



## ***HUMAN CAPITAL INVESTMENT FOR BETTER BUSINESS RESULTS*** CONNECTING WORK CLIMATE, EMPLOYEE HEALTH AND JOB-RELATED OUTCOMES

FINDINGS FROM IBI STUDY *THE IMPACT OF HEALTH ON JOB PERFORMANCE AND PRODUCTIVITY*

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### **Summary**

- Work climates characterized by unsafe working conditions, low respect and trust, poor variety and learning and high workload (“unsupportive” work climates) are associated with higher absence and lower job performance.
- Both physical and mental health symptoms adversely affect absence and job performance
- Physical health symptoms primarily affect absence while mental health symptoms primarily affect performance
- However, “unsupportive” work climates exacerbate the effects of physical and mental health symptoms on both absence and performance
- Employers have some control over factors affecting these relationships including management-related stressors, value-based benefit plan design, and comprehensive wellness programs
- Broader outcomes measurement and interventions including employee wellbeing, attendance and performance will help support sound human capital investments

## Introduction

Two forces are converging in the management of employer-based health and related benefits. As benefits professionals recognize the need to treat workforce health as something more than simply healthcare costs, they are expanding their focus to include dimensions such as absence from work, disability, employee performance and productivity. This broader view is influencing how these professionals are designing and measuring the impacts of benefits plans, programs and interventions.

At the same time, a growing number of employers understand that health is only part of a human capital management strategy that can influence broader “health-as-business-value” outcomes. Organizational dimensions such as employee wellbeing, corporate culture and employee engagement are being seen as opportunities to create a more integrated and holistic strategy in managing workforce health and human capital, and to more broadly influence their impacts on business performance.

In this newest IBI study, we examine how corporate culture influences two key dimensions affecting business performance -- absence from work and performance at work.

## Background

In general, scholars and managers agree that strong work climates support employee engagement and lead to better work outcomes.<sup>1,2,3</sup> Health conditions have also been linked to work outcomes, but the degree to which work climate alters this relationship is not well known. In this study, we investigate how work climate affects absence and job performance directly and whether it influences the relationship between employee health and these same work outcomes. ***To the extent that employers support, rather than undermine, their investments in human capital, they will benefit from a healthy and high-performing workforce.***

## What is Known About Work Climate, Employee Health and Work Outcomes?

There are a variety of existing ways to typify a supportive work climate, one that supports employee engagement in work and commitment to the organization.<sup>4</sup> A recent review of the theory and existing research on workplace factors affecting employee engagement and organizational commitment supports the premise that work climate is important to a variety of work-related outcomes.<sup>5</sup> For example, a recent study found that more positive assessments of the structure and culture of the workplace led to higher employee engagement which in turn

led to higher job satisfaction, lower intention to quit and better work outcomes.<sup>6</sup> Generally, employees with higher levels of engagement were more likely to have better relationships with their employer and consequently have more positive attitudes, intentions and behaviors in relation to their work. One key driver of employee engagement in these studies is the quality of the manager-employee relationship and provision of employer supports to do their job well.

We also know from the research literature that health-related outcomes are affected by employee engagement. One study found that work engagement and job burnout were related to sickness absence duration and/or frequency.<sup>7</sup> Specifically, high job demands were more related to absence duration and lack of job resources was more related to absence frequency. Lack of resources also led to lower employee motivation and lower job performance.

When it comes to investigating the relationship between employee health and work outcomes, there is a predominant emphasis on employee-related factors.<sup>8</sup> However, recent research has found that poor organizational climate is associated with higher sickness absence.<sup>9,10</sup> Another study found that job strain as assessed by both psychological demand and control over work is associated with lower job performance.<sup>11</sup> That study found that a negative work environment may directly and indirectly affect job performance, particularly for individuals with depression. This line of research suggests that “unsupportive” work climates characterized by high workload, low levels of trust and unsafe working conditions may be particularly difficult for people suffering from mental illness. Work locations with high levels of organizational stress experience lower levels of employee engagement and worse job satisfaction than locations with better work climates.<sup>12</sup>

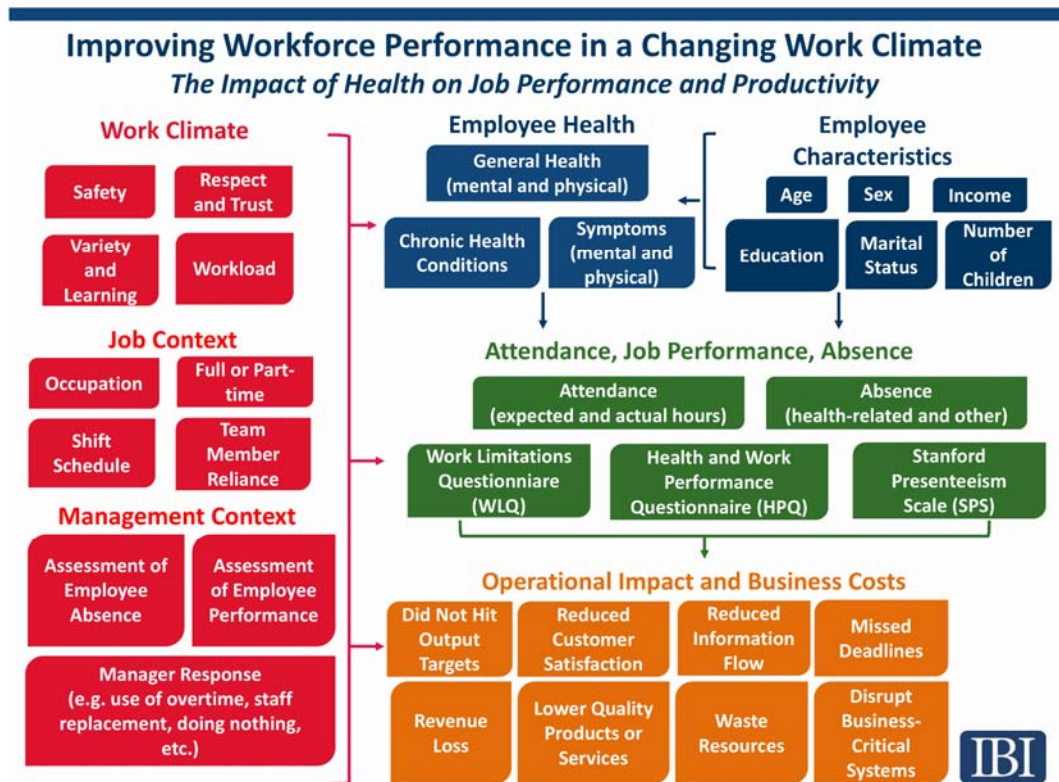
This research literature suggests that a competitive advantage for a business can be gained by creating a behaviorally engaged workforce.<sup>13,14</sup> A meta-analysis found that employee engagement and employee satisfaction at the business-unit level were significant predictors of business-unit outcomes such as customer satisfaction, productivity, profit and employee turnover.<sup>15</sup> Other research efforts have been focused on the effects of positive attributes or “flourishing organizations” on work outcomes.<sup>16</sup> Engaged workers are more productive and engagement of members of the same work team increases performance.<sup>17</sup> Creating a climate of organizational commitment might not only foster greater employee performance, but also an interest in remaining at the company.<sup>18</sup>

