit their policies toward workplace aggression and discrimination they will convey a sense of zero tolerance of such behavior. In so far as this is the case, employees are likely to hold the organization responsible for any negative behavior to which they have been exposed. Theories of organizational justice (Colquitt 2001; Greenberg 1987) suggest that attributions of one's negative fate to the organization will lead employees to question the fairness of organizational procedures, as they assume the organization should have effective procedures in place to ensure proper behavior towards its members. We thus expect acts of aggression, including discrimination, to lead to changes in victims' procedural justice. Employees may also view acts of aggression, such as discrimination, as a reduction in the intrinsic rewards of the job or a negative reward that is an unfair exchange for the effort they expend in the job. This means we would expect them to change their perceptions of distributive justice if they are victims of aggression.

Organizational justice theory explains why employees' perceptions of both procedural and distributive justice are likely to affect their well-being and job satisfaction (Cropanzano et al. 2001). Injustice makes it difficult for employees to obtain valued outcomes at work, signals to employees that they are not valued by their organization, and violates important social norms. Thus it seems likely that organizational justice perceptions may mediate the effects of workplace discrimination on well-being and job satisfaction. Although no studies have specifically examined whether organizational justice mediates the effects of discrimination, the two studies that have examined whether organizational justice mediates the effects of aggression confirm our proposition. Duffy et al. (2006, Study 4) found that both individual interactional and procedural justice perceptions mediated a relationship between co-workers' undermining behavior and job satisfaction. Tepper (2000) found that the relationships between abuse from supervisors and a range of employee outcomes, including depression, anxiety, job dissatisfaction, emotional exhaustion, organizational commitment and work-to-family conflict, were either fully or partially mediated by a composite measure of interactional, procedural and distributive justice. On the basis of this theory and research, we therefore expect organizational justice to mediate the effects of discrimination, and hypothesize the following:

Hypothesis 2a Perceptions of organizational justice (procedural and distributive) mediate the relationships between workplace discrimination and the outcomes of well-being and job satisfaction.

A noteworthy aspect of both Duffy et al.'s (2006) and Tepper's (2000) studies is that each focused on acts of aggression from organizational insiders and moreover aggression from a single source (co-workers and managers, respectively). As such, we do not know whether discrimination from all sources will impact equally on justice perceptions and thus whether the strength of the potential mediation will be the same across discrimination sources. Here, we predict that the strength of the mediation will differ depending on the source of discrimination. The justice line of argument rests on the assumption that organizations can be held responsible for the aggression or discrimination inflicted on their members. In so far as organizations are perceived to have more responsibility for and control over the behavior of insiders, we expect the mediating role of organizational justice to be greater in the insider-discrimination–well-being/satisfaction relationship than in the outsider-discrimination–well-being/satisfaction relationship. Moreover, managers are seen as custodians and inventors of organizational policies and thus any violation by these managers will lead to a questioning of their authenticity and depth. While co-workers typically follow organizational policies, they may not support them and do not invent them. As such, the relationship between discrimination from co-workers and justice perceptions should be weaker than that from managers.

In contrast to organizational insiders, it is typically assumed that organizations have less control over outsiders' behavior towards employees and thus outsider behavior does "not directly reflect the company's treatment of the employees" (Hershcovis and Barling 2010, p. 29). Nevertheless, organizations do attempt to control the behavior of outsiders in various ways, for example, warning people in posters that aggression or discrimination towards staff will not be tolerated and the organization will press for the severest possible penalties in such cases. As such, outsider discrimination might also affect organizational justice perceptions, albeit less strongly than that from insiders. However, there are likely to be differences in the degree to which groups of outsiders are deemed to be within the organization's control. For example, aggression towards staff or sabotage on railway networks perpetrated by subcontractors would be considered more within the organization's control than that by members of the public. In the case of mental health workplaces, we would not expect discrimination from visitors to be any less seen as reflecting on the organization's procedures and the fairness of the allocation of duties and rewards than that from

patients, even though visitors may have less power than patients. There will be procedures in place and instructions given to visitors that seek to limit their behavior, while divergences from these may well be perceived by staff as especially undeserving on top of what is a difficult and taxing job. Such induction is mirrored in other situations; for example, visitors to prisons, schools, or dangerous workplaces such as oil refineries are all subject to overt constraints. Indeed with the heightened 'terrorist threat' throughout the world, and health and safety legislation, organizations are being forced to monitor and by implication accept responsibility for visitors when on their premises.

Under justice theory, we would then expect the mediating role of justice in the relationship between insider discrimination and the outcomes of well-being and job satisfaction to be greater than it is in the outsider discrimination–well-being relationship. However, in contrast to our ranking of the direct effects of the various sources of discrimination in the mental health environment, we do not expect a priori the indirect effect of discrimination from visitors through justice to be significantly less than that from patients. We therefore hypothesize that:

Hypothesis 2b The strength of the mediation between workplace discrimination and the outcomes of well-being and job satisfaction will be greatest for managers, followed by co-workers, followed by visitors and patients.

Method

We use a between-subjects design to test the association between discrimination and well-being and whether it is mediated by justice perceptions. The study was conducted amongst mental health staff members. This setting provides a naturally occurring distinction between outsiders that allows us to test whether discrimination from patients has more effect on both organizational justice and well-being than that from visitors and if the mediating role of justice perceptions differs depending on the source of discrimination. As such, we examined discrimination from four sources: managers, co-workers, patients, and visitors.

Sampling and Data Collection

This study consists of a large sample of mental health staff working in psychiatric wards or community mental health teams in the UK. The sample was drawn from 100 inpatient wards, 18 community mental health teams, and 18 crisis resolution and home treatment teams. The study covers all occupational groups, full and part-time workers, and qualified and unqualified workers.

Our questionnaire was distributed to all workers within the 100 wards and 36 outpatient service teams. The completed questionnaires were returned via post to a member of the research team. Out of a total of 3,545 people who received the questionnaire, 2,258 people responded, yielding an overall response rate of 63.7 %. Each ward or team's number of responses varied from 4 to 40, with an average of 14 employees (response rates ranged from 21.95 to 100 % with a median rate of 62.28 %). Out of a working sample of 2,099, 64 % were female, 75 % were white, and 77 % were nurses. The mean age was 40.7 years with a standard deviation of 10.52.

