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From Occupational Fatigue to Occupational Health

PAUL E. SPECTOR

The scientific study of the human side of organizations is barely into its second century. The initial focus in the early days of industrial-organizational (I-O; then called industrial) psychology and the associated field of management was on organizational productivity by maximizing employee job performance and making the most of human resources (then termed personnel). The study of employee well-being distinct from job performance has had a comparatively short history, particularly in North America. When I wrote the first chapter of my I-O psychology textbook in the middle 1990s, one reviewer commented that my chapter on worker health and safety did not belong in the book as it was not part of the field. The evolution of thinking about the ethical treatment of employees has occurred rather rapidly since then and is reflected in the rich literature on occupational stress and health.

As an American I-O psychology doctoral student in the middle 1970s, it was made clear to me that if I studied worker well-being, which in those days was almost entirely about job satisfaction, I needed to justify it by linking to job performance and the bottom line. After all, no competent manager would consider employee well-being to be a valid concern unless it had direct ties to costs. Thus, I was to justify each research report on job satisfaction by noting how having dissatisfied employees would lead to detrimental outcomes like low productivity or costly turnover. Elements of that sort of thinking can still be found today – how many of us still cite scary statistics about the cost of stress in our occupational stress papers? However, it has become increasingly acceptable for us to study employee well-being purely on ethical grounds.

This chapter will provide a historical perspective on the scientific study of worker well-being in its own right. The earliest studies took an occupational stress perspective, linking working conditions or stressors to physical and psychological strain outcomes, such as negative emotions and physical symptoms. The emergence of the interdisciplinary occupational health psychology field, which evolved from the study of

stress, broadened interest into related topics such as accidents, injuries, mistreatment, and violence. The study of occupational stress became the study of occupational health, safety, and well-being.

Historical Roots

The history of scientific research on worker well-being is very much the history of industrial (and later industrial-organizational) psychology, although there are major contributions of researchers from other fields. Whereas the traditional academic literature on industrial psychology in general was dominated by North Americans, the same was not the case for the study of worker well-being that had its initial development primarily in Europe. There are three streams of research that serve as the foundation for the study of worker well-being in Europe.

- Early industrial psychology research on fatigue beginning during World War I in Britain.
- Trist and Bamforth's (1951) classic paper on technological disruption.
- Scandinavian research on occupational stress.

In North America, as the field matured, it started to shift focus toward worker well-being, but it would be decades until it became mainstream.

Industrial Psychology and the Study of Fatigue in Britain

The scientific study of employee well-being can be traced to the founding of the Health of Munition Workers' Committee (HMWC) in Britain during World War I (Kreis, 1995). As discussed by Kreis, a major activity of the HMWC was to investigate working conditions that would contribute to fatigue and lost productivity. Whereas counterparts in the United States were focused almost entirely on maximizing efficiency, the HMWC researchers were interested in how working conditions that led to fatigue would affect the well-being of employees, for example by increasing anxiety and boredom. At the end of the war, the HMWC was replaced by the Industrial Health Research Board that continued the study of worker well-being.

The leading figure who helped shape early British industrial psychology was Charles Myers, whose writing provided a more balanced treatment of efficiency and well-being than was seen across the

Atlantic. His book *Mind and Work* (Myers, 1920) dealt with employee accidents, boredom, fatigue, and mental health. He described research on rest pauses showing that they could increase productivity even though the amount of time spent working was less. Myers's (1926) industrial psychology textbook included many topics that are prominent in modern occupational health psychology, including accidents, mental health, negative emotions particularly anxiety and boredom, and withholding of output (today counterproductive work behavior). Some of the topics in his text were those a reviewer suggested I remove from mine nearly 70 years later.

Socio-technical Systems

One of the most influential papers in the evolution of thinking about employee well-being was written by Trist and Bamforth (1951). Their paper documented how the social disruption of technological change adversely affected coal miners in Britain. This classic paper talks about how increased isolation and insufficient autonomy were stressful and led to strains of emotional distress and absence. It serves as a foundation for the study of working conditions as stressors, and for socio-technical systems theory that has dominated British organizational research ever since.

Socio-technical systems theory provides a point of view in which the social system and technological system are considered together. The principle of joint optimization suggests that in the ideal workplace, the social and technical systems are designed in a way that best fits with one another. This extends the purpose of human factors from designing technology to fit people to the idea that you have to consider elements of both in designing ideal systems. This allows employees to perform tasks efficiently while reducing strain. A number of established practices such as autonomous work groups and job enrichment can be considered from the point of view of social-technical systems.

The Rise of Stress Research in Scandinavia

Researchers in Scandinavian countries, particularly Norway and Sweden, became early leaders in the study of general and occupational stress (Barling & Griffiths, 2011). This work on stress began in the 1960s and 1970s, underscoring the importance of the workplace

(Cooper & Dewe, 2004). One particular focus was on the link between occupational stress and cardiovascular disease, particularly the impact of life changes, such as increased responsibility at work (Theorell, 2019). A number of prominent researchers contributed to the foundation upon which occupational stress research would be built.