We also know that health conditions influence job performance.<sup>19,20,21,22</sup> We are interested in understanding the extent to which work climate affects job-related outcomes directly and indirectly through employee health. If individuals in “unsupportive” work climates with health problems have higher absence and lower performance than their healthy counterparts it suggests a role for employers in better managing and supporting health-related work outcomes for employees with chronic illness and other health conditions.

## Research Approach: Study Design, Questions, Data, Methods and Measures

### The Parent Study

The research data were collected as part of the overall parent study *"The Impact of Health on Job Performance and Productivity"* with elements and relationships represented in this diagram.



At the core of the research we are interested in the influence of employee health on job-related outcomes such as attendance, job performance and absence. We expect work climate and the job/management context to affect these job-related outcomes directly and indirectly through employee health. We also know that employee characteristics can also influence both health and job-related outcomes. Finally, both the employer and employee factors affect a range of operational impacts and business costs as depicted at the bottom of the diagram. The overall parent study measures each element appearing in the diagram and has two primary aims: 1) clarify the relationship between employee health, job performance and organizational impacts and 2) provide employers useful models and measures to apply in their own work.

Two web-administered surveys -- one to employees and the other to their managers -- gather the following information across employer sites:

- Employees are surveyed on health, attendance, absence, job performance dimensions related to health and work climate.
- Managers are asked a series of questions about employee absence and performance, how the organization responds to maintain work flow and the associated operational impacts and costs.

A variety of researchers have developed validated employee self-reporting tools for evaluating chronic health conditions and job performance impacts. However, these tools tend to take different approaches to the various measurement issues and oftentimes lead to different results. Accordingly, in addition to researchers from the Integrated Benefits Institute (IBI), the parent study's research team includes several leading tool developers including Dr. Ronald Kessler (developer of the Health and Work Performance Questionnaire), Dr. Debra Lerner (developer of the Work Limitations Questionnaire) and Dr. Ken Pelletier (developer of the Stanford Presenteeism Scale).

The parent study was designed to include an initial pilot effort with five employer sites. To date, two sites have successfully fielded the surveys to managers and employees. After the pilot is completed the research effort would expand to include a wider variety of employers to ensure maximum coverage of important occupations and industries such that with sufficient data the information can be built into models for use by employers. For now, with two sites completed, we are able to explore the relationship between employee health, job performance and organizational impacts.

### **This Research Report**

This report provides an overall summary of the initial pilot effort at two sites and draws upon the employee survey results. For this particular research report we focus on a portion of the diagram that addresses how work climate, employee health and job-related outcomes are connected. This paper investigates the following research questions:

- Q1: Will employees in "unsupportive" work climates have higher absence and lower job performance than employees in "supportive" work climates?
- Q2: Will employees with higher levels of health symptoms (mental or physical) have higher absence and lower job performance than employees fewer symptoms?
- Q3: Will "unsupportive" work climates exacerbate the effects of health symptoms on absence and job performance?

We received 322 useable surveys from two employer sites representing health services and county government as outlined in the table below. For this report we utilize the 293 employee survey responses.

Site	Manager Surveys (N=29)	Employee Surveys (N=293)	Total (N=322)
Site 1: Health Services	11	112	123
Site 2: County	18	181	199

IBI worked with Nielsen (formerly HarrisInteractive) to field employee and manager surveys at two sites. An independent review board, Chesapeake IRB, determined this study to be exempt from IRB oversight based on the Department of Health and Human Services regulations found at 45 CFR 46.101(b). All identifiable data collected are held in a secure data environment complying with HIPAA protections. Only the research team has access to these data. The companies participating only receive aggregate reports without individually identifiable information. Sites were offered respondent incentives as follows: \$25 for a completed employee survey with average completion time of 20 minutes and \$50 for a completed manager survey with an average completion time of 35 minutes. Site 1 chose to receive the incentive whereas as Site 2 declined. Incentives were awarded as an Amazon gift card code or the option of donating to a list of charities at the conclusion of the survey.

The Appendix of this report includes detail on the socio-demographics of the employees participating the survey.

