Occupational Health Disparities

Improving the Well-Being of Ethnic and Racial Minority Workers

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THE WORK, FAMILY, AND HEALTH NETWORK ORGANIZATIONAL INTERVENTION: CORE ELEMENTS AND CUSTOMIZATION FOR DIVERSE OCCUPATIONAL HEALTH CONTEXTS

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Interest is growing in the occupational health field regarding workplace interventions targeting the work–family nexus and addressing the growing diversity in occupational health contexts. *Work–family conflict*, which refers to incompatible expectations between work and family role demands, is a growing occupational and public health concern that impacts employees, employers, and families (King et al., 2012). Growing numbers of employees of all cultural backgrounds, ages, and marital and family status are reporting rising levels of work, family, and other nonwork conflicts, and stress in

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industrialized (Bureau of Labor Statistics, 2011) and developing (Baral & Bhargava, 2011) countries. Despite a burgeoning literature, work–family research has had limited impact on occupational health and organizational change practice (Kossek, Baltes, & Matthews, 2011).

The goals of this chapter are to provide a literature review integrating work–family and occupational health perspectives and to discuss the content, design, and customization of the Work, Family, and Health Network (WFHN) intervention. The WFHN intervention was created for one of the largest work–family randomized field control studies in U.S. history. Up until the WFHN study, there had not been a large-scale, rigorous, randomized work–family and health intervention study targeting how work organization can foster work–family conflict in occupational settings in the United States. By *work organization*, we refer to "the way work processes are structured and managed, such as job design, scheduling, management, organizational characteristics, and policies and procedures" (DeJoy, Wilson, Vandenberg, McGrath-Higgins, & Griffin-Blake, 2010, p. 139). We define *work–family interventions* as comprehensive organizational interventions designed to foster a healthy psychosocial work environment by preventing stressors in the organization of work that can lead to work–family conflict (Kossek, Hammer, Kelly, & Moen, 2014).

The WFHN intervention represents a rare and innovative effort to proactively change organizational structure and culture to reduce (and ideally prevent) work–family conflict and improve employee and family health. From the perspective of integrating occupational health, diversity, and organizational change, we focus on the development of interventions that target change in the work environment to influence work–family and personal life conflicts as pathways to employee health and performance. We use the term *work–family* broadly to include work and nonwork roles (caregiving, exercise, personal time) for all employees, even those without families, as many researchers have suggested (Casper, Weltman, & Kwesiga, 2007). After a literature review on work–family interventions and occupational health, we describe the intervention and the training content developed to implement the intervention

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(see Table 8.1). We provide examples from field sites in two industries (information technology [IT] and health care) to show how the intervention was adapted across two diverse organizational contexts that have systemic variation in workforce stressors. A key point of this chapter is that the work context and the nature of the supervision may need to be adapted to support diversity in occupational health contexts. Most interventions target the individual, but here we discuss how to change the structure of the higher level work organization as a way to improve occupational health contexts for women and minorities.

LITERATURE REVIEW

In the literature review, we first briefly discuss links between work–family conflict and occupational health to provide context. We then discuss the need to customize interventions to address diversity in occupational health contexts.

Work–Family Interventions: Moving Toward Occupational Health Perspectives

The literature on creating healthy workplaces is largely in the areas of job stress and occupational health (Tetrick, Quick, & Gilmore, 2012) and generally does not directly address work–family conflict (Bambra, Egan, Thomas, Petticrew, & Whitehead, 2007). Work–family conflict, also known as work-to-family and family-to-work interference, remains one of the most studied concepts in the work–family field (Greenhaus & Allen, 2011) and has been consistently linked to adverse mental, behavioral, and physical health outcomes (Greenhaus & Allen, 2011; Hammer & Sauter, 2013; Hammer & Zimmerman, 2011). Further research has suggested that organizational interventions focusing on job stress and improving relationships between work, family, and other nonwork roles could be considerably improved (e.g., Kelly et al., 2008; LaMontagne, Keegel, Louie, Ostry, & Landsbergis, 2007; Parkes & Sparkes, 1998), and intervention research needs to be more deliberate to foster organizational and member learning in design and implementation (National Institute for Occupational Safety and Health [NIOSH], 2002).

Although not always evaluated as "interventions," reviews (Kossek, 2006; Kossek & Distelberg, 2009) have identified a three-legged stool of work–family initiatives. This includes (a) informal support for work and family roles arising from supervisors, coworkers, and the organization's work–family culture and norms (Allen, 2001; Kossek, Pichler, Bodner, & Hammer, 2011); (b) formal work–family support, such as the flexibility to allow for

TABLE 8.1
A Listing of STAR Intervention Components, Audience, and Timing for Organizations in Information Technology and Health Care Industries

Step	Audience	Stage	Participatory session type	Manager training and employee outside activities	Length of time
			STAR in the IT Industry (Tomo)		
1	Managers	I. Preparing for change	Leadership education		2 hours
2a	Managers			Computer-based training	1 hour
2b	Managers			Supportive behavior tracking, 1st round	2 weeks
3	All employees		Kickoff		2 hours
4a	All employees	II. Setting change in motion	Sludge		2 hours
4b	All employees			Sludge poll	2 weeks
5a	All employees		Culture clinic		2 hours
5b	All employees			"Do something scary"	2 weeks
6a	Managers		Managers only		2 hours
6b	Managers			Supportive behavior tracking, 2nd round	2 weeks
7	All employees	III. Sustaining the change	Forum		1.5 hours
			TOTALS		
			Managers		12.5 hours
			Employees		7.5 hours

STAR in the long-term care industry (Leef)

1	Managers	I. Preparing for change	STAR readiness		1 hour
2	Steering team		Steering team #1 overview		30 minutes
3	Managers		Management team induction/ sludge		2.5 hours
4a	All employees		Team induction/sludge		1.5 hours
4b	All employees			Sludge tracking	2 weeks
5a	Managers			Computer-based training	1 hour
5b	Managers			Supportive behavior tracking, 1st round	2 weeks
6	Steering team	II. Setting change in motion	Steering team #2 review		.5 hour
7	Managers		Manager Culture clinic		2.5 hours
8a	All employees		Culture clinic		1.5 hours
8b	All employees			"Do something different"	2 weeks
9	Managers			Supportive behavior tracking, 2nd round	2 weeks
10	All employees	III. Sustaining the change	Forum		1 hour
11	Steering team		STAR moving forward		1.5 hours
			TOTALS		
			Managers		9.5 hours
			Employees		4 hours
			Steering team (nonmanagers)		6.5 hours

Note. STAR = Start. Transform. Achieve. Result.

employee control of work time, load, or place (e.g., flextime, part-time work, teleworking; see Kossek & Michel, 2011, for a review) or access to caregiving resources (on-site and near-site child care, information and referral, financial subsidies; Butts, Casper, & Yang, 2013); and (c) links to formal HR job design, such as empowering employees to control job tasks and processes to ensure they do not negatively influence one's ability to meet nonwork demands (Perlow, 2012).