During the 1980s most of the research on occupational stress was coming from Europe and particularly Scandinavia. A content analysis by Erez (1994) examined the topics in applied psychology articles by country. She found that the majority of Swedish workplace research involved employee health and well-being, whereas only 5% of American articles covered those topics. The number of researchers in the United States who were studying employee health and stress was small, and it would be more than a decade before this topic became mainstream in the United States.

Developments in North America

American industrial psychology developed at the same time as its British counterpart, beginning during World War I. Whereas the British linked employee productivity and employee well-being, Americans focused primarily on productivity. Their study of worker well-being would take decades to fully develop, beginning with the study of job satisfaction and eventually embracing a broader focus on employee health.

Job Satisfaction

Early studies of worker well-being in the United States focused on job attitudes, often using the newly developed methods for job attitude assessment. Of particular note are the scientific job satisfaction studies by Robert Hoppock. His book *Job Satisfaction* (Hoppock, 1935) described three studies he conducted on the topic that had considerable impact on the field (Bowling & Cucina, 2015). One important contribution was the job satisfaction scale that he included, which provided a standard instrument that researchers began to use. Many of the early studies of job satisfaction, at least in North America, were concerned primarily with how it might affect employee productivity, but over time job satisfaction began to be studied as an important factor in employee health and well-being. One of the early controversies that continues today is whether or not job satisfaction is linked to job

performance. Some reviewers of the literature concluded that it was not (Iaffaldano & Muchinsky, 1985; Vroom, 1964), whereas others reached the opposite conclusion (Judge et al., 2001; Petty et al., 1984).

Job satisfaction has become one of the most studied organizational variables, with more than 31,000 sources contained in both the PsycInfo and Web of Science databases as of December 2020. It is significantly related to hundreds of organizational variables and might be considered a universal outcome. It is an indicator of work adjustment and well-being by showing that people are satisfied with their jobs and aspects of work. It is not sufficient as a measure of worker health and broader well-being. For that, we have to look to other variables.

Mental Health of the Worker

One of the leading figures in the early American work on employee well-being is Arthur Kornhauser. As discussed in Zickar's (2003) Kornhauser biography, worker attitudes was a new topic in the early days of American I-O psychology that interested Kornhauser. In the 1930s, Kornhauser grew critical of the field for being too management-oriented, to the neglect of worker well-being. He became interested in the mental health of workers, which led him to conduct a large-scale interview study of Detroit auto workers (Kornhauser, 1965). The study showed a link between working conditions and negative emotions, and that experiences of work would spill over to the family. This study provided a foundation for later work on occupational stress and work–family conflict.

Occupational Stress: The Explosion

The study of employee well-being began slowly, with the main interest in Britain and Scandinavia. The topic got off to a slower start in North America, but by the end of the twentieth century, research had exploded. During the 1980s, a handful of researchers in North America and elsewhere became interested in the connection between working conditions and employee health/well-being from the perspective of occupational stress. By the 1990s, the study of this topic took off, and interest has accelerated since. Figure 1.1 shows the number of papers published on occupational stress from 1950 through 2019. I queried the Web of Science (WoS) database using the search term

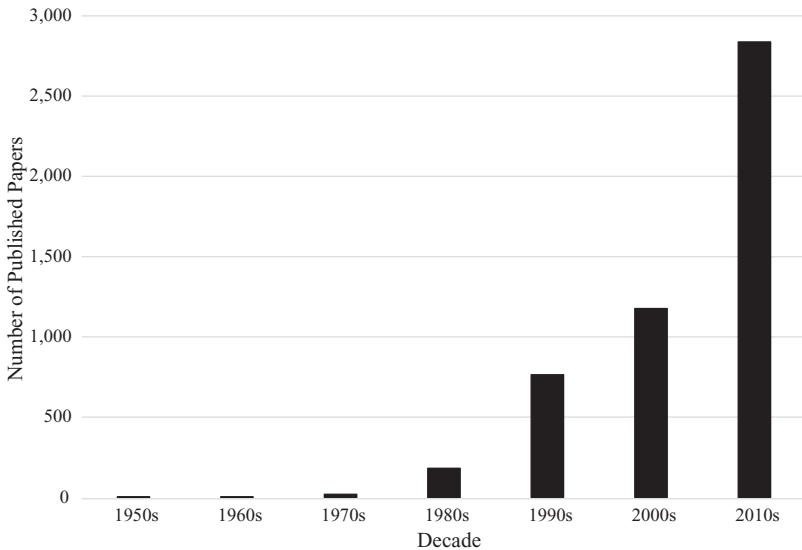


Figure 1.1

“occupational health” to get a count of papers published each year. I combined yearly counts into decades from the 1950s to the 2010s. As the figure shows, there were very few papers published until the 1980s, with a rapid acceleration after that. Fifty-seven percent of occupational stress papers in the WoS database were published between 2010 and 2019. In 2019 alone, there were as many papers as in all the years up to 1993. Clearly, occupational stress is a major topic of study worldwide.

Occupational Stress as a Discipline

In many ways, the study of occupational stress can be considered a discipline in its own right because it shares many of the features with recognized disciplines.