The outcome variables -- employee self-reported absence and job performance -- were measured via HPQ-Select items.<sup>23</sup> These questions were designed for the *World Health Organization Health and Work Performance Questionnaire* (HPQ) and were included in the study survey. Prior validation research shows supportive concordance between this measure and objective measures of performance across a variety of occupations.<sup>24</sup>

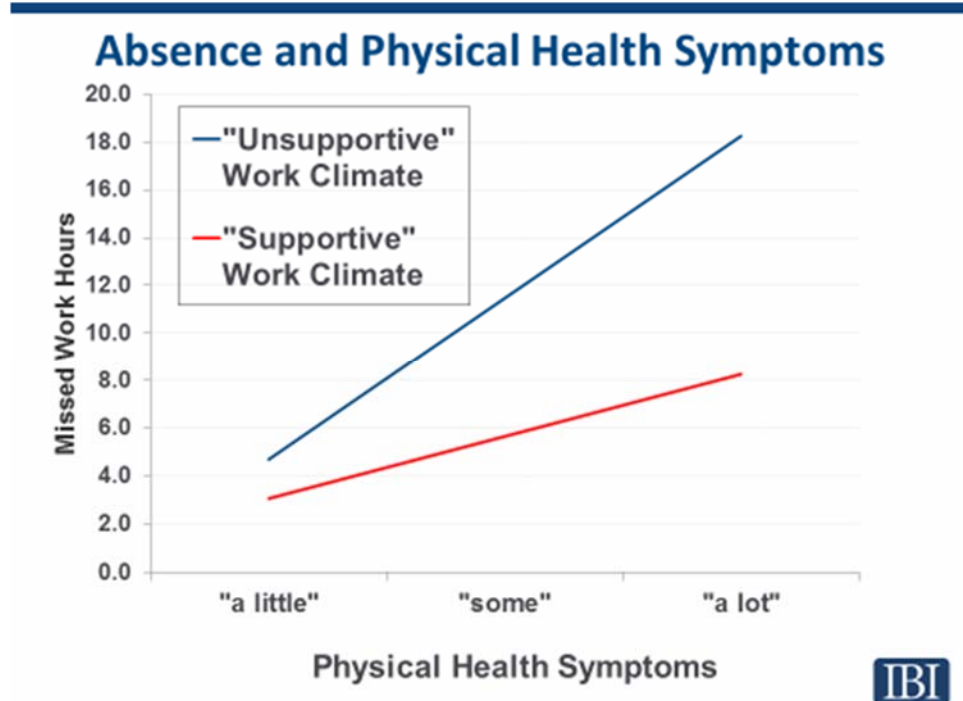
Predictor variables included a series of work climate items from the General Social Survey and self-reported mental and physical health symptoms. The 15 work climate items were measured on an agreement scale (1=strongly disagree and 4=strongly agree) and were factor analyzed with four resulting scales as follows: **Safety** (Safety high priority; No shortcuts on worker safety; Managers and employees ensure safe conditions; *Supportive* safety and health conditions); **Respect and Trust** (Clear expectations; Use skills and abilities; Treated with respect; Trust management; Proud to work for employer; Place of work runs effectively); **Variety and Learning** (Learn new things; Pace of work; Variety); and **Workload** (Too much work; Productivity limits (items reversed)). A single combined construct "overall work climate" was included in the modeling results covered in this report. "*Unsupportive*" work climates were

ones where employees disagreed with the positively-worded items whereas "supportive" climates were ones where they agreed. In this way "unsupportive" work climates are characterized by unsafe working conditions, low respect and trust, poor variety and learning and high workload.

The prevalence of physical health symptoms were measured with 11 items (e.g., tired/low energy, headaches, back/neck pain) on a 4-point scale from "not at all" to "a lot". The prevalence of mental health symptoms (e.g., restless or fidgety, hopeless, nervous) were measured with six items on a 5-point scale from "none of the time" to "all of the time". The multivariate linear regression models included these outcome and predictor variables as well as sex and age. Additional measurement detail is available from the author.

## Results

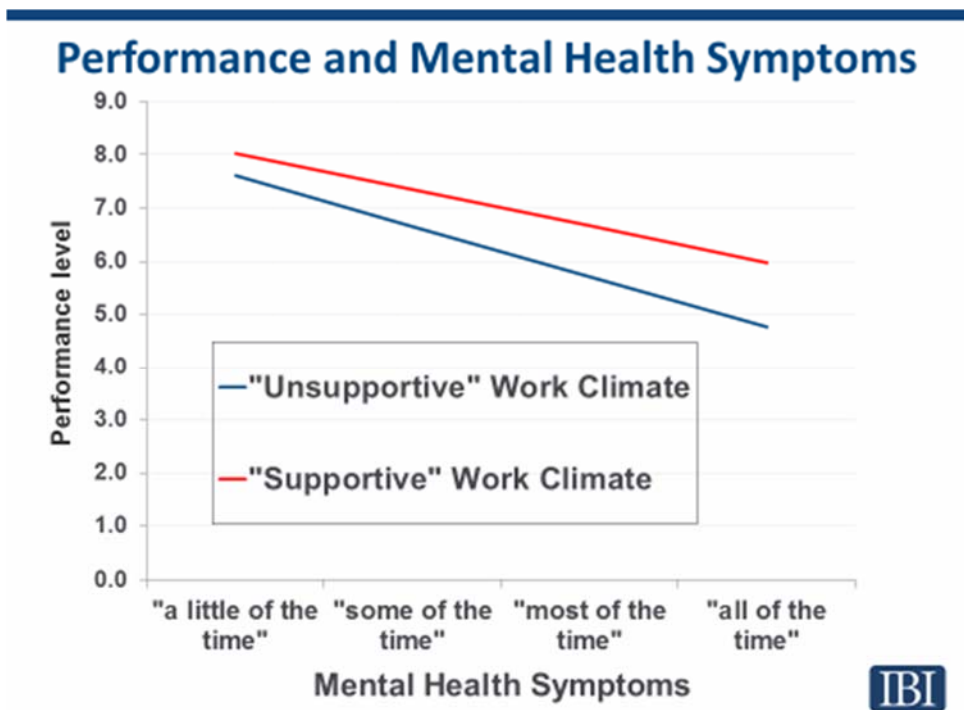
We find that as physical health symptoms worsen from "a little" to "a lot", employees experience higher absence levels as depicted in the figure below. But, for those experiencing low levels of physical health symptoms there is little difference between the absence levels of employees in "supportive" vs "unsupportive" work climates. As symptoms worsen employees in "unsupportive" work climates fare worse, up to a two work day difference in a 28-day recall period.



