The must-have handbook on occupational health psychology for scholars and practitioners. I thoroughly recommend this comprehensive collection brought to you by renowned experts in the field.

—Sharon Clarke, PhD, Professor, Alliance Manchester Business School, University of Manchester, Manchester, England

This updated handbook is a must-have resource for students, researchers, and practitioners working in occupational health psychology and Total Worker Health®. The in-depth topical summaries provided in each chapter of this volume come from an all-star cast of researchers and practitioners in these domains.

—Christopher J. L. Cunningham, PhD, The University of Tennessee at Chattanooga, Chattanooga, TN, United States; Past President, Society for Occupational Health Psychology

As too many jobs continue to wreak havoc on our lives, this book presents the state of the science on health and well-being at work.

—Adam Grant, PhD, organizational psychologist, The Wharton School, University of Pennsylvania, Philadelphia, PA, United States; #1 *New York Times* bestselling author of *Think Again*

More than ever, occupational health is at the center of employees' well-being and organizations' success. This book is a wonderful resource along this route. A set of leading scholars provide their insights into the models, causes, consequences, evaluation, and interventions related to occupational stress. Brilliant work that anyone concerned about health in the workplace should read.

—Christian Vandenberghe, PhD, FRSC, Management Department, HEC Montréal, Montréal, Québec, Canada

This handbook offers a rich knowledge base for students who are brand new to the field, as well as for the seasoned occupational health psychology professional who wants to understand the state of the research. The excellent team of authors features scientist–practitioners who are leading experts in their areas. The added material acquainting readers with allied areas of research and practice is incredibly helpful for scholars and practitioners who desire to embrace an interdisciplinary approach.

—Kristen Jennings Black, PhD, Associate Professor of Psychology, University of Tennessee at Chattanooga, Chattanooga, TN, United States

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Introduction

Public Health and Prevention in Occupational Settings

Lois E. Tetrick, Gwenith G. Fisher, Michael T. Ford, and James Campbell Quick

People spend a significant proportion of their lives at work, and often their jobs bring meaning and structure to their lives (Jahoda, 1982; Warr, 2007). Because work is a central aspect of many people's lives, societies generally recognize that workers should have a safe and healthy work environment. Employees should not have to worry about injury or illness, and governments in many industrialized countries, including the United States, the Netherlands, Sweden, and European Union, have introduced legislation to help ensure this (Kompier, 1996; Tetrick, 2008). The focus of much of the early work on occupational safety and health was on occupational medicine and workers' exposures to physical hazards in the work environment. Over time, scholars and practitioners have recognized the workplace is also a logical, appropriate context for health and well-being promotion, not just the prevention of injuries and illness (Cooper & Quick, 2017). This broader perspective is concerned with healthy people and healthy organizations (Nelson & Quick, 2019). Since the second edition of the handbook, the National Institute for Occupational Safety and Health (NIOSH) has developed and proliferated the science and practice of *Total Worker Health®* (Hudson et al., 2019), integrating safety and health protection with health promotion. Alongside this broadened focus, occupational health psychology researchers have theorized about and delved into how work-related experiences affect workers and their families outside of work (Carlson et al., 2019; Grzywacz & Marks, 2000).

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Handbook of Occupational Health Psychology, Third Edition, L. E. Tetrick, G. G. Fisher, M. T. Ford, and J. C. Quick (Editors)

In this chapter, we first describe the conceptualization of health and the purpose and origins of occupational health psychology (OHP) as a catalyst in bringing together research from multiple disciplines to promote healthy workers and healthy organizations. Next, we review the context in which work today is performed and examine changes in the nature of work. This context plays a role in the optimal functioning of individuals and organizations and drives many key issues in occupational health. We then offer a model for integrating a public health perspective on OHP with a more psychological perspective. Finally, we describe the organization of the rest of the book.

HEALTHY ORGANIZATIONS, HEALTHY WORKERS, AND HEALTHY COMMUNITIES

Regarding the health of workers, in 1946 the World Health Organization defined *health* as not just the absence of disease but also a state of complete physical, mental, and social well-being (WHO, 1948). Health has also been conceptualized more broadly as the ability to have and reach goals, meet personal needs, and cope with everyday life (Raphael et al., 1999). Scholars have, accordingly, taken an expansive view of individual health to include the absence of illness or injury and restoration of health, as well as optimal functioning and flourishing (Hofmann & Tetrick, 2003; Macik-Frey et al., 2007; Schaufeli, 2004). For example, Chari and colleagues (2018) developed a broad, multidimensional model of worker well-being that not only includes workers' physical and mental health but also considers workers' job and life satisfaction, positive emotional experiences, sense of meaningfulness, social support and relationships, as well as a healthy and safe workplace culture and climate as part of worker well-being. NIOSH et al. (2021) recently developed the Worker Well-Being Questionnaire (WellBQ) to assess worker well-being based on this broad conceptualization. In accordance with this framework, this handbook takes an expansive view of worker health.

OHP studies the health of the organization itself, the health of its people, and the impact of organizational practices on the public health of the surrounding community. Regarding the organization itself, Miles (1965) defined a healthy organization as one that survives and continues to cope adequately over the long haul, continuously developing and expanding its coping abilities. Abraham Maslow called for healthy work environments characterized by high productivity, high employee satisfaction, good safety records, few disability claims and union grievances, low absenteeism, low turnover, and the absence of violence (Quick, 1999, 2021b). Nelson and Quick (2019) used a systems view of a healthy organization, arguing that such an organization is able to sustain a healthy and satisfying work environment, even in times of market turbulence. Across these perspectives is the view that a healthy organization has an internal work environment that facilitates the health and productivity of its workers while sustaining itself and adapting to changes in its external environment.

With regard to worker health, the first edition of the handbook had a work–life system view that explicitly acknowledged workers' multiple roles to include roles at work, in the family, and in other nonwork arenas, such as religious, civic, and leisure activities. The boundaries and interfaces that link these multiple systems are instrumentally important to organizational well-being, which of course includes the well-being of the worker (Chari et al., 2018; Quick, 2021a).