- **It is interdisciplinary.** Occupational stress researchers come from many disciplines, including I-O psychology and other areas of psychology, management, and the health sciences. Papers on occupational stress are published in journals from many different disciplines.
- **It has its own journals.** *Work & Stress* was founded in 1981 by Tom Cox at the University of Nottingham in the UK. Although the focus at the time was occupational stress, today it has broadened to

incorporate all topics in occupational health psychology. Other journals focus on stress in general, including occupational stress (e.g., *International Journal of Stress Management*), whereas occupational health psychology journals such as *Journal of Occupational Health Psychology* and *Occupational Health Science* are major outlets for occupational stress research.

- **It has its own conference.** The biannual Work, Stress, and Health conference in North America began with a main focus on occupational stress, although in recent years it has broadened to include other occupational health psychology (OHP) topics.
- **There are books on the topic.** Many books, including this one, are concerned entirely or mainly with occupational stress. There is even the *Handbook of Work Stress*, published in 2005 by Sage Publications, and an annual book series, *Research in Occupational Stress and Well-Being*, published since 2001 by JAI.

Early Occupational Stress Contributions

There are many contributions to the field of occupational stress coming from Europe and the United States. One that linked the early focus on job satisfaction to the broader concern with stress was the book *Work and Well-being* (Warr & Wall, 1975). Although most of the book reviewed research on job satisfaction, there was a chapter devoted to occupational stress. This book was my introduction to the topic of occupational stress and inspired my lifelong interest in the topic. There are many early contributions to the study of occupational stress, but three deserve mention based on their impact in shaping the study of occupational stress and occupational health:

- **Contributions by the Institute for Social Research.** The Institute for Social Research at the University of Michigan began a program of research on employee well-being at the end of the 1950s (Cooper & Dewe, 2004). This program produced many influential products that helped shape the field of occupational stress and broader occupational health. One of the most significant was Katz and Kahn's (1966) *The Social Psychology of Organizations*. In this book, they discuss the role stressors of role ambiguity, role conflict, and role overload that came to dominate the study of occupational stress research for quite some time. Another is the *Job Demands and*

Worker Health study (Caplan et al., 1975), funded by the National Institute of Occupational Safety and Health (NIOSH). This large-scale study of high stress occupations showed a clear link between stressors and strains.

- **Beehr and Newman's (1978) Occupational Stress Model.** One of the most influential papers published in the early days of occupational stress research was Beehr and Newman's (1978) review of the newly emerging literature on occupational stress. One of their major contributions was the inclusion of a model that outlines the complex stress process involving environmental characteristics, individual differences, and both short-term and long-term outcomes for employees and organizations.
- **The Demand-Control Model.** The Demand-Control Model (Karasek, 1979), built on the idea that stressful working conditions (stressors) would lead to poor health and well-being (strains). It suggested that control would buffer the adverse effects of demands and reduce their negative impact. This provided an important stressor-strain framework that would drive much subsequent research and led to the more complex Demand-Control-Support model, which added a buffering effect of social support (Karasek & Theorell, 1990). These models drew attention to the prominence of control in the occupational stress process, and although the buffering effect of both control and support have proven to be elusive (de Lange et al., 2003), there is little doubt that control and support play important roles.

Twenty-First Century Developments

As the study of occupational stress expanded into the twenty-first century, it developed in several directions. Some directions were derived from the general stress literature, whereas others built on work from the occupational domain.

Resource Approaches

Most occupational stress papers rely on resource theories as their underlying frameworks. Initially authors cited Conservation of Resources (COR) Theory (Hobfoll, 1989), which explains how the loss of resources or threat of loss is stressful, leading to strain. Stressors are considered conditions at work that consume resources,

which explains their link to strains. According to this view, resources are things that a person values, and activities that drain resources are stressful.

Two limitations with COR Theory, its lack of work focus and a general and rather vague definition of resources, left an opening for widespread adoption of the work-specific Job Demand-Resource Theory (Bakker & Demerouti, 2014). This theory defines resources as things that enable a person to perform job tasks and suggests that strains occur when job demands exceed available resources. When resources are sufficient to perform job tasks, motivation (engagement) and positive well-being are enhanced. The more specific JD-R Theory has begun to replace COR Theory as a foundation for occupational stress research as it specifies a more specific connection between working demands and strains.

Cross-cultural and Cross-national Issues

Early occupational stress research was concerned with basic principles linking stressors to strains. As globalization expanded into the twenty-first century, there was increasing interest in cross-cultural and cross-national differences in occupational stress. As information technologies made international collaboration easier, researchers in different countries began pooling their resources to conduct comparative occupational stress studies.

One of the largest-scale efforts was the Collaborative International Study of Managerial Stress (CISMS). This two-phase study involved 46 researchers from 39 countries who collected data from more than 14,000 managers. CISMS produced more than two dozen journal articles, most of which dealt with country differences (Spector et al., 2002) and culture differences (Spector et al., 2001).

Other, more modest programs have taken a more precise look at country/culture differences in occupational stress. A notable example is the work of Cong Liu and colleagues, who in a series of studies have investigated differences between Americans and Chinese, focusing on the stressors of interpersonal conflict (e.g., Liu et al., 2015) and organizational constraints (e.g., Liu et al., 2010).

Organizational Climates

The psychological literature on accidents and injuries has been dominated by a focus on safety climate (Zohar, 2010). Safety climate is the

individual perception (perceived climate) or shared perception (organizational climate) that policies and practices of the organization support safety. In other words, following safety protocols is encouraged by management. The idea of climate being linked to occupational stress began to take hold in the new century as researchers noted that climates could be related to strains (Spector et al., 2007).