Measures

Workplace Discrimination

We assessed workplace discrimination by asking respondents, "Do you believe that you have experienced any form of discrimination at work from source *x* in the past 12 months?" Participants indicated yes or no with reference to each of the following potential sources of discrimination: Manager, Co-worker, Patient, and Visitor.

Well-Being

We used complementary three-item measures from Warr (1990) to assess anxiety and depression as indicators of well-being. Respondents were asked, "Thinking of the past few weeks, how much of the time has your job made you feel" each of six negative states: tense, uneasy, worried (for anxiety), miserable, depressed and gloomy (for depression). Responses ranged from "never" (1) to "all of the time" (5). The Cronbach alpha for anxiety is 0.78, and for depression 0.72. We used Maslach's (1998) nine-item measure to assess emotional exhaustion, with items asking how often the respondent feels various indicators of exhaustion (e.g., "emotionally drained from my work", "used up at the end of the working day"). The seven response categories ranged from never to every day. The Cronbach alpha for emotional exhaustion is 0.88.

Job Satisfaction

We assessed job satisfaction using a five-item scale, which asked respondents how satisfied they were with the following intrinsic aspects of their job: "the sense of achievement I get from my work", "the scope for using my own initiative", "the amount of influence I have over my job", "my involvement in decision making", and "the opportunities that I have to use my abilities". The first four of these items were taken from the UK's 2004 Workplace

Employment Relations Survey, the last from the NHS National Staff Survey of 2006. Respondents rated their satisfaction on a scale ranging from "very dissatisfied" (1) to "very satisfied" (5). The Cronbach alpha for job satisfaction is 0.78.

Organizational Justice

Perceptions of procedural and distributive justice were measured using two separate six-item scales developed by Niehoff and Moorman (1993). Respondents were asked to rate the extent to which they agreed to statements such as, "All decisions that affect jobs are applied consistently across all affected employees" (for procedural justice) and "I think my level of pay is fair" (for distributive justice). Responses ranged from "strongly disagree" (1) to "strongly agree" (5). The Cronbach alpha for both procedural and distributive justice is 0.91.

Controls

We included a number of demographic variables, namely age, gender, ethnic origin (coded as white or non-white, the latter comprising Asian, African or Caribbean, and mixed or other ethnic group), and occupational group (coded as nurse or non-nurse, the latter comprising social workers, occupational therapists, psychiatrists, and clinical psychologists).

Analysis Procedure

Comparing Correlations

For Hypothesis 1a we use Pearson product moment correlational analysis to test the association between discrimination from different sources and well-being or job satisfaction. Hypothesis 1b involves a comparison amongst the correlations of the different discrimination sources with the outcome variables. We are testing if the correlations involving discrimination from managers are significantly stronger than those involving discrimination from co-workers, and in turn if these are stronger than those for discrimination from patients; and finally, if these are stronger than those with discrimination from visitors. Representing an outcome variable by a capital *Y*, the Hypothesis 1b can be concisely expressed using the following symbolic expression:

$$H_{1b} : r_{(\text{discrim. from managers}, Y)} > r_{(\text{discrim. from co-workers}, Y)} \\ > r_{(\text{discrim. from patients}, Y)} > r_{(\text{discrim. from visitors}, Y)}$$

This composite hypothesis implies the testing of a set of three null hypotheses on consecutive pairwise correlation differences (see e.g., Meng et al. 1992):

$$\Delta r^{(1)} = r_{(\text{discrim. from managers, } Y)} - r_{(\text{discrim. from co-workers, } Y)}$$

$$H_0: \Delta r^{(1)} \leq 0$$

$$\Delta r^{(2)} = r_{(\text{discrim. from co-workers, } Y)} - r_{(\text{discrim. from patients, } Y)}$$

$$H_0: \Delta r^{(2)} \leq 0$$

$$\Delta r^{(3)} = r_{(\text{discrim. from patients, } Y)} - r_{(\text{discrim. from visitors, } Y)}$$

$$H_0: \Delta r^{(3)} \leq 0$$

where Δr stands for the difference in correlation with the outcome Y between the two specified discrimination sources. If all three null hypotheses are rejected then the hypothesized ordering is supported by the data.

Structural Equation Modeling

Our conceptual model in which the relationship between workplace discrimination and well-being/job satisfaction is mediated by organizational justice perceptions is presented in Fig. 1. A structural equation model (SEM) enables us to test for the mediations in Hypotheses 2a and 2b in one stage, rather than using the two-stage approach of Baron and Kenny (1986). The residual error terms for both organizational justice mediators were allowed to be correlated in this model in order to acknowledge potential missing common predictors and avoid biased estimates of the path model (Preacher and Hayes 2008). Correlations amongst the residual error terms of the outcome variables were also allowed. The SEM was estimated using a full information maximum likelihood procedure.

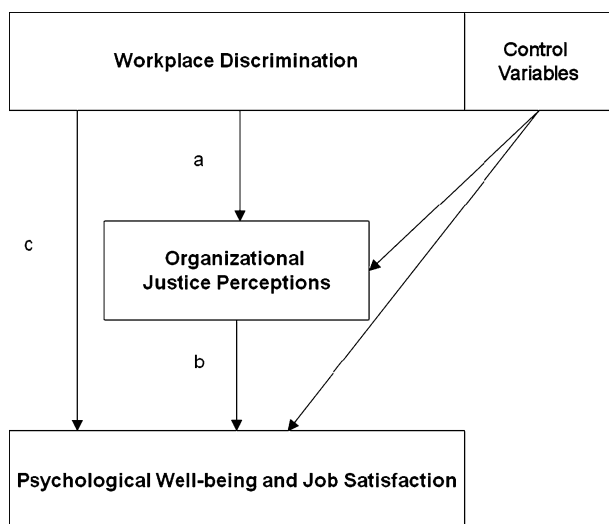


Fig. 1 The summarized conceptual model: the effect of workplace discrimination on well-being and job satisfaction is mediated by justice perceptions

Mediation Analysis

A bootstrapping method is used to construct a sampling distribution in order to develop test statistics and assess the uncertainty in our estimate. Compared to the traditional causal step approach to mediation analysis (Baron and Kenny 1986), this method makes fewer assumptions and has more power (while maintaining reasonable type-I error rates), and is therefore the currently recommended analysis approach (see e.g., MacKinnon et al. 2004; Shrout and Bolger 2002). Two thousand five hundred resamples (with replacement) were drawn from the original sample, and for each new resample the full SEM was estimated to create an empirical sampling distribution of estimated coefficients of interest. Bias-corrected bootstrap confidence intervals (see e.g., Efron and Tibshirani 1993) were computed for the indirect effects (i.e., mediation: path a times path b in Fig. 1).

