Beyond Health Risks: Workplace Climate, Stress, Health and Sick Days

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The Issue: Employers seeking to improve workforce productivity have focused on reducing health risks while often paying scant attention to how workplace climate contributes to both health and to absence. In this IBI research, we find that:

Evidence: Using data over three years from a nationally-representative survey of employed adults, IBI investigated the direct and indirect links between work climate, health, stress and sick days.

- Employees who characterize their workplace favorably in terms of work load, work-life balance, relations between workers and managers, and time-demands also report fewer sick days.
- Workplace climate influences sick days only indirectly, primarily through an influence on stress levels but also with some influence through health more generally.

Solution: Wellness efforts may be most effective at improving productivity when they are part of a broader approach to health and productivity that also entails a full understanding of how the workplace climate influences health. Employers should pay special attention to helping employees manage the demands of their jobs and cope with work-related stress in efforts to maximize employee performance.

Background

Wellness programs are designed to encourage and support employees' healthy behaviors (such as quitting smoking, maintaining a healthy body weight, exercising more, eating nutritious foods) or help employees manage serious illnesses (such as diabetes and heart disease). Employers increasingly view workplace wellness programs as an important way to reduce health care costs and productivity losses from illness-related absence and underperformance.[1] The Bureau of Labor Statistics (BLS) estimates that between 2005 and

[1] Gifford, B., W. Molmen and T. Parry, 2010, *More than Health Promotion: How Employers Manage Health and Productivity*, Integrated Benefits Institute.

2010, the share of private sector workers with access to workplace wellness benefits[2] grew from 23% to 31% (a 35% increase).

Such efforts to promote good health are encouraging. However, they stand a greater chance of improving productivity outcomes if they are integrated with a broader health and productivity strategy rather than as a stand-alone program (or worse still, as benefits offered primarily to promote employee satisfaction with little regard for any impact on productivity[3]). A more holistic approach to health and productivity would integrate management of wellness programs with other benefits programs such as group health and disability. It also would consider how workplace climate – employee perceptions of the ways in which things get done on the job and how people work with and are treated by one another[4] – influences health in ways that go beyond occupational illnesses and injuries. Workplace climates that produce symptoms of stress-related illness (e.g., pain, gastrointestinal discomfort, hypertension) or psychological distress (e.g., depression or other emotional problems) also may result in lost work time and reduced job performance. Wellness efforts that focus primarily on behaviors and on managing chronic illness to the exclusion of the climate within which employees work may miss a more immediate source of improvements in illness-related lost productivity.

How, then, does the workplace climate contribute to illness-related lost productivity? And what, if anything, can employers do about it?

Evidence

To better understand the links among workplace climate, stress, health and absence, we analyzed data over three years from the General Social Survey (GSS)[5], a nationally-representative survey administered biennially by the National Opinion Research Center

[2] Mayfield, M., 2010, "Health, Wellness, and Employee Assistance: A Holistic Approach to Employee Benefits," Bureau of Labor Statistics.

[3] In 2010 IBI's survey of organizations' health and productivity management programs (HPM), 25% of human resources and benefits managers said that employee satisfaction was a primary goal of their most important health promotion programs; 11% said the same of their most important disease management programs. See *More than Health Promotion*.