Finally, OHP also takes a public health perspective in considering the implications of work for the health of the surrounding community and society at large. Public health aims to maximize the benefit for the greatest number of people and addresses health, safety, and well-being for the entire population. This public health perspective of OHP focuses on the role of organizations as being critical in preventing ill health and in promoting well-being in the general population, which includes workers and their families. By extension, organizations can have a positive influence on the health of the communities within which they operate. Taking a public health perspective, communities can have healthier citizens when their organizations use policies and practices that prevent injury and illness and promote health and well-being.

PURPOSE AND ORIGINS OF OCCUPATIONAL HEALTH PSYCHOLOGY

The purpose of OHP is to develop, maintain, and promote the safety, health, and well-being of employees and that of their families. Worker safety, health, and well-being are important both from economic and humanitarian perspectives. Estimates suggest the health care costs and lost productivity due to employee injuries and distress are substantial (Hassard et al., 2018). Meanwhile, working conditions and work-related stress and injuries are a significant factor in the length and quality of life for workers. The primary focus of OHP is the prevention of illness or injury by creating safe and healthy working environments (Quick et al., 2013; Sauter et al., 1999). Key areas of concern are work organization factors that place individuals at risk of injury, disease, and distress. At the least this requires a multidisciplinary approach with experts from multiple disciplines working together, or an interdisciplinary approach that integrates knowledge and methods from multiple disciplines. An ideal goal is a transdisciplinary approach that extends beyond a multi- or interdisciplinary perspective by developing a unified framework across multiple disciplines within and beyond psychology (Maclean et al., 2000). For example, psychology specialties such as industrial and organizational, human factors, cognitive, social, health, clinical, counseling and developmental psychology inform OHP, as do other disciplines such as public health, preventive medicine, occupational medicine, ergonomics, industrial hygiene, and industrial engineering (Schneider et al., 1999). OHP aims to integrate these disciplines with a primary focus on prevention. Therefore, the main focus of OHP is on organizational interventions that reduce the risk of injury and ill health, promote health and well-being, and help employees cope with stressors or rehabilitate rather than rely upon individual interventions such as counseling (Quick, 1999).

OHP emerged from psychology, engineering, and the practice of preventive and occupational medicine to be uniquely recognized in the 1990s, with a particular focus on the prevention of stress and related health issues. These scientific origins are also the foundations for occupational medicine and occupational safety (Macik-Frey et al., 2007, 2009). Since its original recognition in the 1990s, OHP has progressed to focus on worker well-being; positive work experiences including meaningfulness of work; the behavioral factors in occupational safety and injury; organizational climate; social support and fair treatment; healthy leadership practices; the work–nonwork interface; recovery from work; and a renewed concern for equity and fair treatment, workplace interventions, healthy work design, job resources, healthy boundaries between work and nonwork, among other things. These positive advances demonstrate some of the promise that OHP holds for the future.

The challenges to OHP in promoting healthy organizations and healthy people can be more fully appreciated by considering contextual issues and changes that are occurring in workplaces and in the workforce. These changes shape the nature of occupational risks to which people are exposed and the context within which they work. Key changes that relate to OHP are described in the following sections.

THE EVOLVING CONTEXT OF WORK

Since the second edition of the *Handbook of Occupational Health Psychology* was published in 2011, there are many profound ways in which work and workers' experiences have shifted. Examples include macro-level factors such as continued globalization, an increase in service-oriented jobs and "knowledge" work, changing workforce demographics and increased diversity, labor supply and demand, unemployment, job insecurity, continual technological advantages (e.g., AI, automation), more variability and a higher prevalence of alternative work arrangements (e.g., contract work and new forms of contingent work, including "gig" work, and telework), and more recently the global COVID-19 pandemic. These contextual shifts in the nature and organization of work have implications for the experiences of workers and their families, with potential effects on well-being and health.

Amid the contextual shifts described above, OHP researchers have made considerable theoretical and empirical advances. During the early emergence of OHP as an area of study, researchers paid the greatest attention toward understanding occupational stress. Since the publication of the second edition of the handbook, there have been important advances in our understanding of the work stress process and work stress theories (such as further refinement and extensions of the job demands–resources model and more acknowledgment of allostatic load regarding chronic stressors; see Chapter 3, this volume). As a field we have made great strides in our understanding of the effects of organizational policies and practices on the safety, health, and well-being of employees, their families, and their organizations (see, for example, the special issue of the

Journal of Occupational Health Psychology in 2017 that reviewed 20 years of research). Research findings in recent years have also increased our knowledge about a variety of important workplace stressors (e.g., multiple forms of interpersonal mistreatment, telepressure) and positive experiences (e.g., meaningfulness, recovery) that had previously received limited attention. Additionally, there is a growing recognition of and attention to the inter- and multidisciplinary nature of the field of OHP and a need for more empirical studies to evaluate the effectiveness of occupational health interventions (Burgess et al., 2020). As a result, the third edition of the *Handbook of Occupational Health Psychology* has been expanded to cover these developments to the greatest extent possible. This book has added chapters to cover additional topics and developments in the field (e.g., recovery, sleep, meaningfulness of work, mistreatment, and nonstandard work arrangements). It has also been restructured to include other important areas of occupational health research and practice that overlap with occupational health psychology, including public health, occupational medicine, occupational ergonomics, and industrial hygiene.

One of the more notable and sweeping changes to the nature of work over the past 2 decades concerns the process of globalization, which has increased the international competition for organizations, increased stressors for companies and individuals alike, and decreased people's job security. Globalization has been accompanied by greater global interdependencies. For example, advances in the high-technology sectors helped fuel job creation in Europe during the late 1990s. However, because of subsequent downturns in the global economy, national economic swings, and organizational restructuring, these interdependencies have created uncertainty for organizations and employees. Organizational structures, organizational policies and practices, and work arrangements, collectively referred to as the *organization of work*, have become much more dynamic. Additionally, the workforce has become increasingly diverse in relation to many characteristics of employees, including age, gender, sexual orientation, and disabilities, to name a few.

