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RESEARCH REPORT

Aversive Workplace Conditions and Absenteeism: Taking Referent Group Norms and Supervisor Support Into Account

Michal Biron
University of Haifa and Tilburg University

Peter Bamberger
Tel Aviv University and Cornell University

Past research reveals inconsistent findings regarding the association between aversive workplace conditions and absenteeism, suggesting that other, contextual factors may play a role in this association. Extending contemporary models of absence, we draw from the social identity theory of attitude–behavior relations to examine how peer absence-related norms and leader support combine to explain the effect of aversive workplace conditions on absenteeism. Using a prospective design and a random sample of transit workers, we obtained results indicating that perceived job hazards and exposure to critical incidents are positively related to subsequent absenteeism, but only under conditions of more permissive peer absence norms. Moreover, this positive impact of peer norms on absenteeism is amplified among employees perceiving their supervisor to be less supportive and is attenuated to the point of nonsignificance among those viewing their supervisor as more supportive.

Keywords: absenteeism, critical incidents, job hazards, referent group norms, supervisor support

Employee absence takes a heavy toll on worker productivity. In the United States, for example, absenteeism results in productivity losses estimated at $225.8 billion per year (Stewart, Ricci, Chee, Hahn, & Morganstein, 2003). Scholars have examined a wide range of absence antecedents, paying particular attention to work-related risk factors such as aversive workplace conditions, conceptualized as those work characteristics perceived by the employee as noxious or threatening (Campion & Berger, 1990). Job hazards, referring to potentially dangerous conditions that are perceived as posing risk of injury (e.g., causing burns or bruises) to employees (Holcom, Lehmen, & Simpson, 1993), serve as one of the most potent forms of aversive work conditions (Frone, 1999). While perhaps most widely associated with traditional manufacturing settings, job hazards are also prevalent in service contexts, with employees in health, transport, and retail, for example, subject to hazards such as slippery floors, noise, electrocution, and toxic agents (Hendricks & Layne, 1999).

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Michal Biron, Graduate School of Business, University of Haifa, Haifa, Israel, and Department of Human Resource Studies, Tilburg University, Tilburg, The Netherlands; Peter Bamberger, Recanati Graduate School of Business Administration, Tel Aviv University, Ramat Aviv, Israel, and the R. Brinkley Smithers Institute for Alcohol-Related Workplace Studies, Cornell University.

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Correspondence concerning this article should be addressed to Michal Biron, Graduate School of Business, University of Haifa, Mount Carmel, Haifa, Israel 31905. E-mail: mbiron@univ.haifa.ac.il

Interestingly, however, while perceived aversive work conditions such as job hazards are widely assumed to be positively associated with employee absence (e.g., Harrison & Martocchio, 1998), scholars have suggested a number of reasons why the two may be unrelated or even inversely related (Ose, 2005). Moreover, empirical findings regarding the hazards–absence relationship are inconsistent (Darr & Johns, 2008), and as noted by Aldana (2001), the impact of such conditions on absenteeism remains unclear. Accordingly, and consistent with a more context-based approach to management theory (Bamberger, 2008; Johns, 2006), we sought to better understand those work-based factors that might moderate the hazards–absence relationship and thus explain these mixed findings. Building upon Terry, Hogg, and White's (2000) theory of social identity and attitude–behavior relations, we posit that two distinct factors—namely, co-worker absence norms and supportive leader behavior—both independently and in combination, condition the impact of aversive work conditions such as job hazards on employee absence. In what follows, we first review the nature of the primary hazards–absence link. Then, after explicating how each of these two contextual contingencies may independently moderate the relationship between job hazards and absenteeism, we theorize about their joint influence on the hazards–absence relation.

The Hazards–Absence Relationship

As noted above, researchers generally assume a positive association between aversive workplace conditions and employee absenteeism, with three primary mechanisms noted as potentially driving this relationship. The first mechanism is grounded in the notion that absence may minimize exposure to aversive work conditions (e.g., Eriksen, Bruusgaard, & Knardahl, 2004). Accordingly, employees perceiving their work conditions as physically

uncomfortable or hazardous have greater incentives to miss work as a means by which to reduce discomfort or exposure to risk (Humphrey, Nahrgang, & Morgeson, 2007, p. 1337). The second mechanism is grounded in occupational stress theory (Cooper & Robertson, 1999). Employees may feel they need to miss work so as to be able to more effectively attend to severe and/or chronic psychosomatic health symptoms generated by job hazards (e.g., Hendrix & Spenser, 1989). Finally, just as employees may choose to miss work in order to attend to strain-related health complaints, they may also opt to do so in order to attend to acute or chronic physical problems that they associate with the job (musculoskeletal disorders and the like; Breslin et al., 2007).

A number of studies provide empirical evidence in support of such a positive association. For example, cross-organizational/occupational studies have found absenteeism to be positively associated with objective indicators of danger on the job such as number of workdays lost due to workplace accidents (Brown, Fakhfakh, & Sessions, 1999), aversive temporal conditions such as shift work (Drago & Wooden, 1992), disease exposure (Johansson & Palme, 1996), and noise (Fried, Melamed, & Ben-David, 2002). Meta-analytic results provide additional, albeit more indirect, support for a positive association between aversive conditions and absence. For example, consistent with the earlier meta-analytic findings of Fried and Ferris (1987), Humphrey et al. (2007) found small to moderate effect sizes for the link between various job characteristics and absence. Johns (2008, p. 163) noted that to the extent that Humphrey et al.'s meta-analytic results indicated moderate (−.23) to strong (.42) effects of aversive work conditions on job satisfaction and stress (respectively)—two employee attitudes consistently predictive of absenteeism—their findings suggest that the effects of aversive conditions on absenteeism, while operating through such intermediary variables, are likely to be positive and robust. Accordingly, we posit

> *Hypothesis 1:* There is a positive association between perceived workplace hazards and employee absenteeism.