Of the many climates studied, the one that has the closest link to occupational stress is psychosocial safety climate (Dollard et al., 2012; Idris et al., 2012). This type of climate describes organizations where employees feel safe from mistreatment and psychological aggression. People are free to be themselves in an environment of acceptance. Such climates have lower levels of social stressors, such as bullying (Law et al., 2011), and strains such as burnout (Idris et al., 2014).

From Occupational Stress to Occupational Health

As the study of occupational stress and worker well-being developed, it became clear that it dealt with a very broad and complex set of issues. Researchers who studied these issues, many of whom were not psychologists, became convinced that it was large enough to represent a separate field within psychology, and the field of OHP emerged. Quick (1999) credits Raymond et al. (1990) as using the term for the first time in print. Their vision was to integrate the training of OHP practitioners and researchers across a variety of fields, including business, medicine, nursing, occupational health, and psychology. The extent to which this integration has been successful is debatable, as most training is focused mainly in psychology, but there is no doubt that the field of OHP has emerged, initially in Europe and then in North America.

OHP is a field concerned with psychological factors in employee health, safety, and well-being. Much of its attention focuses on the psychosocial aspects of the physical and social working environment. Occupational stress is central to the field of OHP, but OHP covers more territory than stress, and its point of view is broader. It connects with fields concerned with occupational health and safety, investigating how psychosocial aspects of the workplace contribute to accidents, injuries, and illness. It takes a public health perspective in being concerned with exposures to both physical and psychological risks in the workplace, and in recognizing the distinction between primary

prevention (changing the job), secondary prevention (giving employees tools), and tertiary prevention (treating illness and injury).

The field got its early impetus in the United States from a partnership between the American Psychological Association and NIOSH. Over a period of about six years, they awarded small seed grants to more than a dozen graduate programs in the United States, most of them I-O psychology doctoral programs, to stimulate the training of OHP. Five of these programs received NIOSH training grants: Colorado State University, Ohio University, Portland State University, University of Connecticut, and University of South Florida. The partnership also supported two small conferences at Portland State University and University of South Florida where ideas for developing the field in the United States were discussed. This resulted in the founding of the Society of Occupational Health Psychology in the United States.

OHP can be considered a major subfield within psychology, although it is interdisciplinary and goes beyond psychology. There are several characteristics that define it as an established field.

- **OHP Societies.** There are societies devoted entirely to OHP. The UK has the European Academy of Occupational Health Psychology (EAOHP); in the United States, there is the Society for Occupational Health Psychology (SOHP).
- **OHP Graduate Training.** There are more than two dozen universities in both Europe and North America that provide graduate training in OHP. Most are attached to I-O psychology graduate programs, but some are attached to other programs, such as cognitive or social psychology.
- **OHP Journals.** APA has supported the development of OHP by publishing *Journal of Occupational Health Psychology*. In 2016, SOHP launched *Occupational Health Science* to be an interdisciplinary OHP journal. *Work & Stress* originally devoted to occupational stress evolved into a broader OHP journal as it became affiliated with the EAOHP (Cox & Tisserand, 2006).
- **OHP Conferences.** Europe has an annual OHP conference, and as mentioned earlier, the Work, Stress, and Health conference sponsored initially by APA and NIOSH has broadened its purview to OHP and is now cosponsored by SOHP.
- **OHP Books.** There are many books dealing with OHP topics, but most notable is the *Handbook of Occupational Health Psychology*,

edited by James Quick and Lois Tetrick, and OHP textbooks *Occupational Health Psychology*, written by Irvin Schonfeld and Chu-Hsiang (Daisy) Chang (2017), and *Essentials of Occupational Health Psychology*, by Chris Cunningham and Kristen Black (2021).

Today the OHP field is rapidly growing within Europe, the United States, and many other parts of the world as concern for employee health and well-being becomes increasingly recognized. This is reflected in job ads for psychologists that list OHP as a research focus of interest, and in the personal statements of prospective graduate students who note OHP interests. It can be seen in the programs of I-O psychology conferences (European Association of Work and Organizational Psychology and Society for Industrial and Organizational Psychology) and management conferences (Academy of Management, European Academy of Management, Southern Management Association) as OHP topics are frequent topics of sessions. All of this research attention has taught us much about the connection between the work environment and employee health, but also where more work is needed on how best to manage organizations to maximize employee health and well-being.

Creating Healthy Workplaces

A truly healthy workplace is one in which both the employee and the organization can thrive. This means not only the absence of ill health but also continued growth and positive well-being (Spreitzer et al., 2005). Healthy employees are best positioned to contribute to organizational functioning, and healthy organizations have the resources to provide good working conditions and make contributions to the broader society. The health of one cannot be sustained if the other is ignored. The duality of health – employee and organization – is recognized by the concept of the healthy work organization (Sauter et al., 1996). Such organizations have management practices that jointly promote employee and organizational health.

There are a number of management practices and ways of running organizations that contribute to organizational health. Such practices treat employees as valuable resources to be developed and protected rather than exploited. This means providing employees with the resources and tools to efficiently do their jobs while avoiding unnecessary stress. It requires running organizations efficiently and developing

organizational climates that minimize stress while facilitating key organizational goals. The remainder of this chapter will provide specific management recommendations or best practices for building a healthy organization.