Changes in Employment Context

Especially as a result of the global COVID-19 pandemic that triggered the "Great Resignation" (in which large numbers of workers quit their jobs, many seeking work with better working conditions) and a wide range of other economic impacts, world economies are seeing a substantial shift in the number of jobs in various sectors. In the United States, continued growth in service-oriented jobs is projected, whereas jobs in manufacturing have continued to decline due to productivity enhancements and international competition. Among the service-oriented occupations, health care, social assistance, and hospitality are expected to show the greatest increases, while substantial increases are also expected in professional, management, and business services. By contrast, declines are expected in office support, retail, and sales occupations. Meanwhile there is continued growth in jobs related to information technology, and significant increases are also expected in mining, oil, and gas extraction. These changes

have implications for the types of hazards and stressors that workers will be increasingly exposed to in the coming years.

In addition to these industry and occupational changes, employment arrangements have also shown increasing variability in recent years. Alternative work arrangements such as contract work, temporary or agency work, and on-call work have drawn greater attention (Spreitzer et al., 2017). There has also been a rapid increase in remote work in some occupations, further accelerated by changes in response to the COVID-19 pandemic. In some cases, alternative work arrangements can provide flexibility for employees and employers, which may enhance employees' well-being (Broschak et al., 2008) and organizational effectiveness. However, these arrangements also may lead to underemployment, fewer employment benefits, lower job security, and less control over predictability in one's schedule. Further research is needed to fully understand the potential benefits and risks of alternative work arrangements for employee health.

Changes in the Organization of Work

In addition to the changes in work context, the organization of work has undergone significant changes. *Organization of work* refers to the management systems, supervisory practices, production processes, and their influence on the way work is performed (Sauter et al., 1999). Among these changes are continued globalization and increased competition; other economic pressures and technological innovations; complexity of organizational structures and task interdependence; and higher prevalence of nonstandard work arrangements such as on-demand, gig employment:

- Globalization may result in relocation, displacement, unemployment, and fear of unemployment, and these in turn can result in stress and negative health effects among workers and their families. The increased diversity resulting from globalization may also be stressful, perhaps as a result of difficulty in communication or conflict among cultural values or norms (Brislin, 2008).
- Increased competition and economic pressures have resulted in new practices (e.g., lean production, agile HR systems) designed to help organizations respond more quickly and efficiently to environmental pressures and uncertainty (McMackin & Heffernan, 2021). Such practices may result in work intensification to the detriment of employees' health (Polanyi & Tompa, 2004).
- Technological innovations, such as the need to keep up with advances in technology, may also intensify work demands in these instances, increase employees' responsibilities to the detriment of employees' well-being. Increased automation and AI may contribute to work under- or overload, fatigue, unemployment, or increased job insecurity (Cham et al., 2021; Gagné et al., 2021).
- Increased complexity of organizational structures and environmental pressures have resulted in the downsizing and restructuring of many organizations

(Burke & Nelson, 1998; Tetrick, 2000). The health and safety effects of downsizing and restructuring have been found to be negative for the victims, the survivors, and the managers who implemented the downsizing efforts (de Jong et al., 2016; Vinokur & Price, 2015).

- Growth of the gig economy, which comprises on-demand work and other nonstandard work arrangements (Chapter 11, this volume; Tran & Sokas, 2017).

Changes in Workforce Characteristics

Age

Most developed and many developing countries have aging populations and workforces. This has implications for a variety of factors related to occupational health, including the influence of work on healthy physical and mental development, the potential for age discrimination and associated health effects, and changes in worker skills and abilities as individuals grow older. The design of work and other management practices can potentially improve the health, safety, and/or well-being of older workers (Rudolph & Zacher, 2021; Truxillo et al., 2014). For example, increasing autonomy and designing jobs to foster generativity and provide opportunities for older workers with extensive job knowledge to mentor others may be beneficial. There is also evidence suggesting that positive working conditions and job characteristics such as job complexity are beneficial for workers' cognitive functioning (Fisher et al., 2014, 2017; Parker et al., 2021). Findings on the effects of work on successful and healthy aging are now beginning to accrue (e.g., Zacher et al., 2019).

Gender

Labor force participation among women across the world is 47%, ranging from 17% in the Middle East and North Africa to 61% in Sub-Saharan Africa (The World Bank, 2021). With the continued high rate of labor force participation among working mothers, flexible working arrangements (e.g., flexibility in location and time/work schedule) have been implemented to reduce the work–family conflict associated with competing work and family demands. However, such arrangements are not accessible to all workers (Bulger & Fisher, 2012) and can also result in blurred work–family boundaries (Allen et al., 2021; Lewis & Cooper, 1999) and difficulty detaching from work. The positive and negative effects of the work–family interface for the health, safety, and well-being of working men and women have been studied extensively over the past couple of decades and will be discussed in this handbook.

Race and Ethnicity

Paralleling globalization, the U.S. labor force has experienced a shift in the racial and ethnic composition of the workforce, mirroring changes in the population. According to the U.S. Bureau of Labor Statistics, in 2020 12.1% of the U.S. labor force age 16 or older was Black and 6.4% was Asian. Additionally, 17.6% of the

labor force was of Hispanic or Latino ethnicity. This increased diversity in the workforce has implications for OHP (Bell, 2017). Research has documented differential disease rates across racial and ethnic groups, some of which may be related to working conditions and exposures (Barr, 2019). Recent years have also seen an increased emphasis on workforce diversity as well as a focus on the need for equity and inclusion of workers from underrepresented racial and ethnic groups.

The American Psychological Association has undertaken a broad initiative to address the issues of diversity, equity, and inclusion. A joint task force of the Publications and Communications Board and the Board of Scientific Affairs was established in 2020 and worked into 2021 to chart out initiatives to be undertaken in the scientific research and publications directorates of the association. These initiatives are echoed in the broad range of leading universities and colleges as well as Fortune 500 organizations.