We observe a similar pattern for employees experiencing mental health symptoms and their impact on job performance. Consistently, as mental health symptoms worsen, performance



declines. This finding corroborates what others have found on the influence of mental health on performance.<sup>25</sup> We also found that the performance gap between those working in "unsupportive" work climates versus "supportive" widens. Thus, "unsupportive" work climates steepen the slope or exacerbate the effect mental health symptoms on job performance.



### Employer Implications

There are at least two opportunities for employers to affect health-related absence and performance: through direct services, programs and policies that diminish physical and mental health symptoms and through changes in work climate that diminish the negative effects of illness on lost time and support healthy work and improved attendance and performance.

This paper focused specifically on the latter -- work climate -- but symptom relief itself is also a critical part of the findings. Recall that individuals with low symptom levels attended work and performed at similar levels whether they were in "unsupportive" or "supportive" work climates. So it remains critical that value-based treatment options and strong benefit designs are part of the investments that employers make in human capital. However, our findings also suggest that a company can have a solid approach to covering high quality and accessible treatment and have that investment undermined through "unsupportive" work climates. Employers should actively seek out across their organization where the work climate could be improved. Other organizational factors associated with the work context such as flexible scheduling and coworker relations that were not measured in our study may also explain the differences



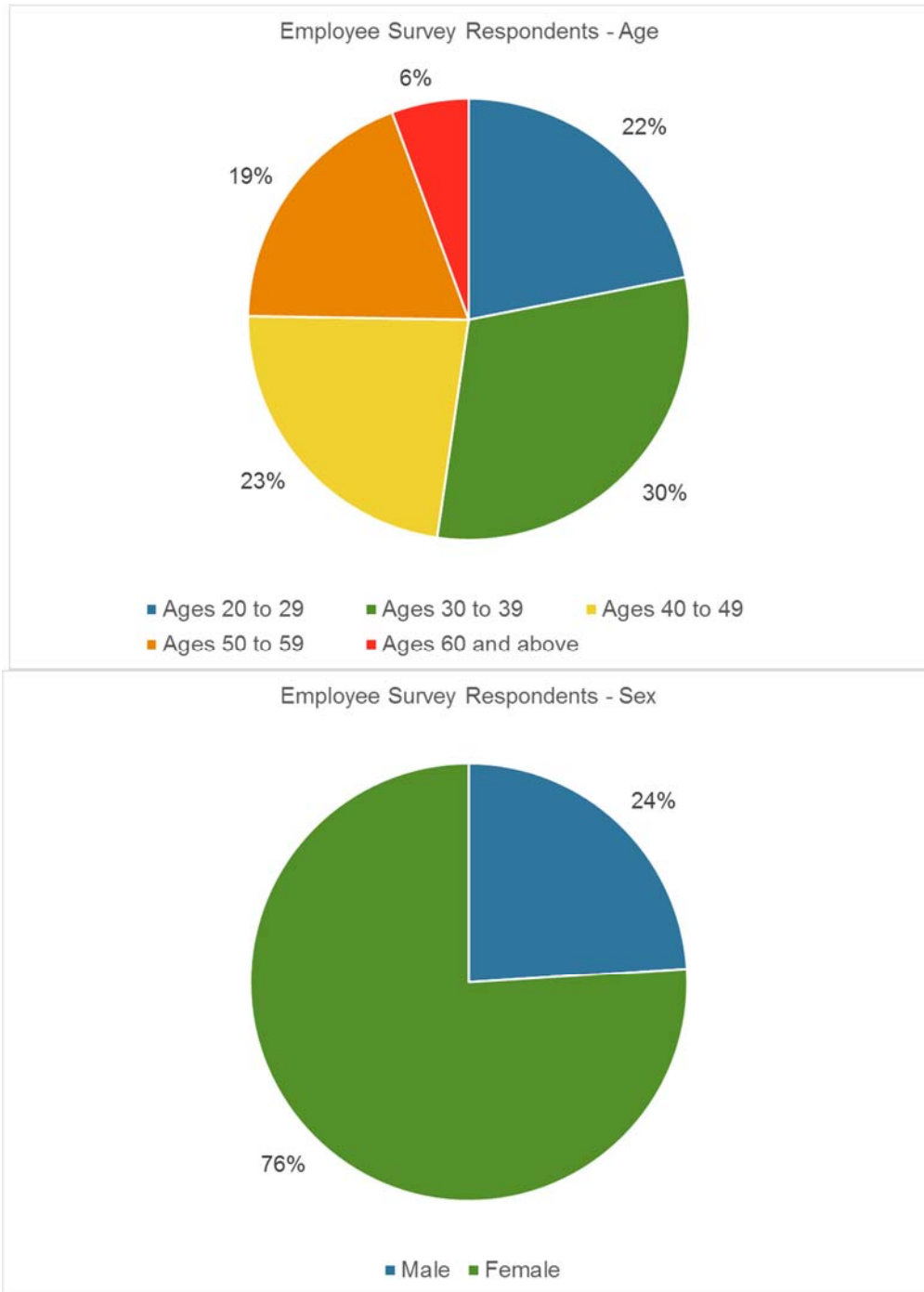
observed in absence and job performance between self-rated "unsupportive" versus "supportive" work climates.<sup>26</sup>