Missing Data

Given the sensitive nature of the discrimination measures, it is possible that some people may be less willing to answer questions on this. We therefore conducted a missing data analysis on these items. This is especially important as discrimination is the starting point of the mediation chain. From the 2,108 individuals, 34 (i.e., 1.6 %) had missing data on at least one of the discrimination variables. To verify whether these data could be considered missing completely at random (Graham 2009), and as such allow for a complete case analysis, a diagnostic analysis was conducted (Allison 2009). A new variable indicating whether an individual has missing data on at least one of the discrimination variables was constructed. A logistic regression of this indicator variable on all outcome, mediator, and control variables was then fitted to reveal any pattern to the missing data. No such systematic pattern was found in the missing data. Thus, full information maximum likelihood estimation methods were used for the core statistical analysis.

Multilevel Structure

The individual-level data is embedded in health service units (wards or community care centers), so observations at the employee level might not be statistically independent, increasing the risk of inflated type-I errors and biased statistical inference. This suggests we might need to use multilevel analysis. However, the impact of this multilevel structure on statistical inference depends both on the strength and amount of clustering present in the data.

An analysis revealed that the intra-class correlation, which can be seen as the expected correlation between two

random individuals of the same workplace or service unit, is low for all mediator and outcome measures (i.e., justice, well-being, and job satisfaction). The ICC1, in multilevel nomenclature, ranges from 0.04 (for anxiety and distributive justice) to 0.09 (for procedural justice), implying that between 4 and 9 % of the individual differences in the outcomes can be attributed to differences between units. Hence, the strength of clustering is low. The amount of clustering is reflected in the average cluster size, being 14 individuals per unit. The total expected impact of the multilevel structure can then be summarized in what is called the design effect (see e.g., Hox 2002), ranging from 1.49 to 1.80, which in our case is equivalent to an expected effective sample size of at least 1,164 independent cases. Given this high effective sample size and corresponding limited strength and amount of clustering, the effect of ignoring the multilevel structure can be anticipated to be negligible. We therefore do not require multilevel analysis for this data.

Results

The mean, standard deviation, and correlations of the key variables are presented in Table 1. The most frequent type of discrimination is from patients, as 15 % of staff report this. This is followed by that from co-workers (10 %) and managers (8 %), and finally that from visitors (6 %). The correlations between discrimination type range from 0.54 between discrimination from patients and co-workers and 0.09 between that from managers and visitors.

The well-being variables, anxiety, depression, and emotional exhaustion, are quite highly positively correlated with each other, and each is moderately negatively related to job satisfaction and the two organizational justice

measures, whilst job satisfaction is moderately positively related to the justice measures.

Discrimination from all sources correlates negatively with both justice perceptions. Procedural justice is most strongly correlated with types of discrimination from managers ($r = -0.19$ compared with a range for the other three types of $r = -0.04$ to -0.09), while distributive justice is also more equally correlated with discrimination from all sources (range for the four sources from $r = -0.12$ to -0.16). Both justice perceptions are significantly negatively correlated with all well-being measures and positively with job satisfaction. The strength of these correlations is quite high, ranging from -0.45 for distributive justice and emotional exhaustion to -0.32 for distributive justice and anxiety. The correlations involving justice perceptions are then consistent with justice perceptions being a potential mediator of the discrimination–well-being/job satisfaction relationship.

The Association Between Discrimination and Well-Being: Hypotheses 1a and 1b

Consistent with Hypothesis 1a, correlations between discrimination and poor well-being are positive and correlations between discrimination and job satisfaction are negative and all are significantly greater than zero. The highest correlates all involve discrimination from managers, ranging from 0.25 for its relationship with depression to 0.20 for its relationship with anxiety. The ranking of the size of correlations between the discrimination sources and the outcome variables is consistent with Hypothesis 1b, that is, following the correlations involving managers, those involving co-workers are consistently higher than those involving patients, which in turn are marginally

Table 1 Correlations and descriptive statistics for the key variables

	1	2	3	4	5	6	7	8	9	10
1 Discrimination from managers	1									
2 Discrimination from co-workers	.30	1								
3 Discrimination from patients	.10	.29	1							
4 Discrimination from visitors	.09	.21	.54	1						
5 Procedural justice	-.19	-.09	-.04	-.08	1					
6 Distributive justice	-.16	-.12	-.14	-.14	.43	1				
7 Anxiety	.20	.12	.12	.10	-.32	-.33	1			
8 Depression	.25	.18	.13	.11	-.35	-.39	.64	1		
9 Emotional exhaustion	.22	.14	.09	.10	-.40	-.45	.58	.67	1	
10 Job satisfaction	-.22	-.14	-.11	-.08	.40	.42	-.41	-.53	-.48	1
Mean	.08	.10	.15	.06	2.52	2.99	2.52	2.07	2.67	3.40
SD	.28	.30	.35	.24	.81	.79	.75	.85	1.00	.80

All correlations are significant: for $r_{(3,5)}$, $p = .043$, and for all other pairs $p < .001$

Table 2 Test of Hypothesis 1b: Comparing outcome correlations between discrimination sources

Correlation with outcome	Anxiety (<i>r</i>)		Depression (<i>r</i>)		Emotional exhaustion (<i>r</i>)		Job satisfaction (<i>r</i>)	
Discrimination sources								
Discrimination from managers	.20		.25		.22		-.22	
Discrimination from co-workers	.12		.18		.14		-.14	
Discrimination from patients	.12		.13		.09		-.11	
Discrimination from visitors	.10		.11		.10		-.08	
Correlation difference	Δr	<i>Z</i>	Δr	<i>Z</i>	Δr	<i>Z</i>	Δr	<i>Z</i>
$\Delta r^{(1)}$: (managers, co-workers)	.077**	2.93	.065**	2.50	.075**	2.88	-.077**	-2.93
$\Delta r^{(2)}$: (co-workers, patients)	.006	0.23	.052*	1.98	.053*	2.01	-.029	-1.07
$\Delta r^{(3)}$: (patients, visitors)	.021	0.98	.015	0.69	-.017	-.79	-.036*	-1.66