Disabilities

According to the U.S. Department of Labor in December 2021, the labor participation rate for individuals aged 16+ with a disability was 22.3%, and 36.7% for individuals aged 16 to 64. OHP research during the last decade has recognized unique stressors (e.g., stigma) and other challenges for workers with chronic health conditions (Beatty & McGonagle, 2018; McGonagle et al., 2020) and those with invisible disabilities (Santuzzi & Keating, 2020).

Between 30% and 50% of adults in the United States experience mental illness at some point during their lifetime (Goetzel et al., 2018). Recent studies highlighted the negative effects of the COVID-19 pandemic on workers' mental health (Khajuria et al., 2021). With poor mental health being a highly prevalent issue and costly problem for society, organizations, and workers, there continues to be an urgent need for research and interventions to improve workers' mental health.

THE PATH MODEL

Considering these changes in workers and the workplace, as well as the resulting risks for physical, emotional, and mental health, it is no surprise that psychologists are giving increased attention to creating and maintaining healthy workplaces. Grawitch and colleagues (2006) reviewed the literature that had been discussed and/or demonstrated to be responsible for psychologically healthy workplaces. The resulting model is the Practices for Achieving Total Health (PATH) model.

The PATH model has five categories of healthy workplace practices: work–life balance, employee growth and development, health and safety, recognition, and employee involvement. These categories are designed to result in employee well-being and organizational improvement. Employee well-being includes the physical, mental, and emotional facets of employee health, as indicated by physical health, mental health, stress, motivation, commitment, job satisfaction, and morale. Organizational improvement includes competitive advantage,

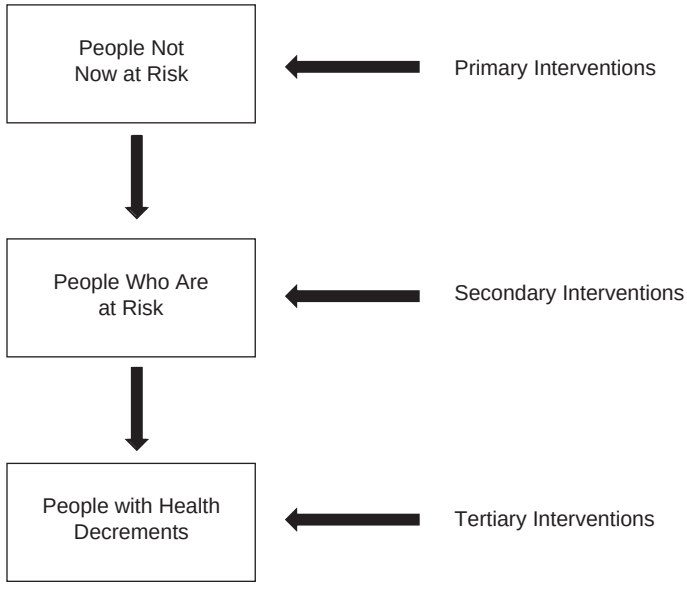
performance and productivity, reduced absenteeism and turnover, reduced accident and injury rates, increased cost savings, hiring selectivity, improved service and product quality, and better customer service and satisfaction. The model promises to be a useful framework for organizing approaches to individual and organizational health.

Macik-Frey et al. (2009) cited the PATH model as an underpinning of the American Psychological Association's psychologically healthy workplace agenda and awards. For example, in 2019 a nonprofit organization in Maine was recognized for their workplace flexibility and transition program for older employees. Other organizations were recognized for their commitment to employees, a culture of collaboration, and support from leadership. The model is useful for both challenging organizations to achieve healthy workplace practices and recognizing and rewarding those who achieve success and meet the challenge.

PREVENTION AND THE PUBLIC HEALTH MODEL

The public health model classifies interventions into three categories: primary interventions, secondary interventions, and tertiary interventions (Schmidt, 1994). Figure 1.1 presents a prevention and public health model showing interventions at different targets within the population. Primary interventions focus

FIGURE 1.1. A Prevention and Public Health Model



From "Prevention at Work: Public Health in Occupational Settings," by L. E. Tetrick and J. C. Quick. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (p. 10), 2003, American Psychological Association. Copyright 2003 by the American Psychological Association.

on prevention among people regardless of risk level or health status. The goal of primary interventions is generally to eliminate or reduce the exposure to, or severity of, health hazards. This is essentially a population-based model in which the intervention is applied to entire populations or groups. Within OHP, a primary intervention might involve redesigning the job to reduce or eliminate work stressors, and/or provide additional job resources such as autonomy or support, offering increased worker flexibility, or developing a positive organizational climate.

Secondary interventions focus on people who are suspected to be at risk of illness, injury, or other strain. Secondary interventions may be administered to groups or individuals and are aimed at reducing the negative health effects of stressors and other hazards. Examples include providing social support, team building, and coping strategies to workers and work groups.

Tertiary interventions focus on those who have experienced a loss in their well-being and attempt to restore well-being. Tertiary interventions are largely therapeutic and curative in nature. These interventions are typically individual based, although they can also be group based. Examples include employee assistance programs, psychotherapy, and counseling.

As previously stated, a great deal of OHP focuses on primary interventions and the factors those interventions target. From a public health and preventive medicine perspective, primary prevention is always the preferred point of intervention (Boulton & Wallace, 2021). A prevention model is highly appropriate in OHP because it is systemic in nature, accounts for work stress as a process that unfolds over time, and recognizes the life history and multifaceted complexity of many health problems (Ilgen, 1990; Quick et al., 2013). Chronic health problems stand in contrast to the infectious and contagious illnesses for which the traditional public health model was developed, originally to prevent disease epidemics.

OHP interventions extend the public health model of prevention by addressing changes to organizations or systems, groups, and individuals. For example, changing the organizational culture to value learning and foster psychological safety would reduce strain that occurs from a fear of making mistakes. Because the organizational culture affects everyone in the population, or organization in this case, it could change groups and individuals. The resultant decrease in strain at the individual level would improve the health of employees. However, as Quick (1999) pointed out, there may be times when secondary or tertiary interventions are needed because primary prevention was not feasible or individual factors create health concerns for only some people.