Relatively little research has integrated any of these components in interventions to prevent work–family conflicts emanating from the work organization. Yet Kossek, Lewis, and Hammer (2010) argued that for work–life initiatives to foster organizational change, they must not only enhance the availability of formal organizational policies and structures but also foster informal cultural support of positive work–family relationships for employees. Unfortunately, studies are unclear on what is meant by a work–family intervention, its theoretical underpinnings, and how to design and evaluate these interventions.

Work–Family Intervention Change Targets

There are three key elements to target to create an overall healthy workplace: the workplace itself, the individual, and the interface between the work and family roles (Quick, 1999). Although there is a growing research literature on the importance of improving employee perceptions of organizational support for work and family (Allen, 2001; Kossek, Pichler, et al., 2011), there has been a shortage of work–family interventions and almost no evaluation research studies using randomized controlled or rigorous quasi-experimental designs examining the roles of the key elements of occupational health interventions (Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007; Kelly et al., 2008; Tompa, Dolinschi, de Oliveira, & Irvin, 2009; for an exception, see Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011). Organizational work–family interventions to improve occupational health are key to creating a healthy workplace. Examples of targets for occupational health interventions would be to give employees greater control over work schedules (e.g., Kelly, Moen, & Tranby, 2011), to train managers and coworkers to provide employees with support for family and personal life (e.g., Hammer et al., 2011), and to redesign jobs and work processes so that employees can focus on results and tasks that are the most critical for performance.

Customizing Work–Family Interventions Across Diverse Occupational Health Contexts

Customization of the intervention design to address unique workforce demands is a key principle that has been used in the occupational health

field but has been underused in the work–family field (Kossek et al., 2014). Specifically, interventions can be tailored to the organization to improve health and well-being outcomes of employees while meeting the needs of the employer. Intervention customization can take many forms, from modified content for various job types, to enhanced delivery techniques using new technology (e.g., web-based methods), to targeting problem areas that need additional attention or resources. For example, Ard and colleagues (Ard et al., 2010) examined a culturally enhanced behavioral weight loss intervention for an organization consisting predominantly of African American women, arguing that this group is disproportionately at risk for obesity. The authors contended that tailoring the dietary intervention program allowed for meaningful weight loss results, reducing disparities in obesity for a traditionally high-risk population (Ard et al., 2010).

Customization may be particularly salient for organizations with diverse employee populations across various job domains and requirements. For example, there has been a historical underrepresentation of workers of color in professional job domains, as well as an overrepresentation in blue-collar and service jobs (Bowman, 2005; Murray, 2003). Similarly, there is an overrepresentation of women in lower level clerical and service jobs, and more single-parent workers with children living in poverty are likely to be women (Kossek & Distelberg, 2009). Different job domains are typically susceptible to occupational health risks at disproportionate rates (Ard et al., 2010; Gany, Novo, Dobslaw, & Leng, 2014; Marín et al., 2009). As Presser (2003) explained, non-Hispanic African Americans (compared with Hispanics or Whites) are more likely to be employed in jobs with nonstandard work hours, lower levels of pay, and increased associated health risks. Individuals working in these jobs are likely to be at greater risk of exposure to work–family and work–life related health hazards than individuals in other jobs, which may be overrepresented in occupational health research.

Yet it is important to not oversimplify within-group demographics similarly. For example, workers of color or women in clerical jobs are not necessarily at higher risk for all negative occupational health and well-being outcomes (Murray, 2003; Shelton, Danes, & Eisenman, 2008). Health disparities are frequently discussed as issues of racial or ethnic inequalities. However, there is diversity across socioeconomic groups as well as in the morbidity and mortality rates for minority individuals (Stoddard et al., 2005). Jackson and Stewart (2003) explained that much of the occupational health research for Black individuals has focused on the severely disadvantaged; however, researchers should examine the risks associated with all socioeconomic levels (e.g., the middle class). Depending on the job and workplace culture and context, individuals from different racial/ethnic and gender groups experience differential exposure to workplace stressors (Bergman, Palmieri, Drasgow, & Ormerod, 2012).

Yet occupational health research has done little to identify the role that workplace interventions have on mitigating these negative outcomes for specific subgroups (Park et al., 2004). It is critical for research examining workplace interventions designed to improve employee health and well-being to consider both the individual and job domains when designing intervention content. This is particularly of concern for groups such as single parents (mostly female or ethnic minorities and immigrants) who may face added workplace stress because of racial and ethnic discrimination and/or language barriers (Deitch et al., 2003; Jamieson & O'Mara, 1991; Jones, 1993; Sparks, Faragher, & Cooper, 2001). Because women still handle more of the work–family caregiving demands than men in dual-career families and are less likely to have a stay-at-home caregiver, women in dual careers, or dual-earner families, may face more stressors on average than men in similar jobs (Kossek & Distelberg, 2009). Similarly, many individuals responsible for caregiving may have blue-collar or service industry jobs rather than professional jobs because of the career penalties or reduced opportunities often associated with caregiving demands (Wyatt-Nichol, 2009). As minority mothers are particularly likely to work while providing caregiving for young children, understanding how occupational interventions are designed to improve health and well-being for this specific cross-section is particularly appropriate (Odom, Vernon-Feagans, & Crouter, 2013). However, much of the research examining occupational health interventions target professional jobs that already offer a great deal of flexibility and may provide additional benefits such as child care (Kossek et al., 2014), as these are more most suitable for intervention design and implementation.

Most work–family interventions have not been customized on the basis of individual, demographic, or job-demand differences (Kossek et al., 2014). Many work–family interventions target whole job domains (e.g., professional jobs), rather than identifying multiple solutions to various types of jobs (e.g., blue collar, service), and rarely examine gender or racioethnic and family demography and systematic trends in the workforce and job populations. Because of the one-size-fits-all approach to many work–family interventions, this research has been criticized for the lack of consideration of individual and contextual concerns (Martins, Eddleston, & Veiga, 2002). Because of the complexity of problems facing diverse populations in organizations, researchers examining occupational health initiatives cite the need for training and interventions to combat the unique issues facing women, minorities, and culturally diverse populations within the workforce (Lillie-Blanton & Laveist, 1996; Murray, 2003; Sparks et al., 2001).

In a review of the effectiveness of training programs for the protection of workers, NIOSH identified demographic factors such as ethnicity as key moderators in the relationship between training and outcomes (Robson et al., 2010). Gender is also a critical moderator. The review authors noted that

although it sometimes may not be politically and practically feasible to include these factors in an organizational study examining a training intervention's effectiveness, particularly if confidentiality and involvement by women and minorities may be negatively affected, for work–family interventions these factors may be increasingly important. Although some interventions have been designed to target specific groups (e.g., blue-collar female employees; Campbell et al., 2002), we could not identify any occupational health interventions addressing the work–family nexus that were specifically customized for unique minority, gender, and job groups while maintaining fidelity for all groups within an organization. Our main focus in this study was on diversity in job groups between the demands of being an IT worker (with more virtual work) and those of being a direct health care worker (with more patient face time). As we discuss next, these job groups had systematic differences in covariation with racioethnic, gender, and income groups.