Human resource development could benefit from understanding the connections between organizational development efforts and employee characteristics including employee health and work-life balance.<sup>27</sup> Further applied research is needed that specifies work processes and the expected influence of engagement and positive work climate on individual work outcomes such as attendance, absence and job performance.<sup>28</sup> Indeed, a recent handbook on employee engagement suggests that too much engagement with management may be viewed as micro-management and therefore have negative effects on work outcomes.<sup>29</sup>

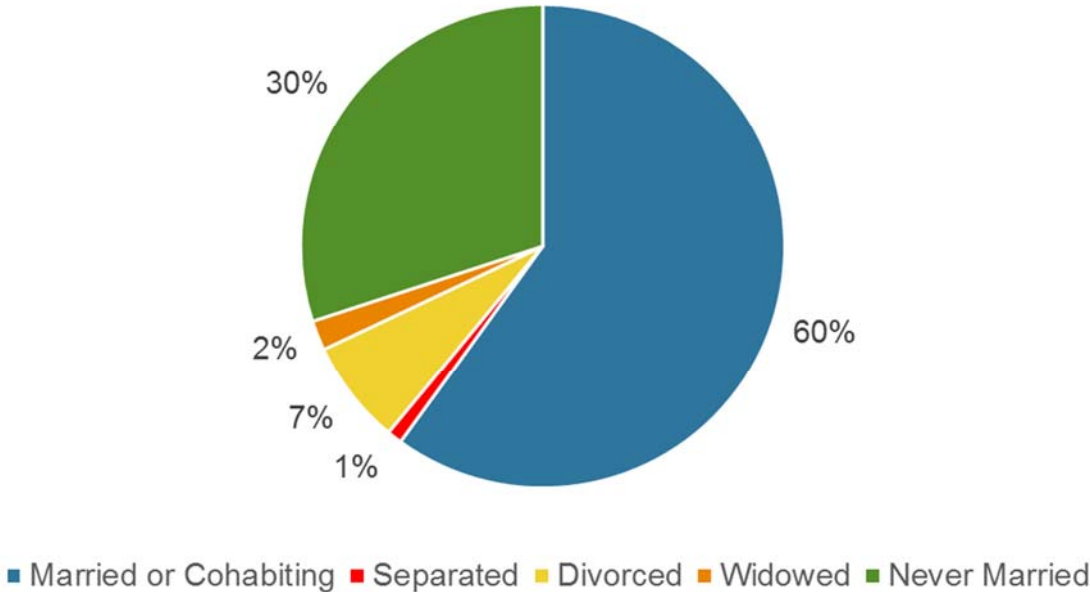
Human capital to date has primarily been thought of, measured and analyzed as individual-level phenomena. Recent theoretical development has suggested that connecting the micro and macro human capital literatures could help bring human resources management and other efforts aimed at improving employee performance and human capital into better alignment.<sup>30</sup> Connecting individual, employee-level effects with organizational effects and ultimately firm performance should provide a fruitful direction for future research efforts.<sup>31</sup> For example, a recent study found that relational climate among workers in primary care clinics was significantly related to improved adherence to diabetes care standards among patients in those same clinics.<sup>32</sup> Bringing work climate and organizational factors into future applied research studies on employee health and performance would advance the field of research and human resource practice.

## Appendix: Employee Socio-Demographics

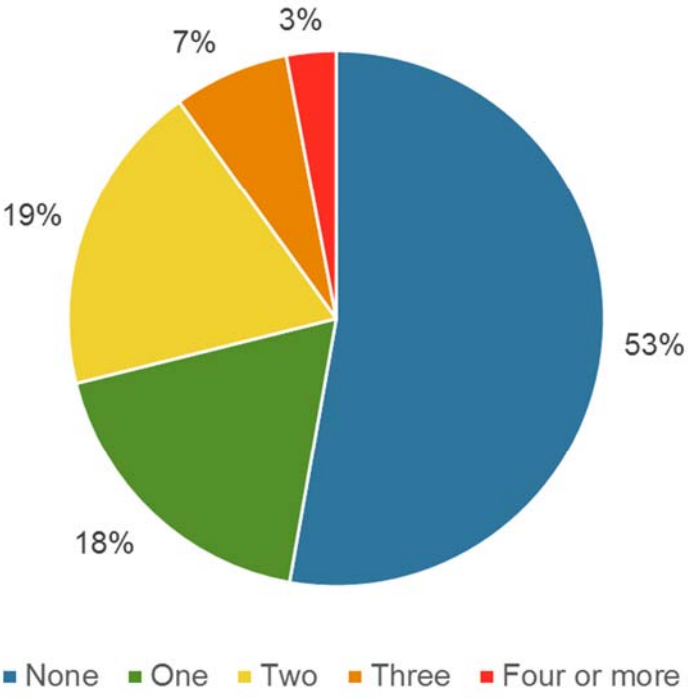
Surveys received from 293 employees representing two employer locations, a health services organization (n=112) and a county (n=181).