However, as suggested above, a number of studies have also found null (e.g., Rix, 1987; Roelen, van der Pol, Koopmans, & Groothoff, 2006) and even inverse (e.g., Allen, 1981; Viscusi & Moore, 1991) relations between aversive work conditions and absenteeism. Scholars have proposed a number of mechanisms that may, by countervailing or even reversing the positive effects noted above, result in such outcomes. For example, Viscusi and Moore (1991) suggested that objectively hazardous conditions may, because of attraction-selection-attrition processes (Schneider, 1987), not always be viewed by workers as sufficiently hazardous to justify absence. Their findings (based on National Institute for Occupational Safety and Health data) suggest that jobs characterized by such conditions may attract and retain employees who, being more suited to such conditions, fail to view them as so demanding or draining as to justify absence. Alternatively, according to the Shapiro–Stigliz model, workers in high-risk contexts are likely to receive some compensating differential (e.g., higher wages; more safety-conscious and/or supportive management), with this differential serving as a disincentive to shirking (Meyer, Viscusi, & Durbin, 1995; Smith, 1979). Consistent with such a notion, Ose's (2005) findings suggest that jobs posing more of an objective physical risk to employees' well-being may also be precisely those characterized by higher pay as well as better safety standards and procedures and/or more safety-conscious and supportive leaders, such that employees may not perceive conditions as sufficiently hazardous to economically justify absence as a means by which to reduce vulnerability or seek relief. Similarly, Väänänen et al. (2003, p. 820), studying several thousand employees of a large, multinational forestry products firm, found that a positive relation between aversive job characteristics and absence was contingent on relatively lower levels of supportive supervision.

Given Johns's (2008, p. 163) comment that "moderators may limit the observed bivariate connection between job characteristics and attendance and even reverse the typical sign," these findings are less than surprising. Rather, they point to the need to pay greater attention to the role that normative and supervisory factors may play in affecting the nature of the relationship between aversive workplace conditions and employee absenteeism.

Norms as a Moderator: The Role of Peer Absence Norms

As noted by van Knippenberg, van Knippenberg, and Giessner (2007), employees often have little choice but to "rely on others to make sense of issues for which no 'objective' reference point exists" (p. 55). With inconsistent signals from organizational leaders and interests often generating uncertainty among employees as to when attendance is required and when absence is considered legitimate, such peer-based sense-making processes have been demonstrated to play a key role in explaining employee absenteeism (Bamberger & Biron, 2007). In this context, group absence norms, defined as a set of shared beliefs and perceptions regarding what is an acceptable rate of, or justification for, employee absences in a given work unit (Chadwick-Jones, Nicholson, & Brown 1982; Johns & Nicholson, 1982), have been found to be associated with attendance behavior (e.g., Harrison, 1995; Rentsch & Steel, 2003).

While many studies focused on the norms of those in an individual's formal work unit (department, plant; e.g., Harrison, 1995), in the current study we focus on the potential impact of normative influences associated with those who may be most instrumental in shaping an individual employee's attitudes and behaviors, namely, those employees comprising the individual's informal peer reference group, typically consisting of those individuals in whom the employee places the greatest trust, with whom the employee has the closest work-based ties, and to whom the employee turns for advice and support (Hackman, 1992). Recently, Bamberger and Biron (2007) demonstrated how, over and above the effect of formal group norms, referent group absence norms affect absence behavior.

However, group norms may also have an indirect effect on absenteeism. Specifically, consistent with social information processing theory (Salancik & Pfeffer, 1978), the absence norms of referent others provide valuable information for making sense of reality. Inferences drawn from the absence norms of reference others may directly influence absence-related decisions (e.g., whether a particular situation warrants absence) and thus the individual's own attendance-related behavior (Bamberger & Biron, 2007; Harrison & Martocchio, 1998). Applied to the case of job hazards and absenteeism, this perspective suggests that de-

pending on the absence-related norms attributed to their referent others, individuals might respond to job hazards differentially. Under conditions of permissive referent group absence norms, job hazards may be framed as problematic work situations that legitimize or even necessitate an absence response (e.g., time off needed in order to recover). However, under conditions of stricter absence norms, absence may be framed as a less legitimate or more problematic response to these same hazards. Accordingly we propose

> *Hypothesis 2:* There will be an interaction between perceived job hazards and subjective referent group absence norms. Specifically, the relationship between perceived job hazards and absenteeism will be stronger as a function of more permissive subjective referent group absence norms.

Leadership as a Moderator: The Role of Supervisor Support

Perceived supervisory support reflects the degree to which one's supervisor is viewed as both caring and able to provide emotional and instrumental assistance in times of need (Bacharach & Bamberger, 2007). This variable was found to be positively associated with subordinates' motivation, commitment (e.g., Mayfield, Mayfield, & Kopf, 1998), and performance (e.g., Cropanzano, Rupp, & Byrne, 2003) and inversely associated with stress, work-related health problems (e.g., Stephens & Long, 2000), and absenteeism (e.g., Cropanzano et al., 2003).