Realign Management Thinking

There is a tendency to think of human resources as costs, both the direct costs of salary and benefits and indirect costs of resources provided to employees. This is wrong thinking and should be replaced with the idea of human resource investments that will provide future returns in productivity, quality, and reputation. One of the early insights provided by Myers (1920) was that working fewer hours often resulted in greater total output. Thus, investing in employees by providing rests can lead to a return of even more performance without overly straining the employees. Many other human resource investments can provide impressive returns.

Build a General Safety Climate

A healthy organization has a climate that protects employees from both physical and psychological risks. This means having a general safety climate that includes elements of safety climate (focus on accidents/injuries) and psychosocial safety climate (focus on mistreatment). There are several steps organizations can take in dealing with such climates (Spector, 2019b).

- 1 **Make Climate a Goal.** Top management needs to adopt the development of a general safety climate as a strategic goal. This means investing resources into safety and considering it a worthwhile investment. It should be considered okay to take time to be safe, even if it means slowing production a little.
- 2 **Communicate Policies.** Policies concerning climate need to be disseminated throughout the organization. This involves messaging from not only the top but also all levels of management. Safety, both physical and psychological, should be a common topic of discussion throughout the organization.
- 3 **Model Safety.** Safety policies and practices are for everyone. All managers should follow safety rules (e.g., wearing safety gear) and

not assume that telling employees is sufficient without modeling that behavior (Kessler et al., 2020).

- 4 **Take Corrective Action.** Direct supervisors need to monitor employee behavior and take corrective action when necessary. Employees should be recognized for safe behavior and corrected for unsafe actions. This means progressive discipline of starting with gentle reminders and escalating to more punitive measures if unsafe behaviors persist.

Select the Right People

It is important to match people's capabilities to the demands of the job in order to maximize organizational health. Mismatches will not only result in substandard performance but also create undue stress as individuals struggle to perform job tasks. Effective selection systems focus on hiring the best talent for the specific job by identifying job requirements and then using selection tools to assess job applicants. Those tools can minimize personal biases of decision-makers and achieve greater workforce diversity and a more capable workforce that performs better with less effort and stress.

Develop Your Talent

Training and other developmental activities should be considered investments that can not only improve the performance of employees in their current positions but also provide a talent pool from which to draw for higher level positions. An effective training and development program focuses on three elements (Spector, 2021).

- 1 **Training Needs Assessment.** Training resources are always limited, so they should be invested wisely so they will have the most impact. Needs assessment means conducting research to determine where knowledge and skill gaps exist for employees, and what future knowledge and skill will be needed. This means first identifying gaps and then prioritizing what and who are to be trained.
- 2 **Training Design.** Training needs to incorporate known principles that maximize effectiveness. The common approach to corporate training of having employees attend all-day presentations might be

practical, but it is not particularly effective in most cases. Well-designed training needs to incorporate the following principles.

- **General Principles.** This means providing the big picture to put the training in context. A training program on a particular application for individuals new to computing should begin with a brief overview of the computer, its main components, and applications in general. Trainees will better understand the particular application they are being taught if they have a general sense of what a computer is and how it works.
- **Spaced Training.** Learning is retained better when training occurs in shorter sessions spread over time rather than one long session. Further, the longer the interval between training sessions, the longer trainees will remember what was trained (Cepeda et al., 2009).
- **Feedback.** In order to learn effectively, people need feedback. They need to know if what they have learned is correct. With training that teaches knowledge, quizzes can be used to show trainees that they understand the material correctly. Skills training should allow practice sessions that include feedback to indicate if something was done correctly.
- **Match Practice With the Job.** The best training allows practice on tasks that are as close as possible to the job itself. For example, flight training makes use of simulators that include elements that match aircraft on the features being trained. High fidelity simulators have cockpits that mimic the real thing and can simulate the motions of an aircraft in response to the actions taken by the trainee.

3 **Training Evaluation.** It should not be assumed that training was effective just because it was completed. Training needs to be evaluated to see if employees felt it was worthwhile, if they learned anything (e.g., by use of a quiz at the end of training), if they apply what was learned on the job, and if the training resulted in improvements in employee or organizational outcomes (Kirkpatrick, 1977). Evaluation means conducting research and collecting data that can be used to determine if training can be improved, or if it is worthwhile to do at all. An effective strategy is to do a pilot test of new training on a small group of employees to determine if the training is effective before rolling it out to all employees who will be trained.

Leadership

One of the key elements in a healthy work organization is leadership. Perhaps the two most important functions of leaders, recognized as far back as the Ohio State Leadership Studies (Fleishman & Harris, 1962), are providing structure and providing support. Structure concerns the organization of work and the coordination of effort across employees and functions. It helps clarify to employees what their roles are and where to put their efforts. Support means paying attention to employees and providing assistance to them in dealing with the demands of the job. Leaders vary in the extent to which they provide each function, but they are both vital to good leadership.

Work needs to be structured, and the costs of a passive leader who does not perform the structuring function can be substantial in terms of both employee poor performance and stress. Effective structure can minimize many stressors, including role ambiguity, role conflict, and work overload, because it clarifies expectations and balances workload to be most efficient.