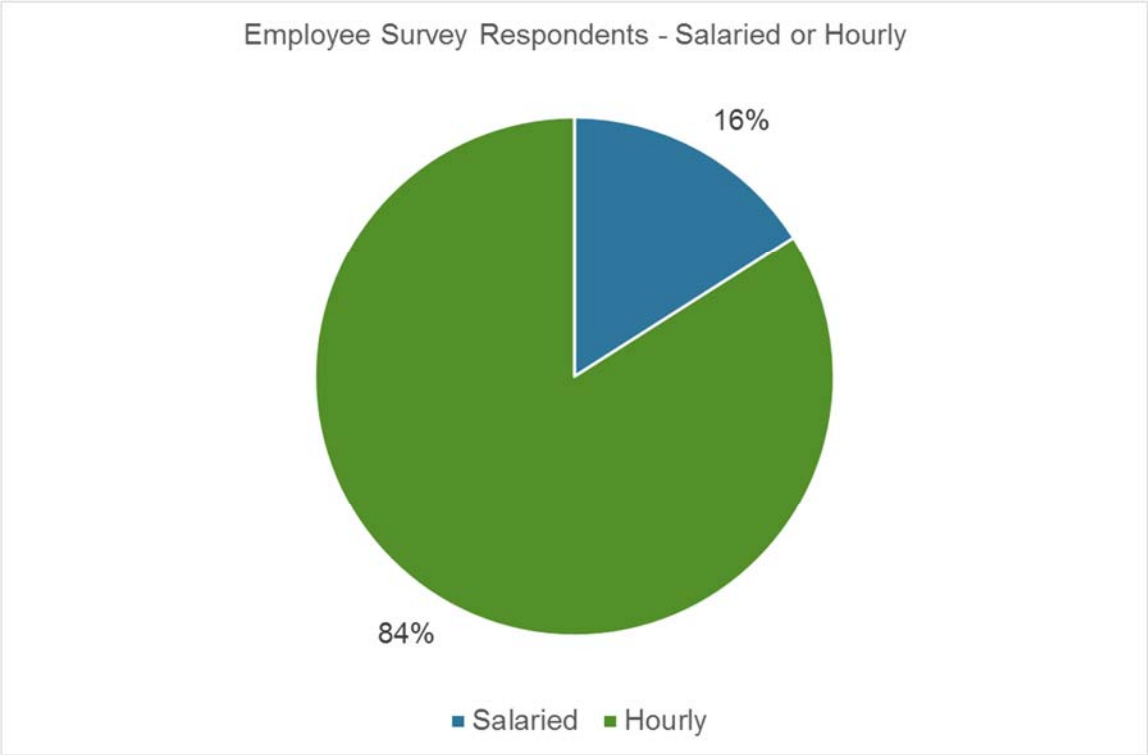
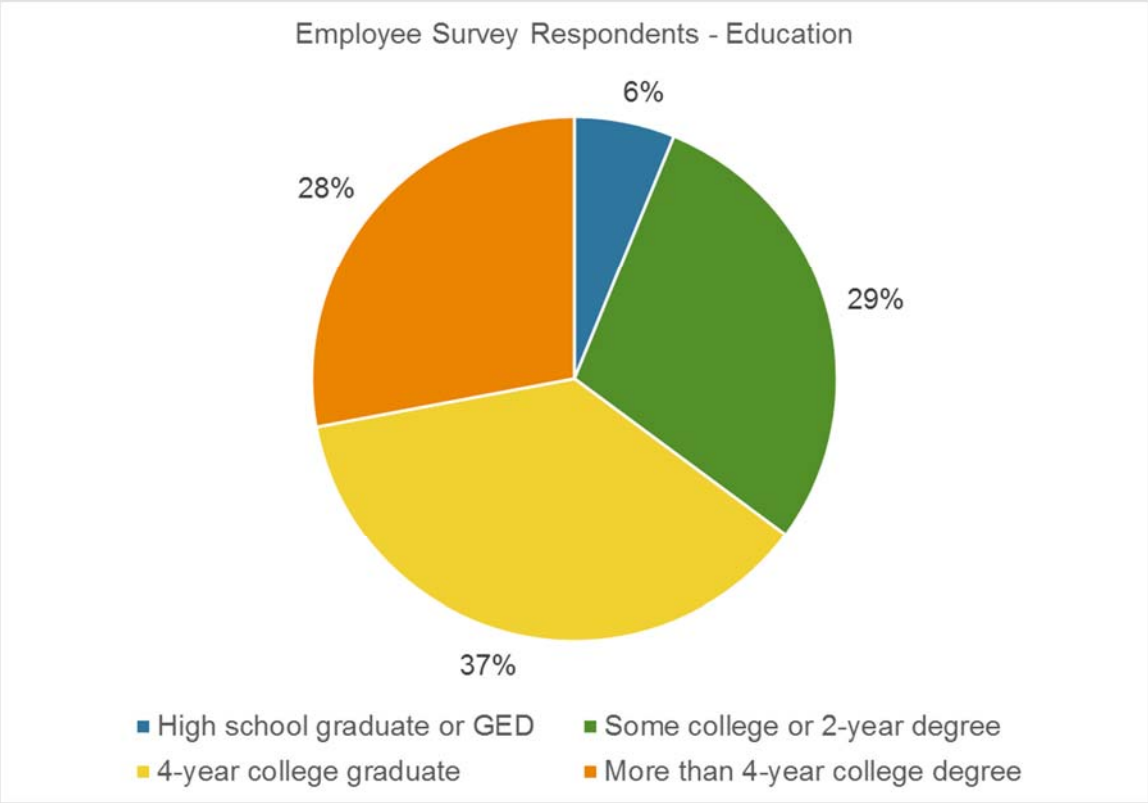