For two main reasons, supervisor support may also have an indirect, moderating effect on absenteeism. First, by its very nature, supervisory support may serve as a buffering mechanism, alleviating the strain and other negative outcomes associated with aversive work environments that could underlie absence behavior (Cohen & Willis, 1985; Väänänen et al., 2003). For example, to the extent that supervisor support manifests itself in the form of recommendations as to how to avoid or minimize exposure to workplace hazards or actual assistance in doing so (e.g., providing training in safety issues, assignment to other, more safe, positions; Ganster, Fusilier, & Mayes, 1986), employees may feel less need to use absence to reduce the risk that they suspect workplace hazards pose to them. Second, the reciprocity norms underlying social exchange (Blau, 1964; Settoon, Bennett, & Liden, 1996) may make employees feel uncomfortable using absence as a means to cope with perceived job hazards when working with a supportive supervisor. Recognizing the potential adverse effects of absenteeism on their supervisor (e.g., the need to handle unpredictable work rearrangements, compensate overtime, etc.) and the organization she or he represents (e.g., lost productivity, replacement costs), individuals perceiving their supervisor as being more supportive are likely to be less willing to impose these costs on their supervisor and more willing to attend work even in the face of aversive conditions (Bacharach, Bamberger, & Biron, 2010; van Knippenberg, van Knippenberg, de Cremer, & Hogg, 2004). As noted by Wang and Walumbwa (2007, p. 403), the more employees feel that their supervisor and the organization she or he personifies are treating them well, the more they "will feel obligated to 'pay back' or reciprocate by becoming more committed to the organization." Accordingly, we posit

> *Hypothesis 3:* There will be an interaction between perceived job hazards and supervisor support. Specifically, the relationship between perceived job hazards and absenteeism will be weaker as a function of more supportive supervision.

The Joint Effect of Normative and Leadership Influences: A Three-Way Interaction

Although the arguments presented above suggest that permissive referent group absence norms and supportive supervision have independent and opposing moderating effects on the relationship between job hazards and employee absence, the theory of social identity and attitude–behavior relations (Tajfel & Turner, 1986; Terry et al., 2000) suggests that normative and leadership influences may in fact interact with each other in conditioning the hazards–absence relationship. Specifically, to the degree that the leadership context may affect the saliency of the individual's identification with his or her referent peers, the impact that peer absence norms may have on the hazards–absence relationship may be amplified or attenuated.

Underlying this three-way interaction is the impact that more supportive supervision can have on the degree to which subordinates identify with peer referent groups maintaining norms inconsistent with those of organizational leaders and hence on the salience of such norms when it comes to the framing of aversive work conditions and the "acceptable" or "legitimate" response to them. With supervisors viewed as being at the nexus of organization–employee relations (Aselage & Eisenberger, 2003), supervisors perceived as more supportive may strengthen employees' sense of identity with the broader organizational mission. Such leaders may do so by developing in employees a sense of pride in contributing to a higher, collective cause (van Knippenberg et al., 2004; Kirkman, Chen, Farh, Chen, & Lowe, 2009) and by instilling a sense of belonging to some larger mission or enterprise (Shamir, Zakay, Breinin, & Popper, 1998). Indeed, research has shown that supervisors may play a highly salient role in shaping not only individuals' sense of attachment to and identification with the organization (Shamir et al., 1998; van Knippenberg et al., 2004) but also their willingness to internalize its values (Hoffman, Bynum, Piccolo, & Sutton, 2011; Stinglhamber & Vandenberghe, 2003). And to the extent that such supervisors offer an alternative basis of identity to that of the reference group, referent peers and the norms that they maintain may be less salient to the individual (Pratt, 2003) and consequently have a less robust effect on the way the individual responds to perceived aversive work conditions.

Recent research in social psychology provides a basis for positing a three-way interaction among cognition, referent norms, and the presence of some competing category implicitly affecting the salience to the individual of the referent group or its members' norms (Abrams & Hogg, 2001). Specifically, Terry et al. (2000) described several experiments in which the moderating effect of referent group norms on attitude–behavior relations was itself contingent on the degree to which the referent group was a salient basis for self-conception. When the reference group was challenged as the basis for self-identity by some competing social category, its members' norms had a diminished effect on attitude–behavior relations. Although the salience of the group to the individual has been identified as the factor most directly moder-

ating the impact of the norms on attitude–behavior relations (Hogg, Martin, & Weeden, 2004), several studies have demonstrated that the strength of a competing category for self-identification, by implicitly influencing the salience to the individual of the group and its members' norms, has a similar effect (Abrams & Hogg, 2001).

Such findings are consistent with Terry et al.'s (2000, p. 90) conclusion that "the moderating effect of group norms on attitude–behavior consistency should be evident only if the norms emanate from a self-inclusive membership group." In other words, if the group membership is not a basis for self-conception, or if its hegemony for self-conception is challenged by some competing category, then the group norms should have a diminished (or no) impact on behavioral outcomes. A similar observation was offered by Ehrhart and Naumann (2004). Their conceptual model suggests that when employees have multiple sources of identification (e.g., divergent role models), the probability that their behavior will be consistent with group norms declines. Accordingly we propose

> *Hypothesis 4:* There will be a three-way interaction among perceived job hazards, subjective referent group absence norms, and supervisor support. Specifically, the amplifying effect of permissive subjective referent group absence norms on the perceived job hazards–absence association will be stronger when supervisor support is low and will be attenuated when supervisor support is high.

Method

Sample and Procedure

Participants were identified through the membership files of a local union representing all nonexempt workers employed by the transportation authority of a large municipality in the United States. This transportation authority closely monitors employee attendance and enforces a strict absence policy requiring employees to submit medical certification for any absence other than an approved vacation or personal day and, in many cases, to submit to an employer-sponsored medical examination for an absence spell longer than two days.

A random sample of 1,093 workers, stratified by operating division, was drawn from among the workers employed by the authority for at least 12 months. All were employed in one of the authority's three main operating divisions, namely, buses (e.g., bus drivers, mechanics), stations (e.g., station agents, cleaners), and underground/subway operations (e.g., conductors, train operators). While many of those in particular occupations work rather independently (e.g., bus drivers), even these individuals have extensive break time (at least 1 hr per day), which is typically spent with their co-workers at the depot, terminal, or shop. The size of each division-specific target sample was determined on the basis of the proportionate size of each division. Sampled members were requested to complete an 18-page questionnaire, with confidentiality guaranteed by the union. Approximately 2 years later, absence data for the 24-month period beginning with the survey administration were drawn from the authority's personnel archives.