THE WORK, FAMILY, & HEALTH NETWORK INTERVENTION

The Work, Family, & Health Network (WFHN)[1] is a national research collaboration of scholars with backgrounds in public health, epidemiology, family studies, organizational psychology, occupational health psychology, sociology, economics, and many other fields. The WFHN is made up of a team of scientists from seven institutions (Bray et al., 2013; King et al., 2012; Kossek et al., 2014).

To help advance future work–family and health intervention research and practice, the WFHN integrated the occupational health job stress intervention and work–family literatures to create and evaluate best practices, such as piloting intervention components, targeting multiple levels of change (e.g., supervision, structure of work), and identifying key ingredients in the organization of work that need to change to reduce work–family conflict (Kossek et al., 2014).

In the piloting phase, the WFHN developed and tested key components of the intervention via separate studies on different core elements of two interventions examined in two contexts: (a) training of supervisors to engage in family supportive behaviors for hourly workers in a grocery store setting (Hammer et al., 2011; Hammer, Kossek, Yragui, Bodner, & Hanson, 2009) and (b) participative cultural training of workers and managers to change norms to increase employee schedule control (Kelly & Moen, 2007; Kelly et al., 2011), thus moving toward a results orientation to eliminate low value work for office workers in a white-collar corporate headquarters. These interventions have

[1]A toolkit and more detailed information can be found at a public website: http://projects.iq.harvard.edu/wfhn/toolkits-achieve-workplace-change.

also been referred to as FSSB (Family Supportive Supervisor Behaviors) and ROWE (Results Only Work Environment), respectively.

The research teams, with the assistance of a consulting group, CultureRx, that originally developed ROWE at Best Buy, integrated the FSSB and ROWE elements into a single intervention, ensuring that essential elements were complemented by and supported each other. This new intervention was called STAR (Start. Transform. Achieve. Results).[2] Figure 8.1 shows the different time periods during which data were collected pre- and postdelivery of the STAR intervention to evaluate its effects in a group randomized control study. In the following section, we provide an overview of the STAR intervention and its customization.

Organizational Contexts

During Phase II, the WFHN chose to investigate this intervention in two different industries with highly contrasting occupational demands and work organization. One industry was an IT firm (called *Tomo*), and the other was a for-profit extended-care organization (called *Leef*).[3] Each industry had unique client and employee concerns and organizational demographies. Tomo had relatively higher professional status and more skilled, salaried employees with college and often advanced degrees. Leef had overall relatively lower status, with less-skilled employees paid by the hour. Organizational job groups and demographic population groups often covary in systematic ways that shape work–family and job demands, work schedules, and face-time demands, with implications for intervention design. The health care employees not only had lower socioeconomic income and education levels, but they also had to do the majority of their job tasks face-to-face in 24–7 continuous service industries. In contrast, employees at Tomo could often do at least part of their jobs virtually.

The racioethnic minorities systematically differed between Tomo and Leef in ways that often correlated with job groups. At Tomo, a majority of the racioethnic minorities (many highly educated, foreign born workers) tended to be in organizational job groups that were higher status, such as managers, directors, and team leaders, whereas the racioethnic minorities at Leef (also many foreign born workers, with a majority without advanced degrees or college) tended to be in lower status job groups, such as nursing assistants.

Another systematic difference in occupational context involves gender. The nursing home staff in the study was about 90% female, whereas the gender profile of the employees in the IT company was more balanced (close to 40% female workers), with a higher percentage of male managers.

[2]Persons interested in learning more about WFHN should go to http://projects.iq.harvard.edu/wfhn.
[3]Tomo and Leef are pseudonyms to protect confidentiality.