Δr is the difference between discrimination sources in correlation with the outcome

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

higher than those involving visitors. Yet, the more formal statistical test of hypothesis 1b only provided partial support for the exact hypothesized ranking. The difference between the correlations involving discrimination from managers and from co-workers (and by extension other sources) with all four outcomes is as hypothesized (see Table 2, $\Delta r^{(1)}$). With respect to a further differentiation between discrimination sources, only the difference between co-workers and patients (see Table 2, $\Delta r^{(2)}$) in their correlation with depression and emotional exhaustion is significantly larger than zero. Thus, Hypothesis 1a is supported, but for Hypothesis 1b the main differentiation in outcome correlation is between discrimination from managers and that from others, and to some extent between discrimination from co-workers and the two outsider sources.

Mediating Effects of Organizational Justice Perceptions: Hypotheses 2a and 2b

We present the results of the structural mediation model in four parts. Parts one and two report the analysis of two paths of the mediation model: first, the discrimination–justice perceptions path (path a in Fig. 1), and then, second, the direct paths from justice perception and discrimination to well-being and job satisfaction (paths b and c in Fig. 1). In part three we connect the two parts to look at the mediation hypotheses, by examining the specific indirect effects of discrimination through the two justice mediators (path a times b in Fig. 1) and hence test Hypotheses 2a and 2b. In the final section we summarize the overall

associations (the direct and indirect effects) between discrimination and the outcomes, well-being and job satisfaction.

Effects of Discrimination on Organizational Justice Perceptions

In the first part of the structural model presented in Table 3 (left part of the path diagrams in Fig. 2), discrimination from all sources, bar one, has a significant negative direct effect on both justice perceptions. Hence, each source of discrimination attributes some unique explained variance even when accounting for the effects of the other discrimination sources; the exception is the non-significant direct effect of discrimination from colleagues on procedural justice. For both procedural and distributive justice perceptions, the strongest effects are for discrimination from managers ($B = -.57$ and $-.40$, hence one half of a point on a scale from 1 to 5) and then from visitors ($B = -.27$ and $-.26$, hence one-fourth of a point on a scale from 1 to 5). This is strong support for the distinct effects of discrimination from managers but does not confirm a simple insider–outsider ranking of effects.

Effects of Organizational Justice Perceptions on Well-Being and Job Satisfaction

The second part of the structural model is presented in Table 4 (and the right-hand side of Fig. 2). It shows that both procedural and distributive justice have a negative impact on all three poor well-being outcomes and a positive impact on job satisfaction. The existence of both

Table 3 Part one of the SEM model: Explaining organizational justice perceptions based upon workplace discrimination

Independent/dependent variables	Procedural justice	Distributive justice
Controls		
Gender (1 = male, 0 = female)	-.09 (.04)*	-.04 (.04)
Age	.00 (.00)	.00 (.00)*
Ethnicity (1 = non-white, 0 = white)	.51 (.04)***	.13 (.04)**
Job (1 = non-nurse, 0 = nurse)	-.06 (.05)	.33 (.04)***
Intercept	2.46 (.07)***	2.81 (.07)***
Direct effects		
Discrimination from managers	-.57 (.07)***	-.40 (.07)***
Discrimination from co-workers	-.08 (.06)	-.13 (.06)*
Discrimination from patients	-.13 (.06)*	-.16 (.06)**
Discrimination from visitors	-.27 (.08)***	-.26 (.07)***
% of Explained variance		
100 × R^2	11.14	8.85
$F(8,2099)$	32.91***	25.46***

The intercept is the estimated outcome for an average white female nurse who is not subject of discrimination (continuous control variables are grand-mean centered.)

Due to the rescaling of the focus variables on similar measurement scales, the reported unstandardized regression coefficients can be meaningfully compared across the dependent variables

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

partial effects, while accounting for the control and discrimination variables, supports the distinction being made between the two types of justice perceptions. The effect of distributive justice is slightly larger than that of procedural justice, especially in the case of emotional exhaustion.

Indirect Effects of Discrimination on Well-Being and Job Satisfaction

Table 5 presents bias-corrected 95 % confidence intervals for the indirect effects separated by specific mediator and by outcome measure. For all four outcome measures, indirect effects through procedural justice exist for discrimination from managers and from visitors, but not for discrimination from co-workers or patients. In the case of distributive justice, the paths for discrimination from managers and visitors (again) and from patients to all measures of well-being are mediated by this form of justice. The relationships involving co-worker discrimination are not mediated by distributive justice, with the exception of that with emotional exhaustion. Hence, the results support a mediation of discrimination effects through justice perceptions as proposed in Hypothesis 2a for three types of

discrimination, but there is only one unique indirect partial effect of discrimination from co-workers.

The ranking of indirect effects involving both mediators shows that discrimination from managers has the largest indirect effects. This is followed by the indirect effect of discrimination from visitors, then that from patients (although in the latter case, there is no indirect effect for procedural justice). Co-worker discrimination has only one indirect effect.