Support comes in two broad forms. Instrumental support provides assistance in getting jobs done. This includes showing employees how to perform tasks and taking on some tasks when employees are overloaded. Emotional support helps employees cope with the stress of the job and, in some cases, stress off the job. Emotionally supportive leaders consider the impact of decisions on employees and build trusting relationships. Their support can help buffer the negative impact of stressful jobs and is particularly vital in industries where jobs are inherently stressful, such as first responders and healthcare. Paying attention to employee health, safety, and well-being is important for providing a general safety climate as it makes clear to employees that their health, safety, and well-being are priorities.

Although it is widely acknowledged that support is a vital leadership function, there has been surprisingly little attention paid to how it can best be accomplished. A new line of research has shown that well-intentioned but poorly delivered support can add to employee stress rather than making it better. Gray et al. (2019) identified ten ways in which workplace support by supervisors and others can be counterproductive. For example, support might be unwanted, delivered in a way that is insulting, or not provide what the employee needs. Gray et al.'s research suggests that managers should consider the following.

- **Communicate with Employees.** Be sure that you understand what support is needed and that the support is wanted. Sometimes an employee needs to struggle to learn how to perform a task and to build confidence. Unless consequences of failure are severe, which can be the case in healthcare, allow employees to figure it out themselves if they wish.
- **Explain Rather Than Do.** If an employee does not know how to do a task, it is better to teach that employee how to do it than to step in and do it for him or her. In the long run, it can be more effective to explain how to do something and sit with an employee while they try, than to do it and have him or her watch. Learning requires doing and feedback.
- **Do Not Be Critical.** Often offers of support can be interpreted as criticism. After all, if you are offering to help an employee with a problem, it implies that the employee is not capable of doing the job. Be tactful in approaching employees and do not assume help is needed. An approach like, “How is it going today?” is better than “You look like you could use some help”.
- **Support, Don’t Dismiss.** When employees are dealing with difficult events, either on or off the job, it can be tempting to try to make them feel better by looking on the bright side, for example telling them that it happened to you once and everything came out all right. This approach can often make someone feel worse by discounting their feelings. Sometimes it is best to say you are sorry they are having the problem, and just be willing to listen.

Provide Rewards for Contributions

Rewards for performance are important because they provide feedback that employee efforts are recognized and worthwhile to management. One of the major stress theories, the Effort-Reward Imbalance Theory, recognizes that unrewarded effort can be stressful (Siegrist, 1996). People whose efforts are unrewarded can feel exploited and unfairly treated.

There are many ways to reward employees, not all of which are monetary. Pay-for-performance systems can be effective if administered in a fair and transparent way, but systems in which most pay is linked to output (e.g., commission sales) can be stressful. Nonmonetary rewards can be as effective in terms of feedback and motivation. It is not a stretch to

suggest that employees will work for praise, although obviously they will not work for praise alone. Providing praise and showing appreciation can enhance employee motivation because it provides feedback that their performance is good, and it signals that the employee is having a positive impact.

Praising employees and showing appreciation does not always come naturally to supervisors. Spector (2019a) offers five tips for using these sorts of rewards.

- Show appreciation for both effort and results. Results ultimately come from effort, so you want to encourage employees to remain motivated even when they have not yet accomplished their goals. Rewarding effort can be used to motivate employees by acknowledging improved performance over time.
- Appreciation can be shown with a simple “thank you”.
- Be clear about what you are rewarding. Thank employees for specific efforts or accomplishments (e.g., a new person best for monthly sales), rather than providing vague statements not tied to particular actions.
- Use rewards to develop people. You can use the principle of successive approximations to reward employees for getting closer and closer to the level of performance you need. Reward an employee for initial efforts, and as performance improves over time, give occasional praise for doing better.
- Rewards need to be fair. Set your own standards and process for providing rewards and then apply them equally to all employees. Praising one employee and ignoring others can create bad feelings and conflict within a group. You need to acknowledge your stars, but average performers also need appreciation and recognition to maintain efforts to improve.

From Fatigue to Health

The scientific field of employee health and well-being is barely one hundred years old. It began with a focus on fatigue during a war in Europe when understanding what drives employee efforts was a matter of survival. In Britain, there was an immediate recognition that employee health and well-being were tied to job conditions that led at least in part to an employee-centered approach to understanding the human side of the workplace moving forward. At the same time, in the

United States, there was a focus primarily on factors that would lead to job performance, with little regard for the impact on employees. Thus, Taylor's *Scientific Management*, which used evidence-based approaches to maximize productivity, was more embraced in North America than in Britain (Kreis, 1995).

They may have followed different paths across the Atlantic, but by the twenty-first century, the importance of worker health and safety was recognized not only in Europe and North America, but by researchers across the world. The study of the psychosocial aspects that are the heart of the field of OHP has become almost universal. This can be seen in the rapid expansion of this field in terms of the research being published and the number of outlets available.

An exclusive focus on organizational efficiency to the exclusion of the well-being of people is bound to be unproductive. Healthy organizations are not only efficient but also have members who enjoy good physical and psychological health and well-being. We know a great deal about the characteristics and practices of such organizations, and examples can be found by consulting lists that recognize the best places to work. Creating such organizations requires effort and expertise in order to jointly optimize conditions that enhance organizations with conditions that enhance their people.