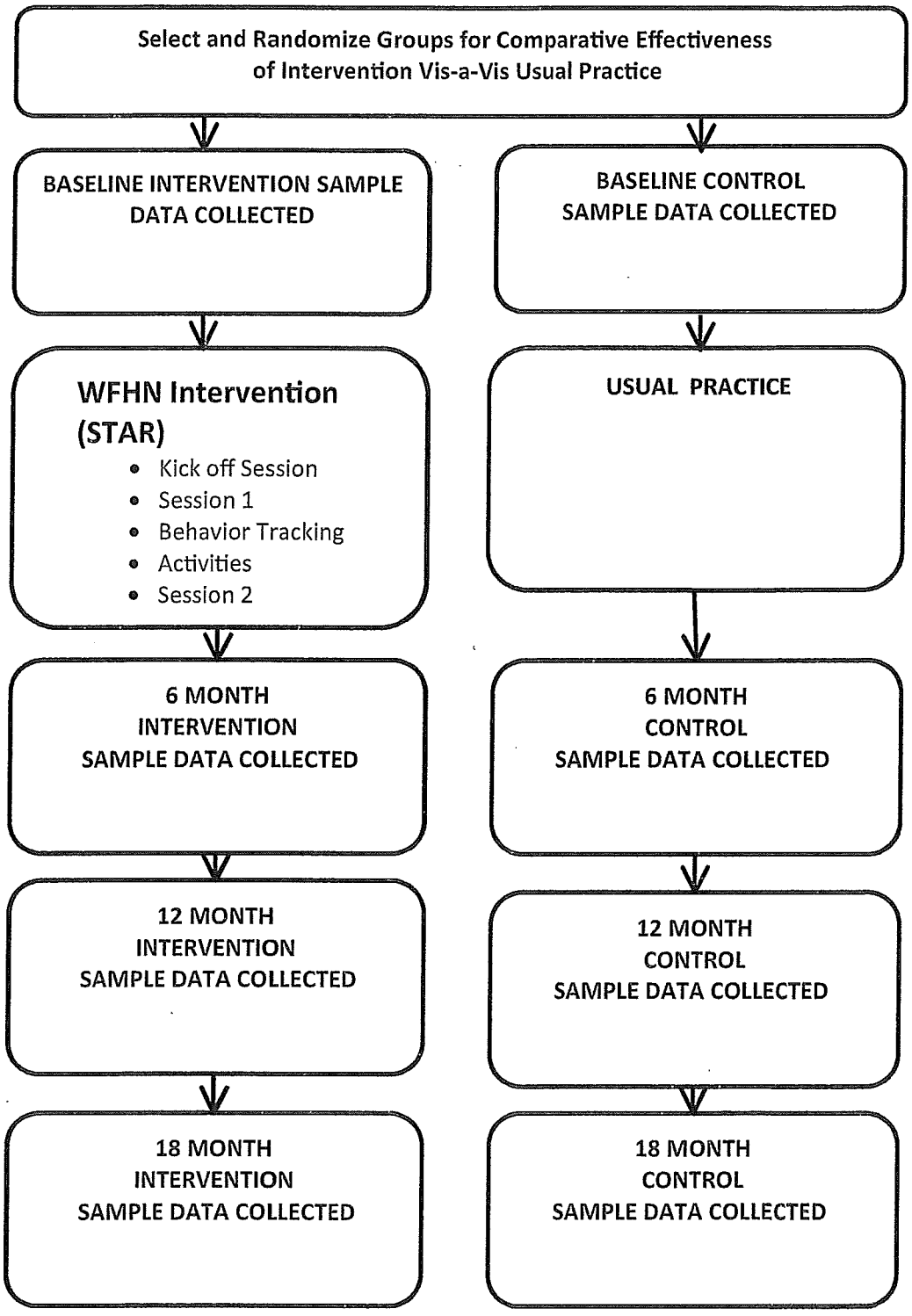

Figure 8.1. Study design and example of timing for collection of evaluation data in a randomized control field design. WFHN = Work, Family, & Health Network; STAR = Start. Transform. Achieve. Results. Adapted from "Changing Work and Work-Family Conflict: Evidence From the Work, Family, and Health Network," by E. L. Kelly, P. Moen, J. M. Oakes, W. Fan, C. Okechuckwu, K. D. Davis, . . . L. Casper, 2014, *American Sociological Review, 79*, p. 496. Copyright 2014 by Sage Publications. Adapted with permission.

Intervention Targets

The STAR intervention had three primary targets. The first target focus was on increasing support and understanding at the workplace for work–family issues from supervisors (FSSBs) and coworkers alike. FSSBs are supervisor actions that validate and facilitate employees' fulfillment of family roles. FSSBs comprise four dimensions or types of behaviors: (a) emotional support, (b) instrumental support, (c) role-modeling behaviors, and (d) creative work–family management or actions managers implement to facilitate employees' abilities to be successful in both their work and family roles (Hammer, Kossek, Bodner, & Crain, 2013; Hammer et al., 2009). Also included was training on performance support, such as ensuring employees clearly understand work objectives and had the resources to achieve these objectives. Although the main focus of social support training was supervisors, group activities were also conducted to promote coworker support for family and performance.

The second target focus was on organization-level change in employees' schedule control, whereby control over when, where, and how many hours employees worked systematically increased (Kelly & Moen, 2007). Schedule control is a job element that complements job control (Kossek, Lautsch, & Eaton, 2006), allowing an employee to control a key aspect of his or her work to accommodate both work and family roles. This facilitated change in the third target, job redesign that focused on results (e.g., patient outcomes or products), rather than on a time-focused orientation (e.g., hours worked), and reduced unproductive face time and low-value work.

Overall, unlike most work–family studies, which view work–family conflict as an individual employee problem targeting only workers in need, STAR focused on whole-systems change in the organization of work to reduce work–family conflict, targeting an entire worksite or work unit. Although the intervention had the same goals in both organizational sites, the process and content were adapted (customized) for each industry.

Occupational Job Context Customization for Core Change Targets

The research team developed consensus that the intervention design was to have the same principles across the two industries and work-unit contexts even as it needed to be adapted to local needs and customized to each industry. Given the diversity in work and family and occupational health contexts, a key challenge the research team faced was whether and how to customize the design of intervention components that had been developed in unique contexts. For example, how could an intervention focused on schedule control and implemented with white-collar corporate professionals (Moen, Lam, Ammons,

& Kelly, 2013) be adapted to hourly workers in a 24–7 patient-centered work system? Or how should intervention components developed largely in an hourly workforce setting (Hammer et al., 2011) be adapted to a professional IT context? What does schedule control look like for lower level, hourly workers with place-bound jobs (Haley-Lock, 2011), compared with IT workers who have high connectivity to work and family via cell phones and the Internet? The intervention in each industry followed similar goals (increase support, control, and job design for results orientation), yet was changed to modify content, timing, and sequencing to adapt common goals and processes to each. Next, we discuss the intervention and identify six areas that researchers and practitioners should attend to in customizing work–family interventions to address diversity in occupational health contexts. They are training content, delivery, cultural framing supplemental content, dosage/exposure time, workforce inclusion decisions, and managing workforce diversity.

INTERVENTION DESIGN: CORE CONTENT AND ADAPTATION

As Table 8.1 shows, the intervention that was rolled out in each industry included the common components of (a) participatory face-to-face sessions with staff and managers, (b) participatory face-to-face sessions for only managers and supervisors, (c) on-the-job activities for all employees to reinforce learning from sessions, and (d) manager-only computer-based training and behavioral self-monitoring. To maintain fidelity, the researchers and consultants worked together to prepare a facilitators' guide for participatory sessions using semistructured scripts as well as on the job application activities. These sessions encouraged supervisors and employees (either jointly or separately) to reflect on current practices and identify strategies to increase supervisor support and work-time control, leading to reduced work–family conflict while continuing to meet or exceed business goals. A supervisor computer-based training and a self-monitoring activity were implemented to teach ways of supporting work and family and to ensure transfer of family and performance support to on the job behaviors.

Formative Research Stage

To customize the intervention for each industry, we conducted focus groups and interviews in each industry with employees, supervisors, and other key personnel (i.e., scheduler in extended care) to determine the major issues likely to surface during the intervention and to be able to create relevant examples. We found that at Tomo, telecommuting was officially "not allowed" but some managers allowed certain employees to work from home,

and this practice was very unevenly applied. It is interesting, though, that many workers were expected to take work calls at home and often very late at night because they were from workers in India and other countries in opposite time zones from the United States.

At Leef, we conducted our formative research in two very different care facilities, one urban and one rural. In both, we found that a major issue, not surprisingly, was scheduling and coverage for workers who called in sick. In the urban setting, the care staff was very culturally diverse and included many recent immigrants, whereas the staff in the rural center was almost exclusively White. This difference influenced scheduling in many ways, including when people most wanted to take time off (e.g., hunting season) and for how long. Those who were immigrants often wanted to be able to take all their time off at once because they frequently traveled long distances to visit family. This was counter to corporate policy and caused some friction for these employees. Also, the concept of "work and family" was often not something many immigrants had ever really thought about explicitly, and the links between work and how that could affect one's health were also often not familiar.

Intervention Design and Stages

The STAR intervention had a dual agenda (Bailyn, 2011) that focused on redesigned work to jointly reduce work–family conflict and enhance work performance. STAR was participatory in enactment, yet required top management support for the change. It was delivered during work time as part of normal business practice with the expectation that all employees and managers in the unit or site would be involved. Management support was also necessary for the randomized, experimental nature of the intervention delivery and the parallel (but separate) longitudinal study evaluating it (see also Kossek et al., 2014).

Because the work environments at Tomo and Best Buy, where ROWE was initially developed, were very similar (e.g., white collar, computer-based work), STAR needed only a small amount of customization relative to Leef. Next, we present the STAR process for Tomo, then how it was adapted for Leef, focusing especially on cultural and diversity issues.