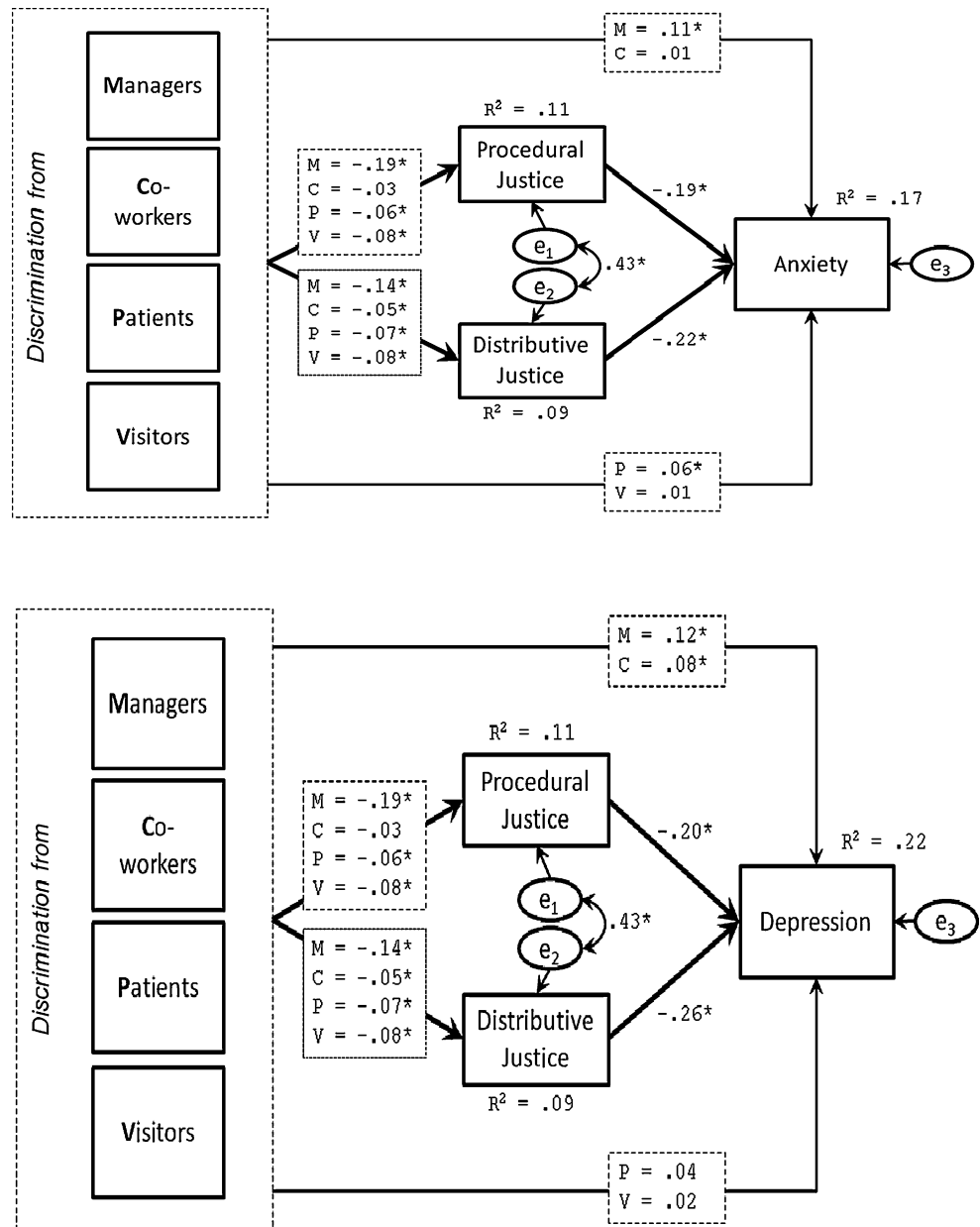
Hypothesis 2b is therefore not wholly supported. It is partially supported in that the strength of the relationships involving discrimination from managers is greater than any of the others. However, relationships entailing discrimination from visitors, which were equal third in our hypothesized ranking, replace relationships regarding discrimination from co-workers as the second strongest, and those involving discrimination from patients are stronger than those for discrimination from co-workers. This means that the indirect effects of insider discrimination are not consistently greater than those of outsider discrimination.

Indirect, Direct, and Total Effects of Discrimination on Well-Being and Job Satisfaction

To provide a more global perspective and summarize the mediation results, Table 6 reports the total effect of discrimination on the outcomes and a breakdown of this between direct and indirect parts. The total indirect effect is the combined effects through procedural and distributive justice. The effect of discrimination from managers is partially mediated by justice perceptions, so the direct effects are between 30 and 50 % smaller than their corresponding total effect, though they are significant for across all outcomes. In contrast, the effect of discrimination from co-workers is predominantly direct, and hence not mediated by organizational justice perceptions. For discrimination from patients, both direct and indirect effects contribute to its effect on anxiety and job satisfaction, but indirect effects contribute most of the total effect on depression and emotional exhaustion. Finally, for discrimination from visitors, only the indirect effects contribute to all outcomes, implying complete mediation by organizational justice perceptions.

The control variables contribute very little to the explained variance (R^2) in the outcome variables, whereas the addition of the discrimination variables leads on average across the outcomes to an increase of 7 % in explained variance. For all outcomes the addition of organizational justice perceptions leads to a significant increase that ranges from 11 to 20 % in explained variance. Justice

Fig. 2 Standardized path diagram of the structural model split up by outcome
Note: For reasons of clarity, control variables and correlations between exogenous variables were omitted from presentation. Complete results can be found in Tables 1, 3 and 4



perceptions thus have an effect over and above their role as mediators of discrimination.