References

- Bakker, A. B., & Demerouti, E. (2014). Job demands-resources theory. In P. Y. Chen & C. L. Cooper (Eds.), *Work and wellbeing* (Vol. 3, pp. 37–64). Wiley-Blackwell.
- Barling, J., & Griffiths, A. (2011). A history of occupational health psychology. In L. E. Tetrick & J. C. Quick (Eds.), *Handbook of occupational health psychology* (pp. 21–34). American Psychological Association.
- Beehr, T. A., & Newman, J. E. (1978). Job stress, employee health, and organizational effectiveness: A facet analysis, model, and literature review. *Personnel Psychology, 31*(4), 665–699.
- Bowling, N. A., & Cucina, J. M. (2015). Robert Hoppock: Early job satisfaction and vocational guidance pioneer. *The Industrial-Organizational Psychologist, 53*, 109–116.
- Caplan, R. D., Cobb, S., French, J. R. P., Jr., Van Harrison, R., & Pinneau, S. R., Jr. (1975). *Job demands and worker health: Main effects and occupational differences*. U.S. Department of Health, Education, and Welfare.

- Cepeda, N. J., Coburn, N., Rohrer, D., Wixted, J. T., Mozer, M. C., & Pashler, H. (2009). Optimizing distributed practice: Theoretical analysis and practical implications. *Experimental Psychology*, 56(4), 236–246. <http://doi.org/10.1027/1618-3169.56.4.236>
- Cooper, C. L., & Dewe, P. (2004). *Stress: A brief history*. Blackwell.
- Cox, T., & Tisserand, M. (2006). *Work & Stress* comes of age: Twenty years of occupational health psychology. *Work & Stress*, 20(1), 1–5. <http://doi.org/10.1080/02678370600739795>
- Cunningham, C. J. L., & Black, K. J. (2021). *Essentials of occupational health psychology*. Routledge.
- Dollard, M. F., Tuckey, M. R., & Dormann, C. (2012). Psychosocial safety climate moderates the job demand-resource interaction in predicting workgroup distress. *Accident Analysis and Prevention*, 45, 694–704. <https://doi.org/10.1016/j.aap.2011.09.042>
- Erez, M. (1994). Toward a model of cross-cultural industrial and organizational psychology. In H. C. Triandis, M. D. Dunnette, & L. Hough (Eds.), *Handbook of industrial and organizational psychology* (Vol. 4, pp. 559–607). Consulting Psychologists Press.
- Fleishman, E. A., & Harris, E. F. (1962). Patterns of leadership behavior related to employee grievances and turnover. *Personnel Psychology*, 15, 43–56.
- Gray, C. E., Spector, P. E., Lacey, K. N., Young, B. G., Jacobsen, S. T., & Taylor, M. R. (2019). Helping may be harming: Unintended negative consequences of providing social support. *Work & Stress*, 1–27. <http://doi.org/10.1080/02678373.2019.1695294>
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <http://doi.org/10.1037/0003-066X.44.3.513>
- Hoppock, R. (1935). *Job satisfaction*. Harper and Brothers.
- Iaffaldano, M. T., & Muchinsky, P. M. (1985). Job satisfaction and job performance: A meta-analysis. *Psychological Bulletin*, 97(2), 251–273. <http://doi.org/10.1037/0033-2909.97.2.251>
- Idris, M. A., Dollard, M. F., Coward, J., & Dormann, C. (2012). Psychosocial safety climate: Conceptual distinctiveness and effect on job demands and worker psychological health. *Safety Science*, 50(1), 19–28. <http://doi.org/10.1016/j.ssci.2011.06.005>
- Idris, M. A., Dollard, M. F., & Yulita. (2014). Psychosocial safety climate, emotional demands, burnout, and depression: A longitudinal multilevel study in the Malaysian private sector. *Journal of Occupational Health Psychology*, 19(3), 291–302. <http://doi.org/10.1037/a0036599>
- Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and