Intervention Process Flow

As Table 8.1 shows, STAR is a change process involving participatory sessions, some with just managers and supervisors and others with everyone (i.e., employees and supervisors together). The first sessions orient the participants to the goals and the change process. At the beginning of the STAR rollout, supervisors and managers are exposed to the STAR philosophy and

business case and are provided with an overview of the program, its key elements, and an open forum to ask questions, similar to methods described in Kelly et al. (2011).

The next set of sessions focuses on changing how people think about work hours and how work is done. This is accomplished partly by highlighting the negative toxic language in a workplace where qualitative judgments are made on how employees spend their work time, which consequently may divide employees or reinforce and maintain established views about work time rather than create new ones. After the completion of the session, workers are instructed to track the number of times they find themselves making a judgment about a coworker regarding when the person arrives or leaves.

At the next meeting, workers brainstormed possible changes at the workplace that would empower workers and facilitate a mind-set from being *time* oriented to being *results* oriented. For example, instead of thinking about performance as being measured by face time spent at work, workers were encouraged to rethink about performance in terms of completing tasks and accomplishing results. Employees and supervisors developed and implemented their own solutions, rather than having them dictated from consultants or top management. Although the focus was often on work scheduling, participants were also encouraged to think about improvement in work processes as well. To help assist with this new way of thinking, everyone was instructed to do an activity between sessions that they wouldn't normally do, such as working from home in the morning without asking permission for Tomo, or finding coverage for a few hours to attend a child's recital during normally scheduled work hours for Leef. Finally, after the completion of this activity, workers came back together to discuss what they tried, what worked, and what didn't, and to problem solve and come up with a plan for keeping the change momentum moving into the future, creating a real culture change within the organization.

Between training sessions, employees completed group-level behavioral self-monitoring activities to transfer training principles into workplace behavior change. The target behaviors for group-level self-monitoring were centered on reducing *sludge* (i.e., value judgments about coworker behaviors) and increasing *doing something different* (e.g., scheduling a personal errand during typical work hours). In both of these self-monitoring activities, group-level feedback was visible to all participating employees.

Additional Training for Supervisors

In addition to the participatory sessions, managers also had computer-based-training and behavioral self-monitoring or tracking, largely derived from FSSB (Hammer et al., 2011). It was designed to educate and motivate

supervisors to increase their support for employees' family and personal lives and job performance, and to provide technology to support those changes. Hammer and colleagues (2011) found that employees with higher family-to-work conflict were most likely to benefit from having supervisors trained in FSSB. These employees had significantly more favorable job satisfaction, physical health reports, and lower turnover intentions. Supervisors first completed computer-based training and self-monitoring of supportive behaviors, followed by a second round of self-monitoring near the end of the intervention process, similar to Hammer et al. (2011). By tracking specific supportive behaviors, supervisors are more likely to transfer what they learned during the computer training into actual practice.

The training content gave examples of supervisor strategies for providing more support for employees' family and personal lives and to facilitate employees' control over work time. These included expressing appropriate and genuine interest in employees' lives outside of work, sharing accurate information on the company's work–life policies and benefits, modeling work–life balance in their own work patterns, establishing standard procedures for managing scheduling conflicts in a fair and transparent manner, posting schedules (Leef only) as far in advance as is feasible, and facilitating cross-training that allows for easier management of schedules. Examples of supervisor-support strategies for maximizing employees' work-time control while still meeting business goals were also provided. These included self-scheduling systems; establishing standard procedures for requesting schedule changes or trading shifts (Leef only); cross-training to increase backups within the work group; standard procedures for requesting an experienced floater/utility person (Leef only); designated "no-meeting hours" policies (Tomo only); and a shift to laptop computers, when feasible, to allow more work to be done remotely (Tomo only).

Immediately after the training, supervisors were asked to begin the first of two trials of behavior tracking using iPod devices. Each trial with the iPods lasted for 2 weeks and involved goal setting, daily self-monitoring of family- and performance-supportive behaviors, and individual and group feedback loops. The tracking process was informed by current best practices in self-monitoring methods (Korotitsch & Nelson-Gray, 1999; Olson & Winchester, 2008). Examples of the practices incorporated included goal setting, alarm cues for self-monitoring, high-frequency automated individual feedback, and normative group feedback provided at follow-up. All feedback loops highlighted gaps between actual supportive behaviors and personal goals. On the basis of the social-cognitive theory of self-regulation and behavioral motivational theory, feedback about "performance gaps" is expected to function as a motivational stimulus (or motivating operation) for supportive supervisory behaviors (Bandura, 1991; Laraway, Snycerski, Michael, & Poling, 2003).

Customization at Leef

Many of the adaptations made to STAR for Leef were done for practical reasons, as it was very difficult to take too many nurses and nurse assistants off the floor to attend sessions. For example, the essential content of two sessions was combined into one, ensuring the core elements were still present. Another critical customization for Leef involved creating steering teams that received training and were charged with communicating the information about STAR to employees in their units and championing the culture change. These teams were designed to have representation across all levels, including the facility director down to nurses' aides, and a racial and ethnic composition reflective of the facility as well.

There was also a follow-up session at the end for the steering team facilitated by the Leef Center administrator. The focus was on identifying challenges, discussing solutions, and developing and implementing an action plan to carry them forward. Table 8.2 shows specific examples of how training content from Tomo, the white-collar IT workforce, was customized at Leef, the nursing and nursing assistant workforce, in regards to the three main intervention change targets: (a) increasing social support for work, family, and performance; (b) increasing control over work and work time; and (c) improving the design of work conditions to become results oriented and reduce face time. As the table shows, these concepts can be carefully adapted to a nursing home setting that has 24–7 scheduling with many federal and state patient regulations (for a discussion of the scheduling and work–life challenges of the low-income workforce, see Kossek, Pisczcek, McAlpine, Hammer, & Burke, 2016).