Working with the union, we collected survey data from 626 transit workers using a coding mechanism designed to ensure that no party would be able to physically link a name to a questionnaire. We excluded 37 observations from our analyses because of excessive missing data, and 81 participants were excluded because they either retired or went on disability within the 2 years following the survey. Of the remaining 508 participants, 69% were males, and the mean age was 46 years ($SD = 8$). Forty-three percent were employed in the authority's bus division, 48% in the station division, and 9% in the subway division. Given the size of the overall target sample (1,093), the effective response rate was 46.5%. The results of *t*-test analyses comparing mean scores along all study variables indicated no significant differences between those dropped from the analyses and those remaining. Table 1 presents means and standard deviations for the study variables ($N = 492$, due to a list-wise deletion of observations).

Measures

Absenteeism. Absence was operationalized in terms of the number of workdays recorded by the transit authority in the employee's personnel record as having been lost for any reason other than an approved vacation or personal day in the 24-month period following the administration of the survey. The mean num-

Table 1
Means, Standard Deviations, and Intercorrelations (Pearson) of the Measured Variables (N = 492)

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Gender (0 = male; 1 = female)	0.31	0.46	—											
2. Age (years)	46.05	8.05	.02	—										
3. Tenure	11.42	6.23	.07	.46**	—									
4. Ethnicity (0 = Caucasian; 1 = minority)	0.91	0.29	.12**	−.17**	−.23**	—								
5. Average work hours per week	45.46	9.59	−.13**	−.04	−.04	−.06	—							
6. Division (buses)	.43	.49	−.32**	−.18**	−.32**	−.03	.29**	—						
7. Division (underground/subway operations)	.09	.28	−.06	.05	.24**	−.05	−.07	−.25**	—					
8. Negative affectivity	1.87	0.88	−.05	.01	−.10*	−.02	−.06	−.01	−.05	—				
9. Perceived job hazards	2.68	1.57	.17**	−.06	.06	.01	.03	−.02	.09#	−.02	—			
10. Exposure to critical aversive incidents	1.88	2.73	.05	−.08#	−.04	.02	.02	.05	−.09*	−.03	.29**	—		
11. Referent group absence norms	4.87	2.18	.01	.02	.12**	−.03	−.08#	−.07	−.03	−.03	.20**	.14**	—	
12. Supervisor support	0.93	0.66	.04	−.05	.10*	−.03	−.05	−.02	−.03	−.04	.25**	.16**	.31**	—
13. Absenteeism	19.34	12.95	.08#	−.04	.05	.01	.05	.06	−.06	.05	.03	.02	.11*	−.02

# $p < .1$. * $p < .05$. ** $p < .01$.

ber of days absent for those in the sample over the 24-month study period was 19.3 (SD = 12.5), or approximately 10 days per year. The reliability of this measure was estimated based on Hackett and Guion (1985, pp. 343–344). The between-year correlation of mean monthly absence rates (0.61) was used as an indicator of the consistency of measurement across relatively equivalent time periods (i.e., test–retest stability of mean monthly rates for Year 1 compared with Year 2). This coefficient is toward the high end of the estimate reported by Hackett and Guion (1985).

Absence data were highly skewed to the right (skewness = 1.47 [SE = .110]; kurtosis = 4.03 [SE= .219]) and not normally distributed (Kolmogorov–Smirnov statistic = .126, $p < .01$). Such data require a nonlinear modeling strategy (e.g., Bamberger & Biron, 2007). Accordingly, we applied the SAS/ETS Countreg Procedure and PROBCOUNTS macro to produce the average predicted count probability from Poisson, negative binomial, and overdispersed Poisson regressions. We then compared these average predicted count probabilities with the observed probability values. The probability based on a negative binomial model best fit the observed probabilities. Accordingly, we tested our hypotheses on the basis of a negative binomial model.

Perceived job hazards. Thirty-four members, randomly selected from the same union, were asked to identify relevant hazards from among those included on the instruments developed by Frone (1998) and Holcom et al. (1993) as well as to identify any additional hazards that they periodically faced on the job. They were asked to comment on the stability of these hazards over time. Although several of the identified hazards were job-specific (e.g., electrocution) or somewhat seasonal (e.g., extreme temperatures), most were common across jobs and characterized as consistent concerns over time. Union accident reports also indicated that the frequency and nature of employee work-related injuries were remarkably stable over the 24-month study period. The measure used here includes the 13 hazards identified as most relevant to their jobs by these informants. Using a response format ranging from 0 (*never*) to 6 (*daily*), we asked employees to indicate the frequency with which they felt they had been exposed to different workplace hazards during the past 12 months. Sample items included continuous loud noise, dangerous chemicals/contaminants, and extreme temperature or humidity (α = .87).

For purposes of study replication, we assessed perceived job hazards in terms of an additional variable, namely, exposure to work-based critical incidents. This variable describes distinct events in which employees are victims of serious injury, witness others suffer serious injuries, or feel that their lives are in danger (e.g., verbal and physical assaults by customers or co-workers; Monnier, Cameron, Hobfoll, & Gribble, 2002; van der Velden et al., 2006). Using Monnier et al.'s (2002) 10-item scale, we asked employees to indicate how many times in the past 12 months they were involved in such incidents as "Injury to yourself severe enough to require medical treatment" and "Verbal or physical threat by a customer/civilian to yourself while on duty." The response scale ranged from 0 to "7 or more" (α = .70).