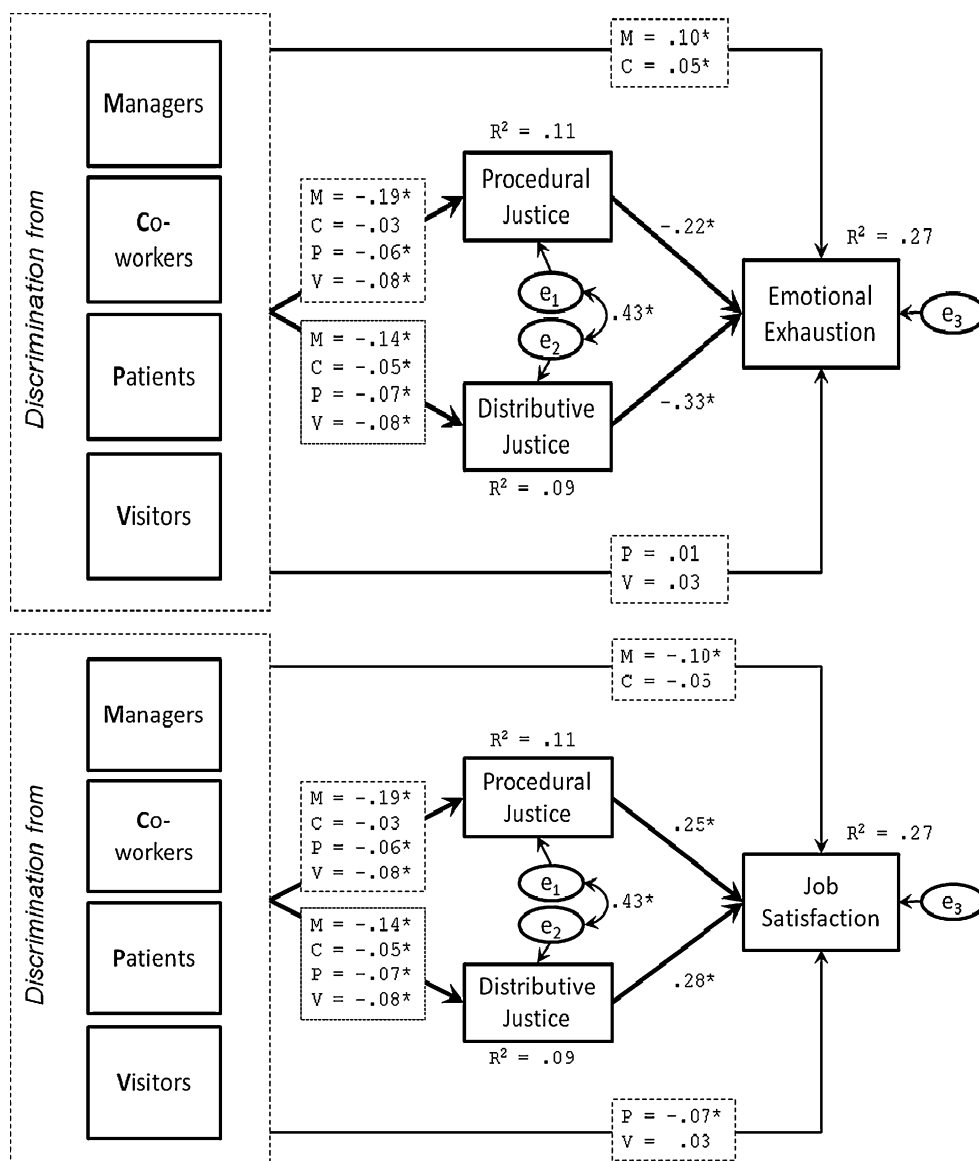
Discussion

The present study attempted to determine whether recent ideas within workplace aggression literature applied to discrimination. The first aim of our study was to test the power thesis, according to which we would expect discrimination from different sources to have differential effects on well-being. We found that although discrimination from all sources investigated—managers, co-workers, patients, and visitors—was related to well-being and

job satisfaction, discrimination from managers had noticeably stronger negative effects compared to discrimination from all other sources.

Our second aim was to test the mediating role of perceptions of organizational justice in explaining the relationships between discrimination from different sources and well-being/job satisfaction. Perceptions of both procedural and distributive justice mediated to an almost equal extent the relationships between discrimination from managers and visitors and all well-being/job satisfaction outcomes. In the case of discrimination from co-workers and from patients, where the indirect relationships are weaker, when they are significant distributive justice was the only mediator. The implication is that such

Fig. 2 continued



discrimination leads less to a questioning of the organization's procedures and approach to ethical standards but more to a questioning of the fairness in the amount of rights or resources that the person who is targeted receives.

Taken together, our key findings demonstrate that both the power of the perpetrator of discrimination and organizational justice perceptions are important ingredients in any explanation of the effect of discrimination on employees' well-being and satisfaction. However, their relative importance varies depending on the source. In the case of discrimination from managers, since there are both direct and indirect effects, both their relative power and the victim's fairness perceptions are important. Whilst managers' role as custodians and inventors of organizational policies may be crucial in explaining why their acts of discrimination are perceived as reflecting badly on the organization procedures and allocation of rewards, their

power particularly to reward and punish subordinates has an independent effect. This is amplified by the fact that employees may be unable to respond to acts of discrimination or confront their source. With regard to discrimination from visitors, however, only indirect effects are evident. Here it seems that the organization is deemed culpable for not having procedures in place to avert discrimination and socialize visitors more effectively or for not creating a fair distribution of rewards for staff.

In contrast for co-worker discrimination, there are less strong indirect effects, which may suggest that co-workers' behavior is to some extent seen as their own responsibility, a perception that may be strengthened when the organization makes it clear it will not tolerate discrimination and other acts of aggression in the workplace. Staff members appear to only blame the organization when the discrimination from co-workers begins to cause high levels of

Table 4 Part two of the SEM model: Explaining well-being and job satisfaction based upon workplace discrimination and organizational justice perceptions

Independent/dependent variables	Anxiety	Depression	Emotional exhaustion	Job satisfaction
Controls				
Gender (1 = male, 0 = female)	-.01 (.03)	-.04 (.04)	-.01 (.04)	.01 (.03)
Age	.00 (.00)	.00 (.00)	-.00 (.00)	.00 (.00)
Ethnicity (1 = non-white, 0 = white)	.02 (.04)	.07 (.04)	-.08 (.05)	.13 (.04)**
Job (1 = non-nurse, 0 = nurse)	.05 (.04)	-.06 (.04)	.12 (.04)**	.06 (.04)
Intercept	2.45 (.03)***	2.01 (.03)***	2.60 (.03)***	3.40 (.03)***
Direct effects				
Discrimination from managers	.29 (.07)***	.38 (.08)***	.36 (.08)***	-.30 (.07)***
Discrimination from co-workers	.10 (.06)	.23 (.07)***	.16 (.07)*	-.12 (.06)*
Discrimination from patients	.13 (.06)*	.08 (.06)	.01 (.07)	-.16 (.06)**
Discrimination from visitors	.04 (.08)	.06 (.08)	.13 (.09)	.08 (.08)
Procedural justice	-.17 (.02)***	-.21 (.03)***	-.27 (.03)***	.25 (.03)***
Distributive justice	-.21 (.02)***	-.28 (.03)***	-.42 (.03)***	.29 (.02)***
% of Explained variance				
100 × R ²	16.54	22.32	27.37	27.09
F(12,2011)	41.55***	60.27***	79.02***	77.93***

The intercept is the estimated outcome for an average white female nurse who is not being discriminated/bullied (continuous control variables and justice mediators are grand-mean centered)

Due to the rescaling of the focus variables on similar measurement scales, the reported unstandardized regression coefficients can be meaningfully compared across the dependent variables

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

emotional exhaustion, i.e., burn-out. For discrimination from patients, there is more differentiation across the outcomes. Both direct and indirect effects account for the negative effects of discrimination from patients on anxiety and job satisfaction, but indirect effects dominate the relationship with depression and emotional exhaustion. The relationships involving discrimination from patients and anxiety and job satisfaction are also stronger than those involving depression and emotional exhaustion. This contrasts with the relationships for discrimination from managers, co-workers, and visitors, as these were all more strongly related to depression and emotional exhaustion.