ADAPTIVE CHANGE: OTHER ISSUES TO CONSIDER IN INTERVENTION CUSTOMIZATION TO INDUSTRY OCCUPATIONAL CONTEXTS

Besides customizing training content, the intervention was customized to each industry to address differences in expected supervisor behaviors and delivery methods. For example, at Tomo some employees teleworked off-site regularly, and most office jobs did not require 24–7 regulations for patient coverage. Consequently, training delivery at Tomo could be scheduled in a webinar and conference room. In contrast, at Leef, just getting workers off the floor to go to the training was a major challenge, as round-the-clock patient coverage had to be maintained so not everyone could be trained at the same time. Not all night-shift or weekend workers were included. Table 8.2 gives another example of how many core training concepts had to be adapted at Leef; for example, supervisor family support for time off had to involve consideration

TABLE 8.2
Examples of Customization at Leef

Key component of intervention	Need for customization	Resulting issue	Delivery adaptation
Increase social support for work–family interface and performance (supervisors and coworkers).	In the caregiving environment, with strict regulations on number of employees per resident, there is less schedule flexibility, as well as less control over work hours. Managers can be supportive of scheduling flexibility, but for one person to take time off, someone else has to provide coverage.	Importance of peer support, because of the nature of the work and necessity of shift swapping/other coverage strategies to achieve some scheduling flexibility. When an employee takes time off or calls out, someone else needs to cover that shift. Although a manager may be the one supporting the employee's scheduling needs, another person will be affected as well.	Inclusion of a "steering team" as an important part of the STAR rollout in the Leef workplace. This is a group of managers and peer leaders, who meet to understand STAR and the guidelines of the initiative, and are expected to "champion" the initiative. STAR in this environment was especially dependent on employee involvement and peer support.
Increase control over work and work time.	Providing care to residents by definition requires working on-site; coverage is necessary 24/7, and the number of each type of direct care staff is highly regulated by the state in which the facility is located.	The idea of changing where work is done is less relevant in this environment. As a result, how work is done is the focus of the change initiatives–work practices and also how employees interact with managers and with other employees.	More emphasis on process issues and working more productively and efficiently together, because working "off-site" is not relevant for most employees at Leef. STAR participants were enthusiastic about the idea of eradicating "sludge"—negative toxic language in the workplace. The reduction in sludge can lead to better teamwork and a more positive work environment.

Improve design of work conditions and support cultural processes to become results oriented and reduce low-value work and unnecessary face time.	Because of state regulations, there is less opportunity to eliminate redundant documentation and strict guidelines regarding the number of employees required to be working at any time. Compared with a corporate work environment, many of the lower wage workers in Leef were less educated, some spoke English as their second language, and many were not as technologically savvy.	It was necessary to empower employees to work differently within a regulated structured environment. The STAR rollout included handouts with key ideas to reinforce learning. Also, the employee activities (Sludge Eradication and Do Something Different/Do Something Supportive) were done on posters with stamps rather than online through a website.	It was especially important to encourage employees to think creatively. Leef corporate required the inclusion of guidelines for employee ideas—all changes had to be "safe," "legal," and "cost neutral." These words were repeated in sessions and on handouts. This attempted to address concerns around employees leaving the facility short staffed. When considering work inefficiencies, the lack of access to computers and less knowledge of technology by some employees needed to be factored in.

Note. STAR = Start. Transform. Achieve. Results.

of worker replacement coverage for workers with jobs involving direct patient care. The results-oriented work training materials developed at Tomo had to be adapted for Leef in supplemental materials to use language that took into account patient safety needs regarding care quality and to account for unique workforce diversity and literacy levels of workers, some of whom were recent immigrants from Caribbean and other countries.

Customizing Supervisor Behaviors in Computer-Based Training and Self-Monitoring

The supervisors component of the intervention was customized for Leef in two ways: (a) supportive supervisory behaviors unique to the Leef work environment were identified through formative research, focus groups, and interviews with supervisors and workers, and then incorporated into training and tracking; and (b) the beta version of the iPod application for tracking was tested with supervisors and modified for usability based on that feedback.

As an example of differential customization for the Leef and Tomo environments, consider the family supportive supervisory behavior construct of functional or instrumental support. For Leef, this category was renamed *daily problem solving*. Example behaviors (derived from formative research described previously) were different within the category as well; for Leef, an example was "Posting work schedules on time so employees can plan for family and personal commitments," whereas at Tomo, the example was "Telling employees about existing company resources or policies that support family or personal needs." Another example of a Leef-specific supportive behavior in the *creative management* category was "rewarding or praising employees who solve problems or cover work shifts/tasks when a coworker has an urgent/emergency family or personal issue," whereas the corresponding Tomo example was "encouraging employees to experiment with new ways of doing work that benefit their family or personal lives." The Leef versions of these supportive behavior examples were irrelevant at Tomo because work shifts were not part of the environment.

Customizing Employee Behavioral Self-Monitoring

Because employees at Tomo are frequently on computers, both group-level behavioral self-monitoring activities were conducted via a daily e-mail poll. For the activities (Sludge Eradication and Do Something Different), each of which was 2 weeks in duration, employees received a daily e-mail with a link to answer yes/no poll and qualitative questions. Group-level feedback was displayed immediately after employees submitted the survey. However, computer and e-mail access among employees was much less frequent in Leef. We customized the activities by printing large posters and posting them in

employee break rooms. We attached rubber stamps to the posters and asked employees to stamp the poster whenever they completed one of the activities. This method still allowed group-level feedback in a way that fit how work was organized at Leef.

Delivery Challenges: Identifying Appropriate Work Unit and Scheduling

The organization of the collective for intervention delivery, defined as the *work unit*, were teams of employees at Tomo who reported to the same manager. At Leef, the work unit was the entire health care facility. The main training delivery issue at Tomo was adaptation to a virtual workplace and linking training to formal policies. Remote workers had teleconference access to participatory sessions. Web-based polls and forums were scheduled as repeating Outlook events to provide easy employee access to self-monitoring activities. Remote managers were given access to the computer-based training.

The biggest delivery issues at Leef were organizing and scheduling training delivery, given the time-sensitive nature of the health care work environment. It was challenging to set training schedules in advance, socialize workers to get off the floor for training, and ensure coverage of patients during training without increasing overtime work and pay. Group-based, work–family intervention training of this scale had never been tried in this context. To ensure that the intervention was widely delivered at Leef facilities, change advocates from all departments and all levels were identified and were responsible for bringing employees up to date if they missed sessions, and a steering team was implemented with members that included managers from different departments and frontline employees.

Although the steering team format helped with communication when sessions were cancelled for bad weather or if some workers were unable to attend face-to-face training sessions, it also reflected the somewhat less bottom-up organic nature of the intervention design that was necessary at Leef. Because long-term care facilities are often highly hierarchical in structure and top-down in decision making, the steering team was developed as a way to allow for representative participation in leadership roles for workers from lower level employee groups.

Supplemental Training Materials to Bolster Intervention in Context

In both industries, some employees were not able to attend the facilitated sessions because of absences or because they were not scheduled to work during the times that sessions were offered. This was particularly true of night-shift workers at Leef or those who worked a weekend or 3-day schedule

that did not overlap with the training sessions. Handouts with key messages were shared by the steering team members at Leef and also left with the administrator for dissemination. This was also thought to be important for those workers, particularly for some of the immigrants who may have had difficulty understanding the oral presentations during sessions. The research team ensured that the language was easily understandably by nonnative English speakers (e.g., avoiding colloquialisms) and provided pictures of diverse peoples.

Dosage Challenges: Paid Time and Training Trade-Off and Inclusion Design Issues

A key issue in both industries was determining how to conduct delivery during paid work time, as the intervention training and activities took employees away from their work. At Leef, the paid-time customization involved agreement with management that the training would not lead to overtime, or if overtime did occur it would be allowed to support training participation. At Tomo, management came up with a special billable code that employees used to track training time. This adaptation resulted in slightly less time spent in formal intervention training at Leef than at Tomo. The research team did not want intervention training to increase work intensification by causing Leef employees to have less time available to complete the same amount of work.