Subjective referent group absence norms. Participants were asked to think about two co-workers with whom they felt "most strongly connected," whose opinions they "most closely valued," that is, people they could "really talk to and rely upon." This wording is nearly identical to that used in previous network studies (e.g., Burt, 1984). For each of these co-workers, participants were asked to indicate the degree to which they viewed 20 possible reasons for absence as "justifiable." Responses were given on a five-point scale ranging from 1 = *very illegitimate* to 5 = *very legitimate*, with higher scores being indicative of more permissive absence norms. This operationalization of peer norms has been employed by others (e.g., Geurts, Schaufeli, & Buunk, 1993). Although the original instrument, developed by Harvey and Nicholson (1999), included 18 items focusing on the individual's own illness symptoms (e.g., headache, sore throat), based on the six illness clusters identified by these researchers, we combined a number of related symptom items in order to reduce the list of own-illness items to 13. These items were also the most prevalent among the physician-prepared medical excuses that absent employees were required to submit upon their return to work. Seven additional items relating to personal situations potentially requiring absence from work (e.g., parental illness; important event at child's school; household chore) were added to these 13 illness items on the basis of the scale developed by Bamberger and Biron (2007). The mean alpha for this 20-item measure across the two co-workers was .82.

Intermember, or within group (WG), agreement (r_{WG}) was calculated for each referent dyad on the absence norms variable, denoting the degree to which the subjective ratings of referents of each individual were interchangeable (Bliese, 2000). Across the 492 referents' dyads, the mean r_{WG} was .77 (minimal r_{WG} value was .69), which is high enough to justify aggregation. Accordingly, we calculated the mean absence norms score for each referent other and then took the average of these two means as our indicator of perceived referent group norms.

Supervisor support was measured on the basis of an 8-item index adopted from Anderson and Williams (1996). Participants were asked to indicate how often during the past month their immediate (i.e., direct) supervisor provided them with such support as "Talked you through work-related problems, helping you come up with solutions" and "Provided you with encouragement (positive feedback) about your work." Participants responded using a 5-point scale ranging from *never* (0) to *several times a day* (4) (α = .93).

Control variables. Previous research suggests that a variety of demographic and individual difference variables such as gender, age, tenure, ethnicity, and average hours worked per week, as well as negative affectivity, may be related to perceptions of aversive work conditions (e.g., Clarke & Cooper, 2004), sickness absence (e.g., Harrison & Martocchio, 1998), or both. Accordingly, in order to take into account any spurious effects and ensure that we were capturing the effects of aversive conditions above and beyond these factors, we controlled for each of these variables (with negative affectivity assessed on the basis of the Negative Affect Scale; Watson, Clark, & Tellegen, 1988; α = .81). In addition, we controlled for the possibility that the values for both the independent and dependent variables differed systematically between the three divisions by creating two dummy variables to represent the three divisions (stations served as the reference group). Finally, in order to link survey data with objective absentee data, we had to use nonanonymous data collection. To account for potential social desirability bias, we included in all analyses a measure for self-enhancement (namely, Paulhus's [1991] Balanced Inventory of Desirable Responding). The inclusion of this vari-

able had no meaningful effect on the observed relationships, and it was eventually dropped from the models.

Results

Means, standard deviations, and correlations are displayed in Table 1. The bivariate results indicate that neither job hazards nor critical incidents were associated with absence ($r = .03$ and $r = .02$, respectively, both at $p > .05$). In addition, both aversive conditions were associated with referent group absence norms ($r = .20$ and $r = .14$, respectively, both at $p < .01$) and supervisor support ($r = .25$ and $r = .16$, respectively, both at $p < .01$). Finally, group norms, but not supervisor support, were associated with absenteeism ($r = .11$, $p < .05$, and $r = -.02$, $p > .05$, respectively).

As can be seen in Model 2 of Tables 2 and 3, respectively, the multivariate results indicate no direct effect for job hazards, or for critical incidents, on absenteeism ($B = .02$ and $B = .00$, both at $p > .05$). Accordingly, Hypothesis 1 is not supported by the data.

To test Hypotheses 2 and 3 (suggesting moderating effects for subjective referent group absence norms [Hypothesis 2] and supervisor support [Hypothesis 3] in the aversive conditions–absence association), we incorporated the centered interaction terms (Aiken & West, 1991) into the model. As shown in Model 3 of Tables 2 and 3, and consistent with our prediction, the association between aversive work conditions and the number of days absent was more positive under conditions of more permissive subjective referent group norms ($B = .03$ and .01, respectively, for job hazards and critical incidents, both at $p < .05$; slopes significantly differ from one another: $\Delta = .117$, Wald $\chi^2 = 4.84$, and $\Delta = .104$, Wald $\chi^2 = 4.91$, both at $p < .05$). In addition, the hazards–absence and the critical incidents–absence relationships were, as hypothesized, more negative under conditions of greater supervisor support ($B = -.02$ and $-.00$, respectively, both at $p < .05$; slopes significantly differ from one another: $\Delta = .023$, Wald $\chi^2 = 10.04$, and $\Delta = .014$, Wald $\chi^2 = 4.71$, both at $p < .05$).

Finally, we found support for our fourth hypothesis, positing that the two-way interaction between aversive conditions and subjective group norms would vary as a function of supervisor support (see Model 4 of Tables 2 and 3). Specifically, we found a significant three-way interaction among job hazards, group norms, and supervisor support ($B = -.01$, $p < .05$) and also among critical incidents, group norms, and supervisor support ($B = -.00$, $p < .05$). This indicates that the aversive conditions–norms interaction should be examined separately at different levels of the third factor, namely, supervisor support. To do so, in Figures 1 and 2, we graphically illustrate the interaction effect of group norms on the hazards–absence relationship, taking into account high and low supervisor support. Accordingly, we created two graphs (each plotting three slopes of group norms: one at 1 *SD* below the mean, one at the mean, and one at 1 *SD* above the mean), one in which supervisor support is at 1 *SD* below the mean (Figure 1) and one in which support is at 1 *SD* above the mean (Figure 2).