Employee Survey Respondents - Marital Status

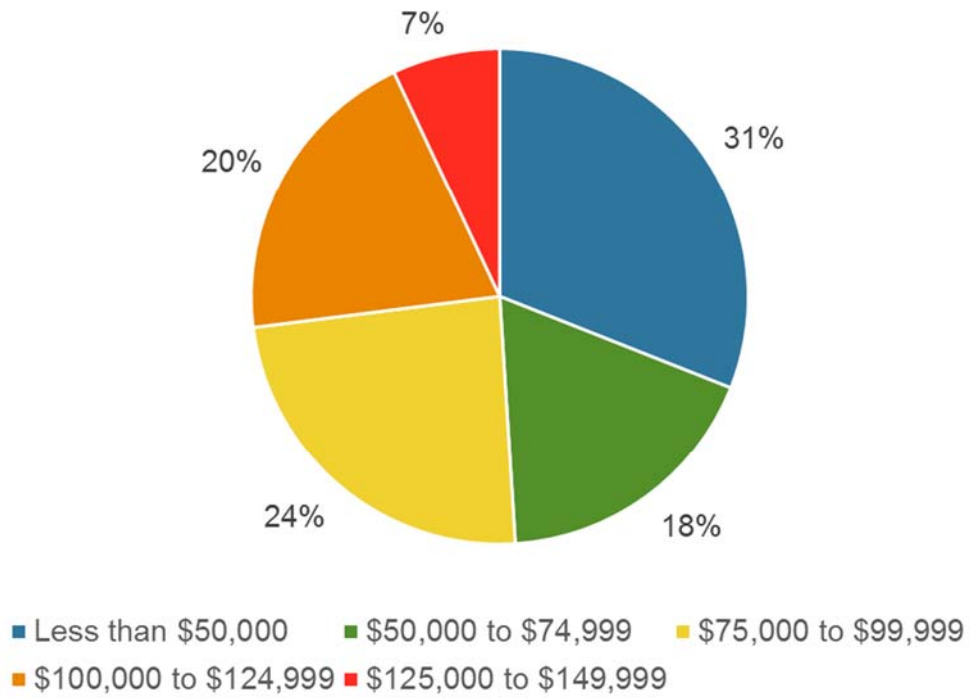


Employee Survey Respondents - Number of Children

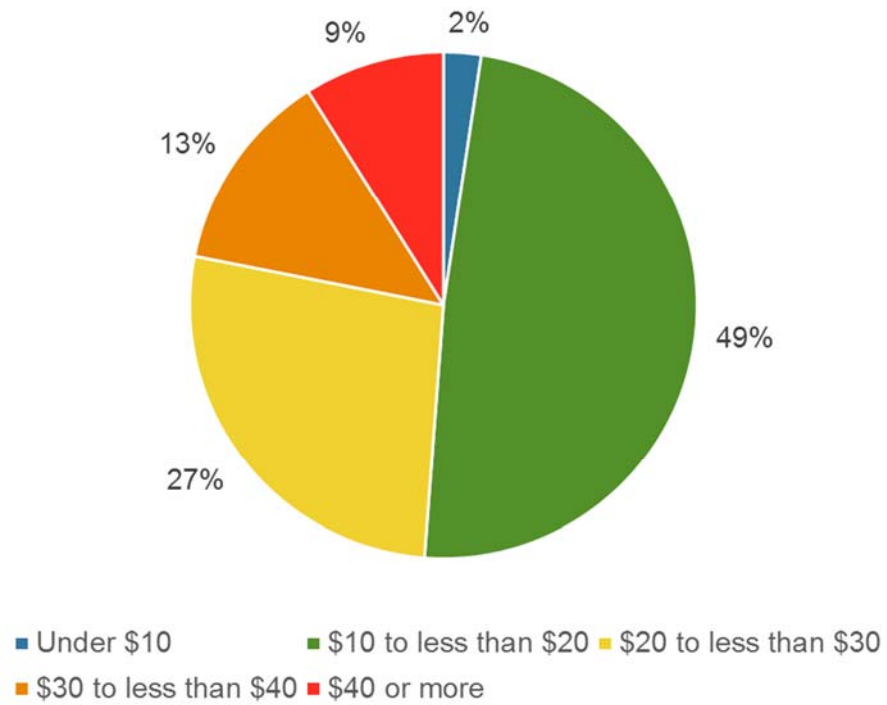




Employee Survey Respondents - Annual Salaries



Employee Survey Respondents - Hourly Wages



## References

- <sup>1</sup> Macey, W.H., Schneider, B. *The Meaning of Employee Engagement*. Industrial and Organizational Psychology. 1. pp. 3-30. 2008.
- <sup>2</sup> Dicke, C., Holwerda, J., Kontakos, A. *Employee engagement: What do we really know? What do we need to know to take action?* A collection of white papers. Center for Advanced Human Resource Studies (CAHRS). May 2007.
- <sup>3</sup> Meyer, J.P., Maltin, E.R. *Employee commitment and well-being: A critical review, theoretical framework and research agenda*. Journal of Vocational Behavior. Doi: 10.1016/j/jvb.20.10.04.007. 2010.
- <sup>4</sup> Dicke, C. *Employee Engagement: I Want It, What Is It?* CAHRS White Paper. Pp. 5-17. May 2007.
- <sup>5</sup> Meyer, J.P., Maltin, E.R. *Employee commitment and well-being: A critical review, theoretical framework and research agenda*. Journal of Vocational Behavior. Doi: 10.1016/j/jvb.20.10.04.007. 2010.
- <sup>6</sup> Saks, A. *Antecedents and consequences of employee engagement*, Journal of Managerial Psychology. Vol 21 (7). pp. 600-619. 2006.
- <sup>7</sup> Schaufeli, W.B., Bakker, A.B., Van Rhenen, W., *How changes in job demands and resources predict burnout, work engagement, and sickness absenteeism*. Journal of Organizational Behavior. 2009.
- <sup>8</sup> Pfeffer, J. *Building Sustainable Organizations: The Human Factor*. Research Paper Series. Stanford Graduate School of Business. Research Paper No. 2017 (R), Jan 2010.
- <sup>9</sup> Holmgren, K., Hensing, G., Dellve, L. *The Association Between Poor Organizational Climate and High Work Commitments, and Sickness Absence in a General Population of Women and Men*. Journal of Occupational and Environmental Medicine. Vol 52 (12). Pp. 1179-1185. December 2010.
- <sup>10</sup> Piirainen, H., Räsänen, K., Kivimäki, M. *Organizational Climate, Perceived Work-Related Symptoms And Sickness Absence: A Population-Based Survey*. Journal of Occupational & Environmental Medicine. Vol 45(2). Pp. 175-184. Feb 2003.
- <sup>11</sup> Wang, J., Schmitz, N., Smailes, E., Sareen, J., Patten, S., *Workplace Characteristics, Depression, and Health-Related Presenteeism in a General Population Sample*. Journal of Occupational and Environmental Medicine. Vol 52. (8). pp. 836-842. August 2010.
- <sup>12</sup> Sullivan, S.E., Bhagat, R.S., *Organizational Stress, Job Satisfaction and Job Performance: Where Do We Go From Here?* Journal of Management. Vol. 18(2). pp. 353-374. 1992.
- <sup>13</sup> Macey, W.H., Schneider, B. *The Meaning of Employee Engagement*. Industrial and Organizational Psychology. 1. pp. 3-30. 2008.
- <sup>14</sup> Gelade, G.A., Ivery, M. *The Impact of Human Resource Management and Work Climate on Organizational Performance*. Personnel Psychology. 56. pp. 383-404. 2003.
- <sup>15</sup> Harter, J.K., Schmidt, F.L., Hayes, T.L. *Business-Unit-Level Relationship Between Employee Satisfaction, Employee Engagement, and Business Outcomes: A Meta-Analysis*. Journal of Applied Psychology. Vol. 87 (2). pp. 268-279. 2002.
- <sup>16</sup> Bakker, A.B., Schaufeli, W.B., *Positive organizational behavior: Engaged employees in flourishing organizations*. Journal of Organizational Behavior. Vol. 29. pp. 147-154. 2008.