Cultural Framing: Language, Symbols, Visioning

For all training components, in each industry, care was taken to include examples, language, and pictures appropriate for the work context. For example, although there was a high degree of overlap in target supportive behaviors across industries, customization required different target behavior examples in certain behavior categories. In the health care industry, an example of instrumental support was "posting work schedules on time so employees can plan for family and personal commitments." In the IT industry, where shift work and schedules are less relevant to workers, an example of instrumental support was "adjusting or facilitating work assignments to support employees' family or personal needs."

Similarly, language in the facilitated sessions was changed. For example, at Tomo, a visioning principle used in the orientation session was "Every day feels like Saturday." At Leef, because some hourly workers work on Saturday, the guidepost was changed to "Every day feels like my day off." Examples that were used at Tomo, such as taking several hours off to get a pedicure during the workday, were dropped at Leef because workers have less discretionary income and schedule flexibility. Examples of leaving for long periods during

the workday were also less effective for workers who had long commutes or who were less able to extend or restructure their 8-hour shift.

In addition to the guidepost vision statement adjustment previously mentioned, other statements used at Tomo were eliminated at Leef because they did not fit with the hourly wage workforce. This change in vision was compensated by innovation in the change tenets of the intervention. For example, a Leef-only guidepost statement was created that employees were able to work in the way that was best for them as long as it was "safe, legal and cost neutral." These principles helped set worksite boundaries about how far culture change and work redesign could go. Overall, slightly more experimentation, trial and error, and customization were needed in the lower wage workers' context, an overbounded system (Alderfer, 2011) with many occupational health challenges (Murray, 2003).

Exploring Intervention Workforce Diversity Considerations

Our intervention provided opportunities to challenge some assumptions about work–life issues and increase sensitivity to the differing needs of various job groups. This customization resulted in a greater sensitivity and awareness of the nuances of work life specific not only to occupational contexts but also to the exploration of racioethnic minority concerns. For example, at some of the Leef facilities, direct care staff who had immigrated from other countries requested more days off when they took vacation for holidays with family in their native country. Yet Leef had strict rules and policies regarding the number of vacation days that could be taken at one time, so these individuals faced situations in which they had many hours of travel and expensive plane tickets, and they were asking to take more time off than was permitted. The STAR sessions encouraged employees to take more control over their work time. In this example, STAR may have encouraged an employee to find his or her own coverage for the extra days needed, whereas previously the employee might have believed quitting was the only way to take an extended period of time off. This shift in how one approaches a work–life conflict may seem relatively minor; however, it is a highly meaningful and symbolic change to employees who ordinarily may not feel much control over their schedule. We also conducted exploratory descriptive analyses to determine how future intervention effectiveness research might consider the distinctive racial and ethnic composition of the organizations studied.

Racioethnic Intervention Design Considerations at Tomo

There was good representation of employees of Asian and Asian American background in the IT industry, as nearly one fourth (23%) of the sample at Tomo were of Asian ethnicity. The disproportionate presence of

Asian employees and managers in this corporation conforms to the number of Asians in IT occupations. According to the Bureau of Labor Statistics (2013), Asians made up only 5% of all employed workers in the United States in 2011 but made up 27% of software developers. Employees with an Asian ethnicity at Tomo were distinctive from the 67% who were non-Hispanic White and the 11% who were Hispanics, Blacks, or "other," pointing to the difficulties of using conventional White/non-White dichotomies. For example, as Moen et al. (2013) found using a 5-point scale with 1 reflecting little or no levels and 5 reflecting high levels, Asian respondents reported considerably less burnout (racioethnic subgroup mean 3.78) than did White, non-Hispanic (racioethnic subgroup mean 4.48) or Black, Hispanic, or "other" ethnic groups (racioethnic subgroup mean 4.06). They also reported less job insecurity (2.13 on a 1–4 scale with 1 reflecting low levels of job insecurity and 4 reflecting high levels of job insecurity. In contrast, Black, Hispanic, and "other" races and ethnicities reported higher levels of insecurity (2.46 mean), and non-Hispanic White respondents had a group mean of 2.30 (Moen et al., 2013).

Moreover, at Tomo, 17% of employee respondents reported to an Asian manager. Multivariate analyses (see Lam et al., 2015) revealed that employees reporting to an Asian manager (as opposed to a White manager) were more likely to report lower job insecurity. This may reflect the relatively more powerful and secure positions of Asian managers in teams engaged in IT work. Related to this, Asian respondents were found to be likely clustered together in teams (Moen et al., 2013). The fact that Asian respondents were more apt to be in teams engaged in direct IT work versus other business support functions such as human resources or finance (60% were in teams doing direct IT work compared with only 31% of non-Hispanic Whites and 20% of Blacks, Hispanics, and those in the "other" category) might have affected their responsiveness to the intervention as well as how well their team adapted to the new ways of working and the supervisor support the intervention offered them (Moen et al., 2013).

Age and gender composition are other key markers of diversity that should be taken into consideration in the customization of interventions and the analysis of their effectiveness. For instance, at Tomo, the IT workforce was middle-aged with an average age of 46, and only 39% were women. Further, many of the Asian employees at Tomo had immigrated to the United States to work at the firm (or another technology company in the IT industry). Because of visa restrictions, some of their spouses are not able to work, which likely has a direct impact on work–family issues and conflicts compared with other Tomo employees who are nonimmigrants.

There are also possible effects of the intersections of these social locational markers related to age and family status. For example, in the Tomo sample, only 23% of the Asian respondents were women, compared with 40%

of the White non-Hispanic respondents and 66% of the Black, Hispanic, and "other" respondents. At Tomo, the Asian employees tended to be younger, and if they had families their children tended to be younger than those of the other employee racioethnic subgroups. For example, one fifth (20%) of the Asian respondents were under 40 with no children, and another two fifths (40%) had preschool children at home. This contrasts with White non-Hispanics and the Black, Hispanic, or "other" respondents, of whom less than 10% were under 40 with no children. Only 14% of the White non-Hispanic respondents and only 16% of the Black, Hispanic or "other" category were parents of a preschooler.

The cultural value of family may be different across racial and ethnic groups as well (Lam, Moen, Kelly, & Kojola, 2013). For example, in a different firm used in a pilot study, one 32-year-old married Asian engineer with a young child observed that he did not understand work–family conflict, as he always prioritized his family over his work, explaining the contrast he saw between family and work life in India compared with that in the United States:

> Family is very different in India than here. Family is always first and is the most important thing in your life. Extended family either lives with each other or very close and they all help the young couples raise kids.