As these graphs indicate, depending upon how the individual perceives the level of support received from his or her supervisor, the norms-moderated effect of aversive conditions on absence is

Table 2
Negative Binomial Analyses Testing the Influence of the Moderating Effects of Supervisor Support and Referent Group Absence Norms on the Association Between Job Hazards and Absenteeism (N = 492)

	(1) Control model		(2) Main effects model		(3) Two-way interactions model		(4) Full model	
Variable	*B*	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Gender (0 = male; 1 = female)	.15*	.07	.13*	.07	.16*	.07	.18**	.07
Age	−.01	.00	−.01	.00	−.01	.00	−.01	.00
Tenure	.01*	.01	.01*	.01	.01*	.01	.01**	.01
Ethnicity (0 = Caucasian; 1 = minority)	−.02	.11	−.01	.11	−.01	.11	−.04	.11
Average work hours per week	.00	.00	.00	.00	.00	.00	.00	.00
Division (buses)	.15*	.07	.15*	.07	.17*	.07	.16*	.07
Division (underground/subway operations)	−.05	.11	−.06	.11	−.05	.11	−.06	.11
Negative affect	.01	.03	.01	.03	.01	.03	.07**	.02
Perceived job hazards			.02	.02	.02	.02	.02	.02
Referent group absence norms					.04*	.02	.05**	.02
Supervisor support					−.01	.01	−.02	.01
Job Hazards × Referent Group Absence Norms					.03*	.01	.04**	.01
Job Hazards × Supervisor Support					−.02*	.01	.01	.01
Referent Group Absence Norms × Supervisor Support							.00	.00
Job Hazards × Referent Group Absence Norms × Supervisor Support							−.01**	.00
Model summary[a]								
R^2	.031		.034		.055		.087	
Full log likelihood	−1,908.15		−1,907.37		−1,902.08		−1,893.28	
ΔR^2			.003[b]		.021*[c]		.032**[d]	

[a] Since our models were assessed on the basis of generalized linear modeling, effect sizes were estimated based on Cox and Snell's (1989) generalized R^2. [b] Relative to the control model. [c] Relative to the main effects model. [d] Relative to the two-way interactions model.
* $p < .05$. ** $p < .01$.

Table 3
Negative Binomial Analyses Testing the Influence of the Moderating Effects of Supervisor Support and Referent Group Absence Norms on the Association Between Exposure to Critical Incidents and Absenteeism (N = 492)

Variable	(1) Control model		(2) Main effects model		(3) Two-way interactions model		(4) Full model	
	B	*SE*	*B*	*SE*	*B*	*SE*	*B*	*SE*
Gender (0 = male; 1 = female)	.15*	.07	.15*	.07	.17*	.07	.16*	.07
Age	−.01	.00	−.01	.00	−.01	.00	−.01	.00
Tenure	.01*	.01	.01*	.01	.01*	.01	.01*	.01
Ethnicity (0 = Caucasian; 1 = minority)	−.02	.11	−.02	.11	−.02	.11	.03	.11
Average work hours per week	.00	.00	.00	.00	.00	.00	.00	.00
Division (buses)	.15*	.07	.15*	.07	.17*	.07	.20**	.07
Division (underground/subway operations)	−.05	.11	−.05	.11	−.02	.11	−.01	.11
Negative affect	.01	.03	.01	.03	.01	.03	.01	.03
Exposure to critical aversive incidents			.00	.00	−.00	.00	.00	.00
Referent group absence norms					.04*	.02	.03*	.02
Supervisor support					−.01	.01	−.01	.01
Critical Incidents × Referent Group Absence Norms					.00*	.00	.00*	.00
Critical Incidents × Supervisor Support					−.00*	.00	−.00	.00
Referent Group Absence Norms × Supervisor Support							−.00	.00
Critical Incidents × Referent Group Absence Norms × Supervisor Support							−.00**	.00
Model summary[a]								
R^2	.031		.031		.063		.099	
Full log likelihood	−1,908.15		−1,907.15		−1,899.96		−1,889.90	
ΔR^2			.000[b]		.032**[c]		.036**[d]	

[a] Since our models were assessed on the basis of generalized linear modeling, effect sizes were estimated based on Cox and Snell's (1989) generalized R^2. [b] Relative to the control model. [c] Relative to the main effects model. [d] Relative to the two-way interactions model.
* $p < .05$. ** $p < .01$.

either amplified or attenuated. Specifically, as Figure 1 suggests, in the context of low (i.e., 1 *SD* below the mean) perceived supervisor support and more permissive group absence norms, the hazards–absence linkage is positive and significant (estimate of .190, $p < .01$). However, Figure 2 indicates that under conditions of high (i.e., 1 *SD* above the mean) perceived supervisor support, the slope of perceived hazards, when norms are highly permissive, is nearly half as steep (estimate of .101, $p < .05$). Indeed, these two slopes are significantly different from one another ($\Delta = .089$, Wald $\chi^2 = 3.63$, $p < .05$). The general form of the three-way interaction was replicated in the critical incidents–absence link, which was positive and significant under conditions of low perceived supervisor

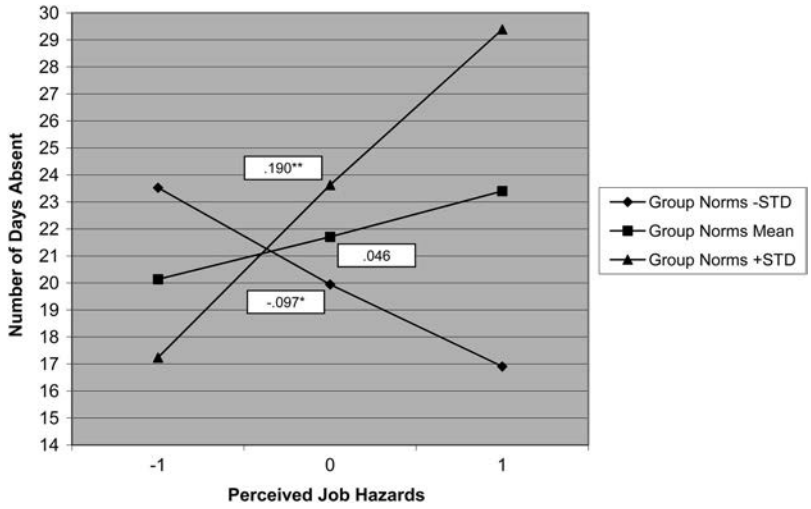


Figure 1. Two-way interaction between perceived job hazards and referent group norms when supervisor support is at 1 *SD* below the mean. Curves are for three different levels of the referent group norms (−1 *SD*, mean, and +1 *SD* of group norms). * $p < .05$. ** $p < .01$.