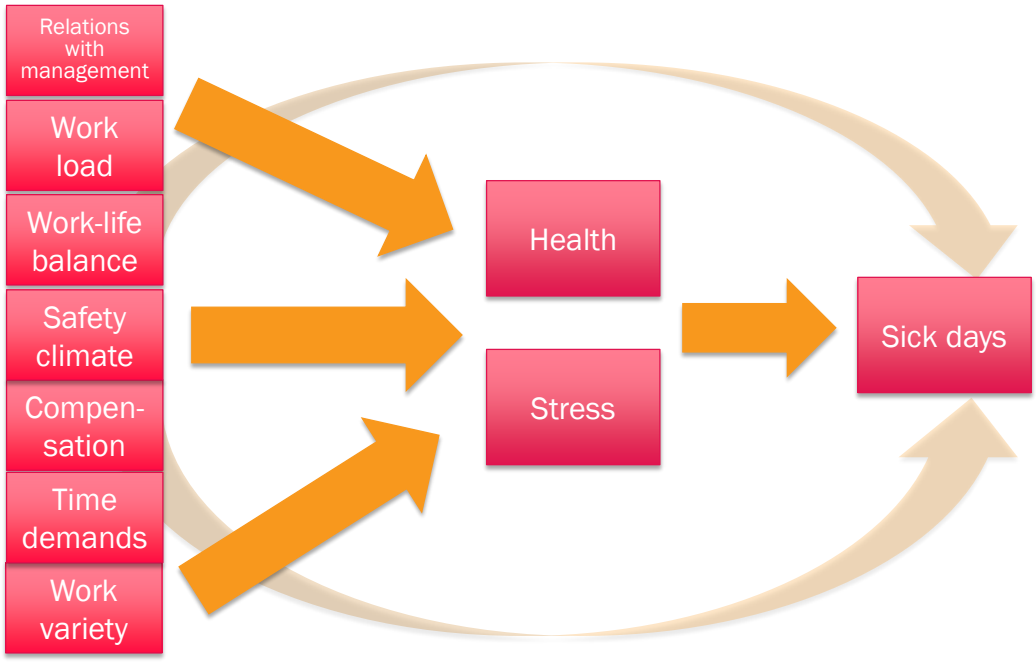
[4] This is a general description for the purposes of this paper. For a deeper treatment of organizational climate, see for example Patterson, M.G. M.A. West, V.J. Shackleton, et al., 2005, "Validating the Organizational Climate Measure: Links to Managerial Practices, Productivity and Innovation," *Journal of Organizational Behavior*, Vol. 26(4), pp. 379-408.

[5] Smith, T.W. P.V. Marsden, M. Hout, and J. Kim, 2011, General Social Surveys, 1972-2010 [machine-readable data file], Principal Investigator, T.W. Smith; Co-P.I., P.V. Marsden; Co-P.I., M. Hout; Sponsored by National Science Foundation. --NORC ed.-- Chicago: National Opinion Research Center [producer]; Storrs, CT: The Roper Center for Public Opinion Research, University of Connecticut [distributor].

(NORC) at the University of Chicago. The 2002, 2006, and 2010 surveys included questions about health, stress, and workplace climate taken from the National Institute of Occupational Safety and Health's (NIOSH) "Quality of Worklife" questionnaire. Our sample of data from these years includes 2,415 employed adults.

IBI researchers developed a model depicted below in which different aspects of workplace climate[6] have a direct impact on general health and levels of stress. Additionally, we analyzed how these factors impacted sick days.[7] In this way, workplace climate is proposed to have an *indirect* impact on sick days through health and stress. However, for completeness, our model also allowed workplace climate to influence sick days directly in order to account for the potential influence of outside factors that are not included in the data.[8]

Pathways to Sick Days



[6] Measures of workplace climate are identified through a statistical technique called "factor analysis" that takes into account how answers to particular survey questions correspond with one another. From our results we combined questions with high correspondence into several measurement scales. This allowed us to analyze a smaller number of measures without losing the richness of the data or characterizing any aspect of workplace climate to responses from a single question.

[7] The GSS does not contain questions about individual's job performance or productivity.

[8] We obtained our final results using a method of multivariate regression analysis called "structural equation modeling." This allowed us to estimate both direct and indirect effects simultaneously. Although not shown in the illustration, our model also controls for demographic characteristics such as age, sex, race, education, and occupation.

Measuring workplace climate: Workplace climate is measured by combining responses to survey questions about:

1. **Relations with management:** relations between employees and management are good; supervisors are concerned about workers' welfare, are helpful in getting the job done, and are likely to praise employees; promotions are handled fairly; co-workers take an interest in one another.

2. **Work load:** employees have too much work to do well, too few workers or not enough time to get the job done.

3. **Work-life balance:** the frequency with which the job interferes with family life and vice versa.

4. **Safety climate:** worker safety is a priority on the job; there are no shortcuts on safety; the company maintains good safety and health conditions; management and employees work together on safety issues.

5. **Adequate compensation:** fringe benefits are good and earnings are fair; employees can make ends meet with their earnings.

6. **Time demands:** the frequency with which employees work extra hours and how often they work from home.

7. **Work variety:** an employee does numerous things on the job; job requires that an employee learn new things.