INTEGRATING THE PATH MODEL WITH THE PUBLIC HEALTH MODEL

The OHP literature has not integrated the PATH model with the public health model, perhaps because there have been relatively few empirical interventions and because the most frequent interventions focus on the individual level (Bellarosa & Chen, 1997; Parks & Steelman, 2008; Richardson & Rothstein, 2008). However, epidemiology and public health are essential for

TABLE 1.1. Example Interventions Integrating the PATH Model With the Public Health Model

Area of intervention	Intervention		
	Primary	Secondary	Tertiary
Work–life balance	Benefits such as flextime, personal days off that are applicable to all employees	Work–family benefits that are applicable to those with family responsibilities	Employee assistance programs for individuals who are experiencing difficulties with nonwork responsibilities
Employee growth and development	Training both job-related (skills) and interpersonal for all employees	Training aimed at employees' needs for development of skills	Remedial training for those who have experienced illness and/or injury
Health and safety	General education campaigns relative to risk factors	Safety tips for individuals working in hazardous situations	Smoking cessation; weight-loss programs for those who are experiencing health declines
Recognition	Rewards for safe behavior	Rewards for lack of accidents (which have been shown to be susceptible to negative consequences)	Incentives/ disincentives for weight loss/gain
Employee involvement	Quality-of-life circles	Health and safety committees for employees in hazardous environments	Peer counseling relative to substance use

Note. PATH = Practices for Achieving Total Health

understanding healthy organizations (see Goh et al., 2016) and for the science and practice of OHP (see Boulton & Wallace, 2021). To illustrate how these two models could be integrated, we have included in Table 1.1 examples of the types of interventions that might fit within a matrix, crossing the dimensions of the PATH model (rows) with the types of interventions of the public health model (columns).

TOTAL WORKER HEALTH®

Total Worker Health® (TWH) is a comprehensive, transdisciplinary approach to improving worker health that integrates worker safety and protection from work-related injuries and illnesses with health promotion (Hudson et al., 2019). It was developed and launched by NIOSH in 2011 as a

> strategy integrating occupational safety and health protection with health promotion to *prevent* worker injury and illness and to *advance* health and well-being.

> This approach eliminates the either/or proposition, overcomes the disconnectedness that exists in many organizations, and provides comprehensive tools and approaches to creating environments where employees thrive. (Schill & Chosewood, 2013, S8)

The TWH approach aims to support organizational efforts to take a systematic approach for addressing and improving worker health and well-being rather than perpetuating a siloed or narrow approach.

Empirical evidence thus far indicates that there are benefits to and success with a TWH approach for addressing worker health and well-being (Anger et al., 2019; Hudson et al., 2019; Lemke, 2021). Although TWH was created in the United States, successful organizational interventions have taken place in other countries. For example, Jaramillo and colleagues (2021) recently applied a TWH approach in a multinational Latin American agribusiness, and Hoge et al. (2019) described a similar approach in Germany called "Workplace Health Management." However, Lemke (2021) recommended taking a complex systems approach (Diez-Roux, 2011; Kaplan et al., 2017) to help ensure success with the *Total Worker Health* approach. Additional chapters in the handbook describe *Total Worker Health*® and its applications.

ORGANIZATION OF THIS VOLUME

In revising this third edition of the handbook, we have added several chapters to better address advances in the field and a risk-problem-prevention-intervention model. Part I offers an overview of occupational health and its history. Part II provides several models and frameworks employed in OHP, including occupational stress, safety, health hazards, savoring, organizational wellness, models of the work–nonwork interface, and cross-cultural perspectives. Part III contains information on causes of and risk factors for ill health and injury, discussing organizational climate, nonstandard work schedules and nonstandard work arrangements, as well as sleep and fatigue, and mistreatment in organizations. Part IV focuses on symptoms and disorders, including burnout, cardiovascular disease, pain and musculoskeletal injuries, return to work, substance use and abuse, psychological well-being, recovery from work, and meaningful work. Part V discusses interventions and treatment, including job stress interventions, worksite health interventions, employee assistance programs, leadership, and policies and practices relative to the work–nonwork interface. Part VI addresses methodology and evaluation. Part VII presents brief descriptions of several allied occupational health disciplines that relate to and in some ways overlap with OHP. The allied disciplines include occupational ergonomics, industrial hygiene, public health, and occupational medicine. In the concluding section, Part VIII, the coeditors aim to integrate some important aspects of the developments in the field of OHP covered in this volume, discuss issues for graduate training, and predict how OHP will advance in the next decade or so.

CONCLUSION

The practice of OHP requires a sound scientific basis for developing healthy organizations and healthy people. To this end, more theoretical development and supporting research are needed to define health not just as the absence of illness but as something more. Perhaps the efforts of positive psychology to understand optimum human functioning and happiness (Csikszentmihalyi & Seligman, 2000) have implications for occupational safety and health and the design of primary interventions to promote health in the workplace. Seligman (1998) chided psychology for focusing on disease to the exclusion of working toward building strength and resilience in people. It appears that OHP has heard this call, and as indicated in several of the chapters in this third edition of the handbook, there is growing recognition that OHP is concerned with creating and sustaining healthy people and healthy organizations, not just the prevention of injury and illness.

REFERENCES

Allen, T. D., Merlo, K., Lawrence, R. C., Slutsky, J., & Gray, C. E. (2021). Boundary management and work-nonwork balance while working from home. *Applied Psychology*, *70*(1), 60–84.

Anger, W. K., Rameshbabu, A., Olson, R., Bodner, T., Hurtado, D. A., Parker, K., Wan, W., Wipfli, B., & Rohlman, D. S. (2019). Effectiveness of Total Worker Health® interventions. In H. L. Hudson, J. A. S. Nigam, S. L. Sauter, L. C. Chosewood, A. L. Schill, & J. Howard (Eds.), *Total Worker Health* (pp. 61–89). American Psychological Association. https://doi.org/10.1037/0000149-005

Barr, D. A. (2019). *Health disparities in the United States: Social class, race, ethnicity, and the social determinants of health*. JHU Press.