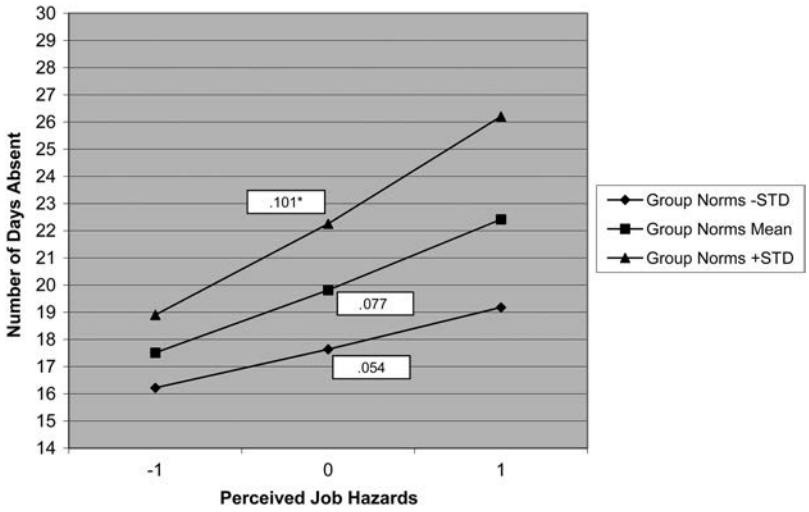


Figure 2. Two-way interaction between perceived job hazards and referent group norms when supervisor support is at 1 *SD* above the mean. Curves are for three different levels of the referent group norms (−1 *SD*, mean, and + 1 *SD* of group norms). $^{*}p < .05$.

support and more permissive group norms (estimate of .019, $p < .05$) yet insignificant under conditions of high perceived supervisor support, even when group norms were highly permissive (estimate of .005, $p > .05$; slopes significantly differ from one another: $\Delta = .014$, Wald $\chi^2 = 4.84$, $p < .05$).

Overall, these results suggest that while more permissive peer referent norms amplify the aversive conditions–absence relationship, this amplification effect is significant only when supervisor support is low. But just how meaningful is this effect? Our findings indicate that when supervisor support is above mean levels, the hazards–absence relationship does not appear to be meaningfully influenced by more or less permissive referent norms (1.11 [vs. 1.06] times greater number of days of absence under high vs. low permissive peer norms). In contrast, when supervisor support is at 1 *SD below* the mean and reference group norms are 1 *SD* above the mean (vs. at the mean), then the expected number of days of absence for an individual with a given level of job hazards is 1.21 times (vs. 0.91 times) greater than the expected number of days of absence for an individual who, all else being equal, perceives his or her job hazards level as being one unit lower. In other words, the number of days of absence associated with a single unit increase in perceived hazards is 30% greater for employees perceiving low supervisor support and highly permissive norms than it is for individuals perceiving low supervisor support and a mean level of permissiveness of referent group absence norms.

Discussion

The findings presented above support the idea that, consistent with the theory of social identity and attitude–behavior relations (Terry et al., 2000), normative and leadership influences interact to condition the impact of aversive workplace conditions (i.e., perceived job hazards and critical incident exposure) on employee absence behavior. Indeed, our findings offer some of the first field-based empirical support for Terry et al.'s theory, demonstrating how the inconsistent findings regarding the association of adverse work conditions with employee absence may be reconciled when taking into account the interplay between subjective peer norms and employees' relations with their supervisor.

More specifically, although we found no direct impact of aversive work conditions on absenteeism, we did find that both group absence norms and perceived supervisor support independently moderate the aversive conditions–absence relation. Perceived hazards and critical incidents were found to have more positive association with absenteeism among those reporting more permissive referent group absence norms. This finding is consistent with social identity and self-categorization theories, which suggest that beyond any direct effect of peer absence norms on individual absenteeism (as is also evident in the current study; see Model 3 of Tables 2 and 3), subjective group norms have important moderating effects, conditioning the impact of employee work-related cognition (in this case, perceived aversive work conditions) on absence.

In addition, the aversive conditions–absence association was—as predicted—more negative among those reporting more supportive supervisory relations. Consistent with notions of stress buffering (Cohen & Willis, 1985) and social exchange (Blau, 1964; Settoon et al., 1996), this finding suggests that employees perceiving their supervisor as being more supportive are less likely to miss work in response to aversive conditions, perhaps because supervisory support alleviates the strain associated with such conditions that could underlie such behavior (Cohen & Willis, 1985) or because such employees seek to reciprocate the positive treatment by attending work and to avoid inflicting the potential adverse costs of their absenteeism on their supervisor or the organization that she or he represents.

Furthermore, we found the strength of the moderating effect of peer norms on the relationship between aversive workplace conditions and absence to itself be contingent on perceived supervisory support. More specifically, consistent with the logic underlying the theory of social identity and attitude–behavior relations, we

found the positive effect of permissive peer norms on the aversive conditions–absence relationship to be attenuated when supervisors were deemed more supportive. However, when supervisory support was low, we found the relationship between aversive conditions and absence to be governed largely by peer norms. Accordingly, under conditions of low supervisory support, this relationship was positive when referent group absence norms were more permissive and negative when absence norms were less permissive (i.e., more restrictive; see Figure 1). Such findings are consistent with the idea that when the supervisor fails to offer a competing category for self-identification, peer group norms may play a more central role in determining employee responses to aversive workplace conditions. In this sense, our findings lend support to the idea that it is the interaction of normative and leadership influences that together govern the relationship between aversive conditions and employee absenteeism, as well as to the idea proposed by Terry et al. (2000), namely, that the effect of peer norms on attitude–behavior relations is malleable, subject to the influence of competing sources of identification such as organizational leaders. For organizational leaders this may be important in that it suggests that enhanced supervisory support may be an important means by which to confront counterproductive employee subcultures (Trice, 1993; van Maanen & Barley, 1984).