We combined the above questions into seven scales and coded the answers so that *higher values indicate a better climate from the employee's perspective* (for example, "good relations with management" has a higher score than bad relations, a lighter work load is scored higher than a heavier work load, fewer days with extra hours and less frequent work from home has a higher score than heavier time demands, etc.).[9]

Health and stress: The survey measures health using a common single-item question asking individuals to rate their general health as "poor," "fair," "good," "very good," or "excellent." Studies show that this question is a good predictor of disease and emotional health.[10] We

[9] Since the underlying questions have different scores for their answers, to make the work context measures comparable to one another the scales are standardized to have a mean of zero (so that positive values are better than negative values from the employee's perspective).

[10] See for example DeSalvo, K.B., et al., Assessing Measurement Properties of Two Single-Item General Health Measures. *Quality of Life Research*, 2006. 15(2): p. 191-201; Idler, E.L. and Y. Benyamini, Self-Rated Health and Mortality: A Review of Twenty-Seven Community Studies. *Journal of Health and Social Behavior*, 1997. 38(1): p. 21-37.

quantify stress by combining two survey questions into a single scale – how often an employee feels used up at the end of the day, and how often their work is stressful.

Sick days: Sick days are calculated based on responses to the question, "During the past 30 days, for about how many days did your poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?" Because the sample is comprised entirely of employed adults, it is reasonable to assume that this measure captures work as a usual activity.

Results

About 80% of the employees reported no sick days during the period; the average number of sick days per employee was 0.8.[11] Not surprisingly, employees who reported better health or lower stress also tended to report fewer sick days (with neither relationship having a stronger relationship than the other).

Overall, our analysis indicates that employees with better work environments also have fewer sick days. None of the measured effects occurred directly – all of the observed impact of work context was due to the findings that employees with better work environments reported better overall health and less stress, and that better health and lower stress were associated with fewer sick days. Because it is difficult to think of some alternative mechanism (other than health) that might link workplace climate and days that a person was too ill to work, the lack of a direct relationship between workplace climate and sick days is critical. It validates that our results are not due to some outside factor that we have failed to model.[12]

With the exception of the variety of work performed, all of the workplace climate measures have a statistically significant relationship to sick days. As an example of how workplace climate relates to sick days, we would expect a person whose work load was worse than the average worker's[13] to have about one sick day over the previous 30 days – which translates into nearly 2-1/2 weeks a year. A person with an average work load is expected to have average sick days (about .8 day per month), while a person with a better than average work

[11] The survey allowed individuals to indicate that they were too ill for usual activities for up to the entire 30 days, which by definition would include weekends (only 4% reported 8 or more days). For a more conservative estimate of lost work days, we multiply the responses by five days per week (i.e., 5/7 or ≈0.71).

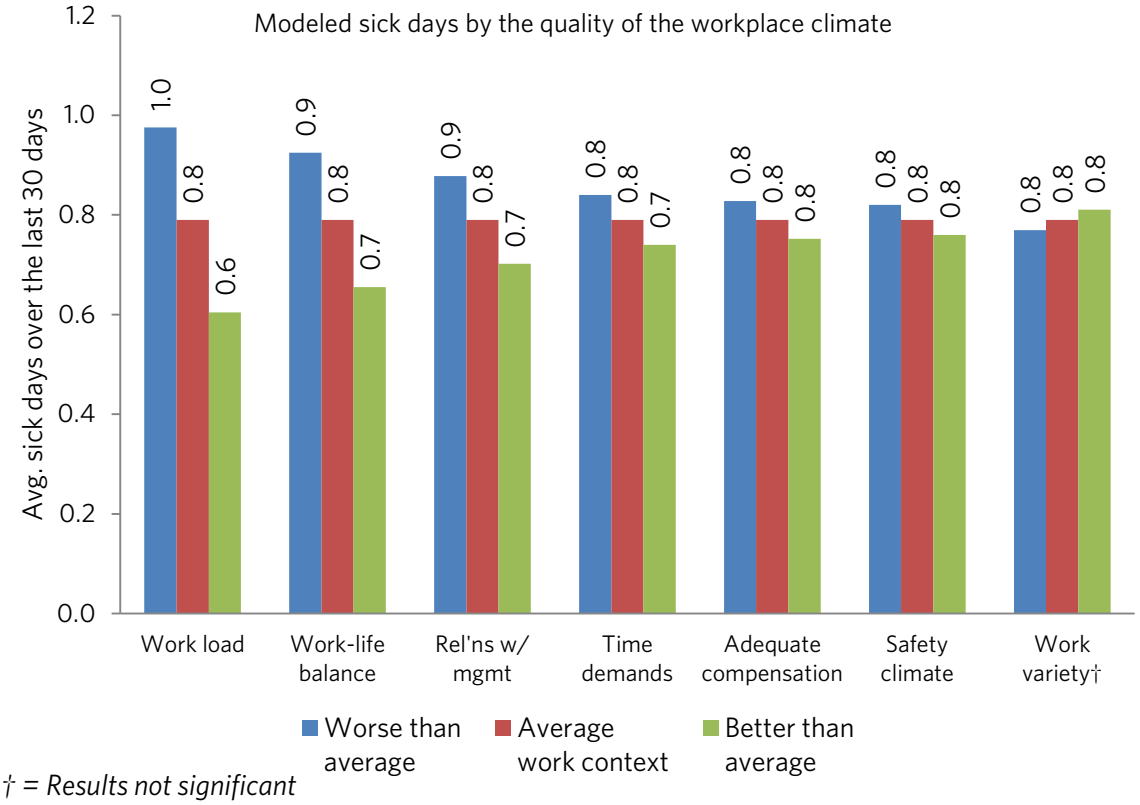
[12] For this reason, the results in the remainder of this report are from models that assume no direct relationship between the workplace climate measures and sick days.