Beatty, J. E., & McGonagle, A. K. (2018). Chronic health conditions and work identity from a lifespan development frame. In S. Werth & C. Brownlow (Eds.), *Work and identity* (pp. 9–22). Palgrave Macmillan, Cham.

Bell, M. P. (2017). *Diversity in organizations* (3rd ed.). South-Western/Cengage.

Bellarosa, C., & Chen, P. Y. (1997). The effectiveness and practicality of occupational stress management interventions: A survey of subject matter expert opinions. *Journal of Occupational Health Psychology*, *2*, 247–262. https://doi.org/10.1037/1076-8998.2.3.247

Boulton, M. L., & Wallace, R. B. (2021). *Maxcy-Rosenau-Last: Public health and preventive medicine* (16th ed.). McGraw Hill Medical.

Broschak, J. P., Davis-Blake, A., & Block, E. S. (2008). Nonstandard, not substandard: The relationship among work arrangements, work attitudes, and job performance. *Work and Occupations*, *35*, 3–43. https://doi.org/10.1177/0730888407309604

Brislin, R. (2008). *Working with cultural differences: Dealing effectively with diversity in the workplace*. Praeger/Greenwood.

Bulger, C. A., & Fisher, G. G. (2012). Ethical imperatives of work/life balance. In N. P. Reilly, M. J. Sirgy, & C. A. Gorman (Eds.), *Work and quality of life: Ethical practices in organizations* (pp. 181–200). Springer.

Burgess, M. G., Brough, P., Biggs, A., & Hawkes, A. J. (2020). Why interventions fail: A systematic review of occupational health psychology interventions. *International Journal of Stress Management*, *27*(2), 195–207. https://doi.org/10.1037/str0000144

Burke, R. J., & Nelson, D. (1998). Mergers and acquisitions, downsizing, and privatization: A North American perspective. In M. K. Gowing, J. D. Kraft, & J. C. Quick (Eds.), *The new organizational reality: Downsizing, restructuring, and revitalization* (pp. 21–54). American Psychological Association. https://doi.org/10.1037/10252-001

Carlson, D. S., Thompson, M. J., & Kacmar, K. M. (2019). Double crossed: The spillover and crossover effects of work demands on work outcomes through the family. *Journal of Applied Psychology*, *104*(2), 214–228. https://doi.org/10.1037/apl0000348

Cham, B. S., Andrei, D. M, Griffin, M. A., Grech, M., & Neal, A. (2021). Investigating the joint effects of overload and underload on chronic fatigue and wellbeing. *Work and Stress*, *35*(4), 344–357. https://doi.org/10.1080/02678373.2021.1888822

Chari, R., Chang, C. C., Sauter, S. L., Sayers, E. L. P., Cerully, J. L., Schulte, P., Schill, A. L., & Uscher-Pines, L. (2018). Expanding the paradigm of occupational safety and health: A new framework for worker well-being. *Journal of Occupational and Environmental Medicine*, *60*(7), 589–593. https://doi.org/10.1097/JOM.0000000000001330

Cooper, C. L., & Quick, J. C. (2017). *The handbook of stress and health: A guide to research and practice*. Wiley Blackwell.

Csikszentmihalyi, M., & Seligman, M. (2000). Positive psychology. *American Psychologist*, *55*(1), 5–14.

de Jong, T., Wiezer, N., de Weerd, M., Nielsen, K., Mattila-Holappa, P., & Mockallo, Z. (2016). The impact of restructuring on employee well-being: A systematic review of longitudinal studies. *Work & Stress*, *30*, 91–114. https://doi.org/10.1080/02678373.2015.1136710

Diez-Roux, A. V. (2011). Complex systems thinking and current impasses in health disparities research. *American Journal of Public Health*, *101*, 1627–1634. https://doi.org/10.2105/AJPH.2011.300149

Fisher, G. G., Stachowski, A., Infurna, F. J., Faul, J. D., Grosch, J., & Tetrick, L. E. (2014). Mental work demands, retirement, and longitudinal trajectories of cognitive functioning. *Journal of Occupational Health Psychology*, *19*(2), 231–242. https://doi.org/10.1037/a0035724

Fisher, G. G., Chaffee, D. S., Tetrick, L. E., Davalos, D. B., & Potter, G. G. (2017). Cognitive functioning, aging, and work: A review and recommendations for research and practice. *Journal of Occupational Health Psychology*, *22*(3), 314–336. https://doi.org/10.1037/ocp0000086

Gagné, M., Parker, S. K., & Griffin, M. A. (2021). How does future work need to be designed for optimal engagement? In J. P. Meyer & B. Schneider (Eds.), *A research agenda for employee engagement in a changing world of work* (pp. 137–154). Edward Elgar Publishing. https://hbr.org/1999/07/the-toxic-handler-organizational-hero-and-casualty

Goetzel, R. Z., Roemer, E. C., Holingue, C., Fallin, M. D., McCleary, K., Eaton, W., Agnew, J., Azocar, F., Ballard, D., Bartlett, J., Braga, M., Conway, H., Crighton, K. A., Frank, R., Jinnett, K., Keller-Greene, D., Rauch, S. M., Safeer, R., Saporito, D., . . . Mattingly, C. R. (2018). Mental health in the workplace: A call to action proceedings from the mental health in the workplace—Public health summit. *Journal of Occupational and Environmental Medicine*, *60*(4), 322. https://doi.org/10.1097/JOM.0000000000001271

Goh, J., Pfeffer, J., & Zenios, S. A. (2016). The relationship between workplace stressors and mortality and health costs in the United States. *Management Science*, *62*(2), 608–628. https://doi.org/10.1287/mnsc.2014.2115

Grawitch, M. J., Gottschalk, M., & Munz, D. C. (2006). The path to a healthy workplace: A critical review linking healthy workplace practices, employee well-being, and organizational improvements. *Consulting Psychology Journal: Practice and Research*, *58*, 129–147. https://doi.org/10.1037/1065-9293.58.3.129

Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work–family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, *5*(1), 111–126. https://doi.org/10.1037/1076-8998.5.1.111

Hassard, J., Teoh, K. R. H., Visockaite, G., Dewe, P., & Cox, T. (2018). The cost of work-related stress to society: A systematic review. *Journal of Occupational Health Psychology*, *23*(1), 1–17. https://doi.org/10.1037/ocp0000069

Hofmann, D. A., & Tetrick, L. E. (2003). The etiology of the concept of health: Implications for "organizing" individual and organizational health. In D. A. Hofmann & L. E. Tetrick (Eds.), *Health and safety in organizations* (pp. 1–28). Jossey-Bass.