- <sup>17</sup> Bakker, A.B., Demerouti, E. *Towards a model of work engagement*. Career Development International. Vol 13 (3). pp. 209-223. 2008.
- <sup>18</sup> Meyer, J.P., Gagne, M., Parfyonova, N.M., *Toward an evidence-based model of engagement: what we can learn from motivation and commitment research*. Handbook of Employee Engagement. 2010.
- <sup>19</sup> Wynne-Jones, G., Buck, R., Varnava, A., Phillips, C., Main, C. *Impacts on work absence and performance : what really matters ?* Occupational Medicine. 2009. Vol. 59 pp. 556-562. Sept 2009.
- <sup>20</sup> Musich S, Hook D, Baaner S, Edington DW. *The association of two productivity measures with health risks and medical conditions in an Australian employee population*. Am J Health Promot. 2006 May-Jun;20(5):353-63.
- <sup>21</sup> Collins JJ, Baase CM, Sharda CE, Ozminkowski RJ, Nicholson S, Billotti GM, Turpin RS, Olson M, Berger ML. *The assessment of chronic health conditions on work performance, absence, and total economic impact for employers*. J Occup Environ Med. 2005 Jun;47(6):547-57.
- <sup>22</sup> Hemp P. *Presenteeism: at work--but out of it*. Harv Bus Rev. 2004 Oct;82(10):49-58, 155.

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- <sup>23</sup> The HPQ-Select was co-developed by the Integrated Benefits Institute and Dr. Ronald Kessler of Harvard Medical School. The HPQ-Select is a shorter version of the Health and Work Performance Questionnaire (HPQ), originally co-developed by Dr. Kessler and the World Health Organization.
- <sup>24</sup> Kessler, R.C., Barber, C., Beck, A., Berglund, P., Cleary, P.D., McKenas, D., Pronk, N., Simon, G., Stang, P., Üstün, T.U., Wang, P. *The World Health Organization Health and Work Performance Questionnaire (HPQ)*. Journal of Occupational and Environmental Medicine, 45 (2), 156-174. 2003.
- <sup>25</sup> Wynne-Jones, G., Buck, R., Varnava, A., Phillips, C., Main, C. *Impacts on work absence and performance : what really matters ?* Occupational Medicine. 2009. Vol. 59 pp. 556-562. Sept 2009.
- <sup>26</sup> De Menezes, L., Kelliher, C. *Flexible Working and Performance : A Systematic Review of the Evidence for a Business Case*. International Journal of Management Reviews. 2011.
- <sup>27</sup> Shuck, M.B., Rocco, T.S., Albornoz, C.A. *Exploring employee engagement from the employee perspective: implications for HRD*. Journal of European Industrial Training, Vol. 35(4). pp.300–325. 2011
- <sup>28</sup> Adrian Medhurst, A., Albrecht, S. *Salesperson engagement and performance: A theoretical model*. Journal of Management & Organization. Vol 17(3). pp. 398-411. May 2011.
- <sup>29</sup> Meyer, J., Gagne, M., Parfyonova, N. *Toward an evidence-based model of engagement : what we can learn from motivation and commitment research*. Handbook of employee engagement. Pp. 62-72. October 2010.
- <sup>30</sup> Ployhart, R., Moliterno, T. *Emergence of the Human Capital Resource: A Multilevel Model*. Academy of Management Review. Vol 36 (1). Pp. 127-150. Jan 2011.
- <sup>31</sup> Towler, A, Lezotte, D.V., Burke, M.J. *The service climate-firm performance chain: The role of customer retention*. Human Resource Management. Vol 50 (3). pp. 391-406. May/June 2011.
- <sup>32</sup> Benzer, J., Young, G., Stolzmann, K., Osatuke, K., Meterko, M., Caso, A., White, B., Mohr, D. *The Relationship between Organizational Climate and Quality of Chronic Disease Management*. Health Services Research. Vol 46 (3) pp. 691-711. June 2011.