Although the effect sizes obtained in our study are small by conventional standards, it should be noted that they were estimated on the basis of Cox and Snell's (1989) generalized R^2, estimates of which are typically lower than those obtained in linear regression. This is because unlike the variance-based R^2 of ordinary least squares regression, this deviance residual-based metric has an upper limit that is less than unity (Hosmer & Lemeshow, 2000). Moreover, meta-analytic results (Beehr, 1995) indicate that work-related stressors explain, on average, no more than 2% of the variance in absenteeism (Beehr, 1995) and that strain does only slightly better (4% to 6%; Darr & Johns, 2008). Relatedly, given the use of a sample drawn from a single organization operating under a single collective bargaining agreement with a rather strict absence policy, the potential attenuation of the variance in absence might serve to further reduce the likelihood of finding significant relationships. Accordingly, if anything, our findings err on the conservative side. Finally, our ability to detect slope-based differences that are seemingly small can be meaningful, particularly in situations involving thousands of people, as in our case (Cortina & Landis, 2009). Specifically, discounting medical benefits, the labor rate in our sample is approximately $70 per hour on average. In each of the two years of the study, the mean employee at this organization took 77 sick hours. This company has 23,634 employees for a total loss due to sick leave of approximately $127.4 million per year. Our three-way interactions accounted for approximately 3% of the variance in sickness absence, or about $3.8 million per year.

Limitations and Suggestions for Future Research

Although over 600 employees participated in our survey, and despite a response rate of nearly 50%, a little more than a fifth of the observations (129) could not be analyzed because of missing data or other sample-related problems (e.g., dropouts due to retirement, disability). While *t* tests suggest that the responses of those excluded from the analysis were not different from the responses of those retained, the risk of sample bias may still remain. We therefore applied a procedure recommended by Goodman and Blum (1996). Specifically, using logistic regression, we tested a model in which the dependent variable was a dichotomous variable distinguishing between observations used in our analyses (i.e., "stayers") and those dropped for any reason ("leavers"). The independent variables specified included all of the variables of theoretical interest to us. With none of the coefficients emerging as statistically significant, we are reasonably confident that any attrition was random and hence unlikely to have biased our results (Little & Rubin, 1987).

Second, because the study focused on peer norms as well as individual perceptions of job hazards and supervisory support, it is possible that the empirical support for our model stems less from the attributes of the context (i.e., referent peer norms, supervisor support) and more from attributes of the employees perceiving these contextual attributes themselves. Moreover, the fact that all three of these variables are significantly correlated with one another may suggest the presence of some underlying personal attribute such as negative affect or social desirability that is not only biasing all three perceptions in some systematic fashion but is also the factor really underlying absenteeism. Then again, these variables were, at most, only moderately intercorrelated. Moreover, the fact that the inclusion of negative affectivity and social desirability in all analyses (as noted above) had no meaningful effect on the observed relationships indicates that our findings are unlikely to be simply an artifact of same-source bias (Edwards, 2008).

Third, in that we relied on subjective measures of aversive working conditions, it is risky to draw conclusions about the causal nature of the relationship between aversive conditions and absence. In particular, there could be an argument for a reversed link; people who are absent more often may adjust their perceptions (and reports) of job hazards and/or critical incidents to justify or legitimize their behavior. Accordingly, we encourage the use of longitudinal designs assessing the relative strength of these potentially reciprocal effects.

Finally, our study may offer somewhat limited generalizability in that it focused on unionized, blue-collar workers employed in only one metropolitan transit authority in the United States under a single collective agreement with a strict absence policy. Our findings should be replicated, particularly with regard to white-collar employees or other types of blue-collar workers employed in other firms, industries, and/or countries.

Conclusions and Implications

Despite these limitations, our study contributes to the literature on employee absence by theorizing and demonstrating that models of absenteeism are likely to offer greater predictive utility to the extent that they (a) take into account the indirect effect of group norms and leadership behavior and (b) consider the simultaneous effect of these factors, namely, how leaders serve as a competing basis of self-identity, affecting the salience of group norms. Although recent research suggests that group attachment may in many cases exert a stronger influence on employee attitudes and behavior than organizational attachment (Riketta & van Dick, 2005), we are aware of only one study (Eder & Eisenberger, 2008) that has suggested that organizational support may serve to buffer

the impact of group norms on individual behavior (i.e., tardiness). The current study extends this idea by systematically unpacking such an effect. More specifically, by predicting and finding a three-way interaction among aversive work conditions, group absence norms, and supervisor support, we demonstrate an interaction between cognition, norms, and a salience-influencing condition in a manner consistent with the core notion of Terry et al.'s (2000) social identity theory of attitude–behavior relations.

In terms of practical implications, the results suggest that while more permissive group absence norms may encourage employees to respond to perceived aversive conditions by taking more days off than they might have otherwise, supportive supervision may be a way to manage such normative influences. The amplifying effects of permissive workplace norms were themselves diminished as a function of employee perceptions of more supportive supervision. This suggests that organizations faced with higher-than-desired absenteeism may find it useful to encourage frontline supervisors to be more supportive and to provide them with the resources, such as training, necessary to develop more supportive supervisor–employee relations. Indeed, adopting such a strategy as a means to mitigate the salience of permissive referent group absence norms is likely to generate less resistance than the alternative strategy, namely, attempting to shift often deeply embedded referent peer norms (Trice, 1993).

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