Hoge, A., Ehmann, A. T., Rieger, M. A., & Siegel, A. (2019). Caring for workers' health: Do German employers follow a comprehensive approach similar to the Total Worker Health concept? Results of a survey in an economically powerful region in Germany. *International Journal of Environmental Research and Public Health*, *16*(5), 726. https://doi.org/10.3390/ijerph16050726

Hudson, H. L., Nigam, J. A., Sauter, S. L., Chosewood, L., Schill, A. L., & Howard, J. E. (2019). *Total Worker Health*. American Psychological Association.

Ilgen, D. R. (1990). Health issues at work: Opportunities for industrial organizational psychology. *American Psychologist*, *45*, 273–283. https://doi.org/10.1037/0003-066X.45.2.273

Jahoda, M. (1982). *Employment and unemployment: A social psychological analysis*. Cambridge University Press.

Jaramillo, D., Krisher, L., Schwatka, N. V., Tenney, L., Fisher, G. G., Clancy, R. L., Shore, E., Asensio, C., Tetreau, S., Castrillo, M. E., Amenabar, I., Cruz, A., Pilloni, D., Zamora, M. E., Butler-Dawson, J., Dally, M., & Newman, L. S. (2021). International Total Worker Health: Applicability to agribusiness in Latin America. *International Journal of Environmental Research and Public Health*, *18*(5), 2252. https://doi.org/10.3390/ijerph18052252

Kaplan, G. A., Diez-Roux, A. V., Simon, C. P., & Galea, S. (Eds.). (2017). *Growing inequality: Bridging complex systems, population health, and health disparities*. Westphalia Press.

Khajuria, A., Tomaszewski, W., Liu, Z., Chen, J.-H., Mehdian, R., Fleming, S., Vig, S., & Crawford, M. J. (2021). Workplace factors associated with mental health of healthcare workers during the COVID-19 pandemic: An international cross-sectional study. *BMC Health Services Research*, *21*(1), 262. https://doi.org/10.1186/s12913-021-06279-6

Kompier, M. A. J. (1996). Job design and well-being. In M. J. Schabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *Handbook of work and health psychology* (pp. 349–368). Wiley.

Landsbergis, P. A., Schnall, P. L., Belkic, K. L., Baker, D., Schwartz, J. E., & Pickering, T. G. (2011). Workplace and cardiovascular disease: Relevance and potential role for occupational health psychology. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (2nd ed., pp. 243–264). American Psychological Association.

Lemke, M. K. (2021). Is the Total Worker Health program missing its mark? Integrating complex systems approaches to unify vision and epistemology. *Journal of Occupational and Environmental Medicine*, *63*(5), e304–e307. https://doi.org/10.1097/JOM.0000000000002183

Lewis, S., & Cooper, C. L. (1999). The work–family research agenda in changing contexts. *Journal of Occupational Health Psychology*, *4*, 382–393. https://doi.org/10.1037/1076-8998.4.4.382

Macik-Frey, M., Quick, J. C., & Nelson, D. L. (2007). Advances in occupational health: From a stressful beginning to a positive future. *Journal of Management*, *33*, 809–840. https://doi.org/10.1177/0149206307307634

Macik-Frey, M., Quick, J. D., Quick, J. C., & Nelson, D. L. (2009). Occupational health psychology: From preventive medicine to psychologically healthy workplaces. In A.-S. G. Antoniou, C. L. Cooper, G. P. Chrousos, C. D. Spielberger, & M. W. Eysenck (Eds.), *Handbook of managerial behavior and occupational health* (pp. 3–19). Edward Elgar.

Maclean, L. M., Plotnikoff, R. C., & Moyer, A. (2000). Transdisciplinary work with psychology from a population health perspective: An illustration. *Journal of Health Psychology*, *5*, 173–181. https://doi.org/10.1177/13591053000050020

McGonagle, A. K., Schmidt, S., & Speights, S. L. (2020). Work-health management interference for workers with chronic health conditions: Construct development and scale validation. *Occupational Health Science*, *4*(4), 445–470. https://doi.org/10.1007/s41542-020-00073-2

McMackin, J., & Heffernan, M. (2021). Agile for HR: Fine in practice, but will it work in theory? *Human Resource Management Review*, *31*(4), 100791. https://doi.org/10.1016/j.hrmr.2020.100791

Miles, M. B. (1965). Planned change and organizational health: Figure and ground. In F. D. Carver & T. J. Sergiovanni (Eds.), *Organizations and human behavior: Focus on schools* (pp. 375–391). McGraw-Hill.

Nelson, D. L., & Quick, J. C. (2019). *ORGB*^{6}*: Organizational Behavior*. Cengage/South-Western.

NIOSH, Chari, R., Chang, C. C., Sauter, S. L., Petrun Sayers, E. L., Huang, W., & Fisher, G. G. (2021). NIOSH worker well-being questionnaire (WellBQ) (DHHS [NIOSH] Pub. No. 2021–110, Rev. 5/2021). U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. https://doi.org/10.26616/NIOSHPUB2021110

Parker, S.K., Ward, M.K., & Fisher, G.G. (2021). Can high-quality jobs help adults learn new tricks? A multi-disciplinary review of work design for cognition. *Academy of Management Annals*, *15*(2), 406–454. https://doi.org/10.5465/annals.2019.0057

Parks, K. M., & Steelman, L. A. (2008). Organizational wellness programs: A meta-analysis. *Journal of Occupational Health Psychology*, *13*, 58–68. https://doi.org/10.1037/1076-8998.13.1.58

Polanyi, M., & Tompa, E. (2004). Re-thinking work-health models for the new global economy: A qualitative analysis of emerging dimensions of work. *Work: Journal of Prevention, Assessment and Rehabilitation*, *23*, 3–18.