- quantitative review. *Psychological Bulletin*, 127(3), 376–407. <http://doi.org/10.1037/0033-2909.127.3.376>
- Karasek, R. A., Jr. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24(2), 285–308. <http://doi.org/10.2307/2392498>
- Karasek, R. A., Jr., & Theorell, T. (1990). *Healthy work: Stress, productivity and the reconstruction of work life*. Basic Books.
- Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. John Wiley.
- Kessler, S. R., Lucianetti, L., Pindek, S., & Spector, P. E. (2020). “Walking the talk”: The role of frontline supervisors in preventing workplace accidents. *European Journal of Work and Organizational Psychology*, 29(3), 1–12. <http://doi.org/10.1080/1359432X.2020.1719998>
- Kirkpatrick, D. L. (1977). Evaluating training programs: Evidence versus proof. *Training and Development Journal*, 31, 9–12.
- Kornhauser, A. (1965). *Mental health of the industrial worker*. John Wiley.
- Kreis, S. (1995). Early experiments in British scientific management: The Health of Munitions Workers’ Committee, 1915–1920. *Journal of Management History*, 1, 65–78.
- de Lange, A. H., Taris, T. W., Kompier, M. A., Houtman, I. L., & Bongers, P. M. (2003). “The very best of the millennium”: Longitudinal research and the demand-control-(support) model. *Journal of Occupational Health Psychology*, 8(4), 282–305.
- Law, R., Dollard, M. F., Tuckey, M. R., & Dormann, C. (2011). Psychosocial safety climate as a lead indicator of workplace bullying and harassment, job resources, psychological health and employee engagement. *Accident Analysis and Prevention*, 43(5), 1782–1793. <http://doi.org/10.1016/j.aap.2011.04.010>
- Liu, C., Li, C., Fan, J., & Nauta, M. M. (2015). Workplace conflict and absence/lateness: The moderating effect of core self-evaluation in China and the United States. *International Journal of Stress Management*, 22(3), 243–269. <http://doi.org/10.1037/a0039163>
- Liu, C., Nauta, M. M., Li, C., & Fan, J. (2010). Comparisons of organizational constraints and their relations to strains in China and the United States. *Journal of Occupational Health Psychology*, 15(4), 452–467. <http://doi.org/10.1037/a0020721>
- Myers, C. S. (1920). *Mind and work: The psychological factors in industry and commerce*. University of London Press.
- (1926). *Industrial psychology in Great Britain*. Jonathan Cape.
- Petty, M. M., McGee, G. W., & Cavender, J. W. (1984). A meta-analysis of the relationships between individual job satisfaction and individual

- performance. *The Academy of Management Review*, 9(4), 712–721. www.jstor.org/stable/258493
- Quick, J. C. (1999). Occupational health psychology: The convergence of health and clinical psychology with public health and preventive medicine in an organizational context. *Professional Psychology: Research and Practice*, 30(2), 123–128. <http://doi.org/10.1037/0735-7028.30.2.123>
- Raymond, J. S., Wood, D. W., & Patrick, W. K. (1990). Psychology doctoral training in work and health. *American Psychologist*, 45(10), 1159–1161. <http://doi.org/10.1037/0003-066X.45.10.1159>
- Sauter, S. L., Lim, S. Y., & Murphy, L. R. (1996). Organizational health: A new paradigm for occupational stress research at NIOSH. *Japanese Journal of Occupational Mental Health*, 4(4), 248–254.
- Schonfeld, I. S., & Chang, C.-H. (2017). *Occupational Health Psychology*. Springer.
- Siegrist, J. (1996). Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, 1(1), 27–41. <http://doi.org/10.1037/1076-8998.1.1.27>
- Spector, P. E. (2019a). People work for praise. <https://paulspector.com/people-work-for-praise/>
- (2019b). What is organizational climate? <https://paulspector.com/what-is-organizational-climate/>
- (2021). *Industrial and organizational psychology: Research and practice*. John Wiley.
- Spector, P. E., Cooper, C. L., Sanchez, J. I., O'Driscoll, M., Sparks, K., Bernin, P., Büssing, A., Dewe, P., Hart, P., Lu, L., Miller, K., de Moraes, L. F. R., Ostrognay, G., Pagon, M., Pitariu, H., Poelmans, S., Radhakrishnan, P., Russinova, V., Salamatov, V., . . . Yu, S. (2001). Do national levels of individualism and internal locus of control relate to well-being: An ecological level international study. *Journal of Organizational Behavior*, 22(8), 815–832. <http://doi.org/10.1002/job.118>
- Spector, P. E., Cooper, C. L., Sanchez, J. I., O'Driscoll, M., Sparks, K., Bernin, P., . . . Yu, S. (2002). Locus of control and well-being at work: How generalizable are Western findings? *Academy of Management Journal*, 45(2), 453–466. <https://doi.org/10.5465/3069359>
- Spector, P. E., Coulter, M. L., Stockwell, H. G., & Matz, M. W. (2007). Perceived violence climate: A new construct and its relationship to workplace physical violence and verbal aggression, and their potential consequences. *Work & Stress*, 21(2), 117–130. <http://doi.org/10.1080/02678370701410007>

- Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization Science*, 16(5), 537–549. <http://doi.org/10.1287/orsc.1050.0153>
- Theorell, T. (2019). A long-term perspective on cardiovascular job stress research. *Journal of Occupational Health*, 61(1), 3–9. <http://doi.org/10.1002/1348-9585.12032>
- Trist, E. L., & Bamforth, K. W. (1951). Some social and psychological consequences of the longwall method of coal-getting: An examination of the psychological situation and defences of a work group in relation to the social structure and technological content of the work system. *Human Relations*, 4(1), 3–38. <http://doi.org/10.1177/001872675100400101>
- Vroom, V. H. (1964). *Work and motivation*. John Wiley.
- Warr, P., & Wall, T. D. (1975). *Work and well-being*. Penguin.
- Zickar, M. J. (2003). Remembering Arthur Kornhauser: Industrial psychology's advocate for worker well-being. *Journal of Applied Psychology*, 88(2), 363–369. <http://doi.org/10.1037/0021-9010.88.2.363>
- Zohar, D. (2010). Thirty years of safety climate research: Reflections and future directions. *Accident Analysis and Prevention*, 42(5), 1517–1522. <https://doi.org/10.1016/j.aap.2009.12.019>