Discrimination from managers, co-workers, and visitors thus reduces enthusiasm and engagement but has a relatively lesser negative effect on people's contentment or satisfaction in the job. The different pattern of effects between these sources and those for patients, we conjecture, reflects the fact that aggression of some form may be viewed as a manifestation of the patients' mental health problems and may therefore to some extent be expected; as such, its occurrence does not affect the enthusiasm or engagement of staff. Consistent with this explanation, talking to patients about such behavior is the usual and preferred first response, ahead of medication or confinement (Foster et al. 2007). Nonetheless, discrimination from patients may create anxieties and a sense of adding pressures that are a source of dissatisfaction in the job, which is

consistent with the dominance of distributive rather than procedural justice in any of the mediated relationships for discrimination from patients.

Overall, our findings question the carte blanche association of aggression from insiders with greater adverse effects on well-being and highlight the need to differentiate within insider and outsider groupings. First, the strongest divide is between the manager and all other sources of discrimination, thus illustrating the already accepted need to differentiate amongst insiders. Second, some sources of outsider discrimination may have greater effects than that from some insider groups, as is illustrated by the large effects of discrimination from visitors on depression and emotional exhaustion in contrast to discrimination from co-workers. Third, the mediating effect of organizational justice does not apply to all insider sources of discrimination, while it is complete for some outsider discrimination. Fourth, the strongest differences in the results are between the two outsider groups, patients and visitors. Consequently, the underlying reason why all discrimination from insiders will not always have a greater effect on well-being than that from outsiders is that the relative power of the perpetrator of aggression is not the sole determinant of whether organizations are held responsible for their behavior or which people will be included in the groups that the organization will include in its pronouncements about abusive or aggressive behavior.

Table 5 Indirect effects of workplace discrimination on well-being and job satisfaction through procedural and distributive justice perceptions

Dependent variable	Anxiety			
Mediator	Procedural justice		Distributive justice	
Indirect effect	ab	95 % CI	ab	95 % CI
Discrimination from managers	.10*	[.07, .12]	.08*	[.05, .11]
Discrimination from co-workers	.01	[−.01, .03]	.03	[.00, .05]
Discrimination from patients	.02	[.00, .05]	.03*	[.01, .06]
Discrimination from visitors	.05*	[.02, .07]	.05*	[.02, .08]
Dependent variable	Depression			
Mediator	Procedural justice		Distributive justice	
Indirect effect	ab	95 % CI	ab	95 % CI
Discrimination from managers	.12*	[.09, .15]	.11*	[.07, .14]
Discrimination from co-workers	.02	[−.01, .04]	.04	[.00, .07]
Discrimination from patients	.03	[.00, .06]	.04*	[.01, .08]
Discrimination from visitors	.06*	[.02, .09]	.07*	[.03, .11]
Dependent variable	Emotional exhaustion			
Mediator	Procedural justice		Distributive justice	
Indirect effect	ab	95 % CI	ab	95 % CI
Discrimination from managers	.15*	[.12, .18]	.17*	[.11, .22]
Discrimination from co-workers	.02	[−.01, .05]	.06*	[.01, .11]
Discrimination from patients	.04	[.00, .07]	.07*	[.02, .11]
Discrimination from visitors	.07*	[.03, .11]	.11*	[.05, .17]
Dependent variable	Job satisfaction			
Mediator	Procedural justice		Distributive justice	
Indirect effect	ab	95 % CI	ab	95 % CI
Discrimination from managers	−.14*	[−.17, −.11]	−.11*	[−.15, −.07]
Discrimination from co-workers	−.02	[−.05, .01]	−.04	[−.07, .00]
Discrimination from patients	−.03	[−.07, .00]	−.04*	[−.08, −.01]
Discrimination from visitors	−.07*	[−.11, −.03]	−.07*	[−.12, −.03]

Evidence for an indirect effect is present if a null-effect is absent from its bias-corrected 95 % bootstrap confidence interval. This is signaled with an asterisk

The strength of the study is that it is based on a large sample of people working in occupations highly relevant to the debate about workplace discrimination, or more generally aggression, and well-being. We have explored more differentiated sources of discrimination than is the norm within the aggression literature, differences in the extent to which justice perceptions may mediate the discrimination–well-being relationship, and the effects of discrimination on four outcome measures to reflect the multi-dimensionality of well-being. The extent to which we can generalize the results across other samples or types of aggression is unknown but the results we obtained regarding insider aggression compare favorably with those reported in Hershcovis and Barling's (2010) meta-analysis. For

instance, the meta-analysis reports a confidence interval for the correlation between 0.21 and 0.32 for the relationship between supervisor aggression and depression, and in our study the comparable correlation between discrimination from managers and depression is 0.25, which is in the middle of what could be expected based upon the meta-analysis. In the case of outsider aggression the picture is less clear. On the one hand, in the meta-analysis the correlation between outsider aggression and job satisfaction lies between −0.20 and −0.07 and the correlations in our study fall within this range, as they are −0.13 for discrimination from patients and −0.08 for that from visitors. On the other hand, the correlation between outsider aggression and depression lies between 0.25 and 0.47,

Table 6 Analysis of the indirect, direct, and total effects of workplace discrimination on psychological well-being and job satisfaction

Independent/dependent variables	Anxiety			Depression		
	Direct	Indirect	Total	Direct	Indirect	Total
Discrimination from managers	.29*	.18*	.47*	.38*	.23*	.61*
Discrimination from co-workers	.10	.04	.14*	.23*	.05	.28*
Discrimination from patients	.13*	.05*	.18*	.08	.08*	.16*
Discrimination from visitors	.04	.10*	.14	.06	.13*	.19*
R^2 : (only controls)			.00			.01
R^2 : +discrimination			.06*			.09*
R^2 : +discrimination + justice			.17*			.22*

Independent/dependent variables	Emotional exhaustion			Job satisfaction		
	Direct	Indirect	Total	Direct	Indirect	Total
Discrimination from managers	.36*	.32*	.68*	-.30*	-.26*	-.56*
Discrimination from co-workers	.16*	.08*	.24*	-.12*	-.06	-.18*
Discrimination from patients	.01	.10*	.11	-.16*	-.08*	-.24*
Discrimination from visitors	.13	.19*	.32*	.08	-.14*	-.06*
R^2 : (only controls)			.01			.02
R^2 : +discrimination			.07*			.08*
R^2 : +discrimination + justice			.27*			.27*

An asterisk signals a significant effect, with Alpha significance level set at .05

whereas the correlations in our study are lower, 0.13 for discrimination from patients and 0.11 for that from visitors. These divergences might reflect that there are context- or perpetrator- (or even target-) specific factors in any effects of discrimination or aggression from outsiders. We therefore have to be especially cautious in drawing conclusions about the insider–outsider distinction, as identical results may not be observed in other organizational contexts or with respect to other forms of aggression.