[13] "Worse than average" in this example is indicated as the score on the work load scale that is one standard deviation (SD) below the average score. Only about 16% of respondents are expected to report that their work load is even worse than this. By the same token, "better than average" is indicated as one SD above the average.

load is expected to have about .6 days sick days per month, a 25% difference. The expected difference in sick days between workers with the worst and best work load is therefore about 0.4 days per month or approaching 5 days per year.

Work load has the strongest connection to sick days, followed by work-life balance, relations with management and time demands. While the links between sick days, safety climate and perceived adequacy of compensation are statistically significant, the impact is relatively weak (the differences between the "worse" and "better" categories measure in the hundredths of a day, as indicated by the chart below).

As the workplace climate improves, sick days decline

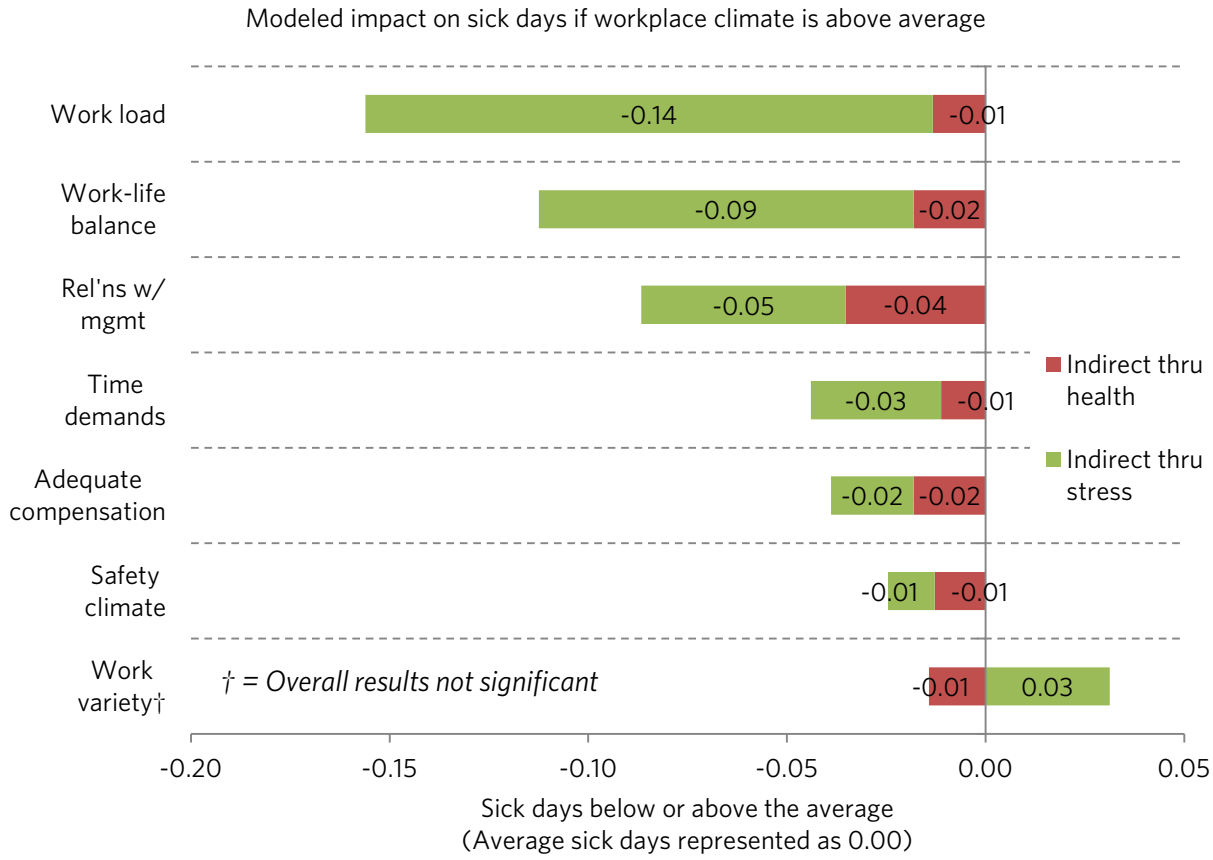


† = Results not significant

Most of the indirect relationship between workplace climate and sick days occurs through its impact on stress rather than on health, as shown below. For example, we would expect a person whose work load was better than the average worker's to have lower stress to such an extent that they have 0.14 fewer sick days per month. By comparison, the impact through health was almost trivial (0.01 fewer days). This finding does not mean that health has no bearing on sick days – only that health matters regardless of the quality of the workplace climate. Relations with management and employee's perceptions of the adequacy of their compensation impact sick days through health and stress in roughly equal measures.

We created the work-variety measure under the hypothesis that more variety at work is better than less variety from the employee's perspective. However, results indicate that more variety increases stress to the extent that we would expect 0.03 more monthly sick days (although this is offset by the finding that more variety has a mild benefit for health, which reduces the total impact on sick days).

Most of the impact of workplace climate on sick days runs through stress



Implications for Employers