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*, 123–128. https://doi.org/10.1037/0735-7028.30.2.123

Quick, J. C. (2021a). Organizational stress in the United States of America: Research and practice. In K. A. Sharma, C. L. Cooper, & D. M. Pestonjee (Eds.), *Organizational stress around the world* (pp. 303–317). Routledge/Taylor & Francis Group.

Quick, J. C. (2021b). Wellbeing and work–life boundaries/interfaces. In T. Wall, C. L. Cooper, & P. Brough (Eds.), *The SAGE handbook of organizational wellbeing* (pp. 89–103). Sage Publications.

Quick, J. C., Wright, T. A., Adkins, J. A., Nelson, D. L., & Quick, J. D. (2013). *Preventive stress management in organizations* (2nd ed.). American Psychological Association.

Raphael, D., Steinmetz, B., Renwick, R., Rootman, I., Brown, I., Sehdev, H., Phillips, S., & Smith, T. (1999). The Community Quality of Life Project: A health promotion approach to understanding communities. *Health Promotion International*, *14*(3), 197–209. https://doi.org/10.1093/heapro/14.3.197

Richardson, K. M., & Rothstein, H. (2008). Effects of occupational stress management intervention programs: A meta-analysis. *Journal of Occupational Health Psychology*, *13*, 69–93. https://doi.org/10.1037/1076-8998.13.1.69

Rudolph, C. W., & Zacher, H. (2021). Age inclusive human resource practices, age diversity climate, and work ability: Exploring between- and within-person indirect effects. *Work, Aging and Retirement*, *7*(4), 387–403. https://doi.org/10.1093/workar/waaa008

Santuzzi, A. M., & Keating, R. T. (2020). Managing invisible disabilities in the workplace: Identification and disclosure dilemmas for workers with hidden impairments. In S.L. Fielden, M.E. Moore, & G.L. Bend (Eds.) *The Palgrave handbook of disability*

at work (pp. 331–349). Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-42966-9

Sauter, S. L., Hurrell, J. J., Fox, H. R., Tetrick, L. E., & Barling, J. (1999). Occupational health psychology: An emerging discipline. *Industrial Health*, *37*, 199–211. https://doi.org/10.2486/indhealth.37.199

Schaufeli, W. B. (2004). The future of occupational health psychology. *Applied Psychology: An International Review*, *53*, 502–517.

Schill, A. L., & Chosewood, L. C. (2013). The NIOSH Total Worker Health program. *Journal of Occupational and Environmental Medicine*, *55*(12), S8-S11. https://www.jstor.org/stable/48500336

Schmidt, L. R. (1994). A psychological look at public health: Contents and methodology. In S. Maes, H. Leventhal, & M. Johnston (Eds.), *International review of health psychology* (Vol. 3, pp. 3–36). Wiley.

Schneider, D. L., Camara, W. J., Tetrick, L. E., & Stenberg, C. R. (1999). Training in occupational health psychology: Initial efforts and alternative models. *Professional Psychology: Research and Practice*, *30*, 138–142. https://doi.org/10.1037/0735-7028.30.2.138

Seligman, M. E. P. (1998, January). Building human strength: Psychology's forgotten mission. *APA Monitor*, *29*(1), 2. https://doi.org/10.1037/e529932010-003

Spreitzer, G. M., Cameron, L., & Garrett, L. (2017). Alternative work arrangements: Two images of the new world of work. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*, 473–499. https://doi.org/10.1146/annurev-orgpsych-032516-113332

Tetrick, L. E. (2000). Linkages between organizational restructuring and employees' wellbeing. *Journal of Tokyo Medical University*, *58*, 357–363.

Tetrick, L. E. (2008). Prevention: Integrating health protection and health promotion perspectives. In M. Sverke, K. Näswall, & J. Hellgren (Eds.), *The individual in the changing work life* (pp. 403–418). Cambridge University Press.

Tetrick, L. E., & Quick, J. C. (2003). Prevention at work: Public health in occupational settings. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (pp. 3–17. American Psychological Association.

Tran, M., & Sokas, R. K. (2017). The gig economy and contingent work: An occupational health assessment. *Journal of Occupational and Environmental Medicine*, *59*(4), e63–e66. https://doi.org//10.1097/JOM.0000000000000977

Truxillo, D. M., Cadiz, D. M., & Rineer, J. R. (2014). The aging workforce: Implications for human resource management research and practice. In M. A. Hitt, S. E. Jackson, S. Carmona, L. Bierman, C. E. Shalley, & M. Wright (Eds.), *The Oxford handbook of strategy implementation* (pp. 179–238). https://doi.org/10.1093/oxfordhb/9780190650230.013.004

Vinokur, A. D., & Price, R. H. (2015). Promoting reemployment and mental health among the unemployed. In J. Vuori, R. Blonk, & R. H. Price (Eds.), *Sustainable working lives* (pp. 171–186). Springer, Dordrecht.

Warr, P. (2007). *Work, happiness and unhappiness*. Erlbaum.

The World Bank. (2021). *Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate)*. https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS

World Health Organization. (1948). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19–22 June 1946; signed on 22 July 1946 by the representatives of sixty-one states (Official Records of the World Health Organization, no. 2, p.100) and entered into force on 7 April 1948.

Zacher, H., Esser, L., Bohlmann, C., & Rudolph, C. W. (2019). Age, social identity and identification, and work outcomes: A conceptual model, literature review, and future research directions. *Work, Aging, and Retirement*, *5*, 24–43. https://doi.org/10.1093/workar/way005