The major limitation of the study is its cross-sectional design. Alternative orderings of the variables in our model could be consistent with the data, and particularly a model in which the independent and mediator variables are reversed. A plausible argument could be made that organizational justice perceptions drive perceptions of discrimination: if the organization is viewed as institutionally unfair or discriminatory or the individual perceives the organization as procedurally and substantively unfair, a person may be more likely to perceive acts as discriminatory than they would otherwise. However, for our study, SEM comparison results do not support this ‘unjust organization’ model and are in favor of the model upon which we have focused where justice is a mediator of the discrimination–well-being relationship. (The results of this comparison are available from the authors.) Nevertheless, future research might wish to use a longitudinal study design to consolidate the proposed mediation theory. In addition, it may be that the effects of cumulative discrimination will be more readily apparent in intra-individual analysis over time than from inter-individual analysis.

Our measure of discrimination concentrated on its occurrence and not its intensity. Single-item occurrence measures such as the one we used have been employed to assess related constructs, such as sexual harassment (Hershcovis et al. 2010) and unfair treatment (Meier et al. 2009). Such measures are well suited for measuring perceptions of discrimination. Victims may experience the same behavior in different ways when they are perpetrated by different sources (Hershcovis et al. 2010). Therefore, it may be desirable to give participants discretion as to whether they perceive that they had been discriminated against by particular sources, rather than to impose a label of discrimination based on various behaviors that may not have been interpreted in an adverse, discriminatory manner. The added practical benefit is the reduced survey length and cognitive load on participants. On the other hand, intensity measures have mostly a multi-item format with different behavioral indicators to operationalize broader aggression constructs (e.g., Cowie et al. 2002). This has the advantage that measurement models (e.g., confirmatory factor analysis) can be used, but also implies a risk that groups of individuals do not regard all items to the same extent as indicators of discrimination (e.g., due to gender or ethnic differences). Individuals might also be inclined to use the effects on their well-being as a means of assessing the intensity of the discriminatory action. Thus single-item discrimination measures were used in our study, as its focus was perceptions of specific discrimination sources.

With respect to future research, a key priority will be to determine the extent to which our results are context-specific. Further studies into justice perceptions and discrimination from differentiated sources in other environments are therefore necessary. The inclusion of more groups like visitors who may have little or no power within the organization would also be useful from this perspective. A comparison with other non-employees who may have some degree of power, such as IT specialists resident in a range of organizations, accountants conducting audits, or subcontractors who have traditionally worked on construction sites and oil refineries, would be especially valuable. Moreover, further differentiation between subgroups within groups such as those we studied might also pay dividends. For example, in our case, reactions to aggression from schizophrenics with acute psychosis, who are delusional and hearing voices and not necessarily responsible for their actions, may be very different from those reactions to aggression from patients with an antisocial personality disorder, who tend to have a low threshold for being aggressive or violent and are typically responsible for their actions.

Conclusions

The research highlights that current developments in the workplace aggression literature are applicable to discrimination, suggesting that discrimination should be included in the calls to have a unified approach to all types of aggression and abuse. Our study has extended existing research on workplace aggression in two main ways. The first is to extend previous research that has contrasted insiders versus outsiders of organizations (e.g., Hershcovis and Barling 2010) by establishing the utility in differentiating a wider range of sources of aggression, especially between distinct types of organizational outsiders. The second is to extend previous research by Duffy et al. (2006) and Tepper (2000) by demonstrating that perceptions of organizational justice do not just explain the effects of insider aggression but may also help to explain the effects of outsider aggression, especially in our context of visitors to the organization. Nonetheless, managerial discrimination has the strongest direct and indirect effects on mental health workers' well-being and job satisfaction, consistent with our theory.

Eradicating discrimination and other forms of aggression is significant in its own right, but it is also important because of their effects on job performance, and in this particular case the therapeutic relationships between patients and staff (Taylor et al. 2009; cf. Ryan et al. 2008) and hence patient outcomes. The policy implications of our findings extend beyond encouraging organizations to make

it clear that they do not condone discrimination and that people guilty of it will be disciplined or even charged with a criminal offence. In the case of visitors, the option of permanently excluding them from the premises or involving the police might increase the sense that the organization is concerned about their staff's welfare and treats them fairly. Encouraging people to report discrimination or other abuse from co-workers in a way that acknowledges their reluctance to do this, as they feel it may further undermine relationships, and ensuring that complaints are handled well, may help to reduce such acts. On the one hand, such initiatives may have the effect of reducing the responsibility accorded to the organization especially if the discrimination is from an outsider. However, on the other hand, especially in the case of discrimination from managers or visitors, the existence of policies may increase the chance of people holding the organization responsible for them, as discrimination from these sources may be seen as indicative of policies that are not working. This will be intensified when the discrimination is from managers as they are seen as the authors and custodians of the policies.

The ultimate implication is that the sources of discrimination must be tackled directly; ensuring due process procedures in the event of discrimination will help, but ultimately priority must be on ensuring that at least insider discrimination does not occur, through better selection processes, training, role-modeling and, especially in the case of patients and visitors, induction. In addition, in cases where discrimination originates from one's manager, the effects of discrimination on justice perceptions may be compounded by grievance procedures that are controlled by the same authority structure as the perpetrator. Greater transparency in the determination and monitoring of organizational policies and overt discussion of the value of good interpersonal relationships throughout organizations may also be required.

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