The results of this analysis suggest that, on balance, better workplace climates produce less stress and better health, which in turn results in less illness-related lost work time and, therefore, improved productivity. Generally speaking, workplaces that are characterized by lighter workloads, balanced work and family responsibilities, good relations between workers and management, and low demands on workers personal time are more productive than workplaces with less favorable climates – at least in terms of employees' abilities to show up for work consistently.

Employer wellness efforts may be most effective at improving productivity when they are part of a broad, holistic approach to health and productivity that takes these workplace aspects into consideration. Thus, addressing the productivity impact of illness may require more than employers simply providing wellness resources and encouraging healthier habits and better adherence to treatment guidelines. Insofar as possible, employers also should ensure that the organization of work itself does not undermine employees' well-being or their ability to take advantage of available wellness resources. For example, benefits such as onsite gyms or discounted gym memberships won't help employees stay healthy if their schedules do not allow them time to work out.

Perhaps most importantly, employers could benefit by ensuring that their wellness efforts include methods to help workers minimize and cope with work-related stress. The Centers for Disease Control and Prevention[14] provides useful information on preventing, reducing and coping with stress (such as identifying stress triggers and setting task priorities). Many health care providers make similar information publicly available. In addition to contributing to more illness absences, we know from IBI's previous research on stress at work that employees with high stress levels also report worse job performance on several dimensions (such as not working as carefully as they should or having difficulty concentrating on their work).[15] Helping employees manage stress could improve productivity in more ways than one.

Senior executives are searching for ways to maximize workforce productivity and improve business performance. Health benefits managers and their supplier partners have seen an opportunity to begin to link health to those business objectives. This analysis, however, demonstrates the importance of broadening the focus to include workplace climate in efforts to improve attendance and workforce performance.

[14] *Stress at Work*. DHHS (NIOSH) publication No. 99-101; U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Health and Safety.

[15] "Stressed Out at Work: Health, Stress, and Job Performance," October, 2011, Integrated Benefits Institute.