Racioethnic Considerations in Computer-Based Supervisory Training and Behavior Tracking

There is a lack of research on whether different self-monitoring methods are more effective for increasing participation and behavior change among different ethnic and racial groups (Korotitsch & Nelson-Gray, 1999; Olson, Schmidt, Winkler, & Wipfli, 2011). Contrasting participation rates across trials revealed that nonminority supervisors were approximately 15% less likely to drop out during Trial 2. In another analysis of participation, we examined the number of times a supervisor opened the app and made a submission during each trial (in contrast to the behavior counts reported). Minority supervisors made 30.0 ($SD = 18.0$) submissions in Trial 1 and 26.2 ($SD = 25.8$) in Trial 2, compared with 31.1 ($SD = 19.2$) and 28.4 ($SD = 23.6$), respectively, for nonminority supervisors. A 2×2 repeated measures analysis of variance revealed no significant differences between groups in this measure of app usage. Overall, these participation rates show that minorities and nonminorities participated equally in behavior tracking, whereas minority supervisors had slightly higher retention rates in the second trial of the activity. This suggests that in our case the activity did not have an adverse impact on minority participation. To ensure this kind of outcome for other studies, researchers and practitioners should conduct formative and developmental activities with both minority and nonminority users and then monitor for any differences across groups. In

addition, inspecting data on participation and dropout rates during implementation may identify opportunities to improve activities for maximum minority engagement. Overall, however, adopting a general focus on user-friendliness and tailoring activities to the unique culture of the occupational working population at hand may be more practical than making specific customizations based on race or ethnicity, unless language and translation issues are impeding training participation and involvement and data suggest that particular groups are not engaged or are dropping out at higher rates.

In terms of participant reactions to behavior tracking, there were somewhat more favorable reactions from White managers than non-White managers. Specifically, the non-White supervisors in Leef indicated that the behavior tracking designed to increase self-monitoring of targeted behaviors was less useful to them as supervisors than the White supervisors at Leef. Although these findings are exploratory, future research should gather qualitative information on the cross-cultural valence of individual goal setting and tracking across multicultural groups.

Future Research Directions

Organizational interventions need to be designed to address how the organization of work contributes to occupational health disparities and work–family conflict, which may differ across organizational contexts. As this chapter shows, change targets vary depending on work organization contexts that systematically differ across racioethnic, gender, and class groups. Although professional office employees at Tomo could be empowered to work nearly wherever and however they want, shift-working health care employees' at Leef were encouraged to give input to having greater control over work processes, such as how schedules are made, or having some say regarding how work is done. Thus, interventions can use similar design principles across two very different industries, yet must be customized in delivery and enactment to meet occupational and cultural needs.

More research is needed that investigates the role of primary prevention interventions in preventing outcomes associated with work–family conflict. We have noted that there is relatively little research that has examined how intervention efforts targeting change at multiple levels can improve health and work outcomes for employees. This chapter describes intervention content considerations in addressing these gaps in the design of the WFHN's randomized controlled field experiment to improve occupational health by reducing work–family conflict in the organization of work across diverse industries. Not only has there been a shortage of work–family intervention studies to improve occupational health across industries, but there have been virtually no evaluation studies using randomized controlled or rigorous quasi-experimental designs examining the roles of the key elements

of these occupational health interventions. Future research should specifically consider whether multilevel workplace interventions, involving both leaders and employee work groups to improve the organization of work to reduce work–family conflict (i.e., increasing job control, redesigning work to reduce low value work, and increasing support for work and family roles), can improve employee and family health and organizational outcomes. More research is also needed to compare the effectiveness of these work–family intervention components to improve occupational health across industries.

Overall, this chapter identifies the necessity of considering the unique context in which the work–family intervention occurs as well as the individuals and groups receiving the interventions. Many job contexts, as well as demographic groups of employees within those job domains, are likely to face specific challenges that require tailored interventions to address the unique issues these individuals face. Yet the preponderance of work–family and heath interventions to date have not been customized on the basis of individual or demographic differences specific to the populations in which they are targeted.

Our research suggests that customization of work–family interventions is critical to improve occupational health. Yet most work–family interventions focus on one kind of employee population (e.g., those in professional jobs), rather than identifying multiple solutions to various types of jobs (e.g., blue collar, service). We need to move away from the one-size-fits-all approach to designing work–family interventions. Future studies need to seriously increase consideration of variations in demographic concerns and how these intersect with the job positions held across occupational contexts. Future research should identify how customization of intervention content, delivery, structure, and length may improve intervention success and address the workforce needs of women and minorities.

We have also suggested that rather than being evaluated as ad hoc policy, work–family initiatives should be evaluated rigorously as organizational change interventions. Such studies would link the design of work–family policies to changes in issues of control, support, and work redesign over time. Studies would need to include measures of both formal structural and policy change, such as the adoption of workplace flexibility policies and job redesign to allow for flexible scheduling, as well as informal change in organizational culture and norms to allow for greater worker perceptions of their level of job control and leader social support for family and job demands.

Implications for Practical Design

This study demonstrates that having diversity in occupational health contexts allowed the team to take a more holistic approach to promote

understanding of the commonality and distinctiveness of principles and processes of work–family organizational change to improve occupational health. Kossek et al. (2014) identified the main principles and strategies that emerged in the development of robust work–family interventions.

All interventions should begin with identifying theoretically derived key intervention ingredients that target the reduction of occupational risk factors for work–family conflict. Intervention scholars and practitioners should also attend to a design approach that conscientiously seeks to prevent work–family conflict in the organization of work. This primary prevention approach is critical to the implementation of organizational change that averts work design issues related to work–family conflict, rather than reactively dealing with problems after they have been allowed to develop. Second, commitment from both top management and workers at all levels to support implementation of the work–family intervention is vital to intervention success. One reason work–family policies may have had limited impact on reducing stress is that they have been implemented largely without significant top management support, and they have not been implemented as joint employer–worker participation initiatives.

Third, ameliorating work and family conflict involves multiple streams of knowledge, and the integration of knowledge from multiple disciplines in the design and evaluation of interventions is also valuable. This could be done at different stages of the research if resources are limited. For example, colleagues from disciplines outside the core research team, such as health and family researchers, could be consulted on measures or intervention design features. Workplace change researchers could focus on intervention design and delivery. The WFHN intervention was developed on the basis of the understanding that the employees and the organizations would plan and designate resources (e.g., time outside of sessions) specifically to ensure transfer of training (e.g., new employee and supervisor norms and behaviors) to the work environment.

Fourth, given that much of the intervention research is conducted at the individual level of analysis, such as job stress training (LaMontagne et al., 2007), the integration of multiple levels of analysis, referred to as a high-systems approach (LaMontagne, Noblet, & Landsbergis, 2012), will yield the most effective intervention to reduce work–family conflict. Future researchers should take a primary prevention approach and consider ways of leveraging the organizational-level programs, such as work–life supports, policies, and benefits, in addition to individual-level targets for stress reduction, to ideally lead to the most effective organizational intervention. Work–family conflict occurs across multiple organizational levels from personal stress to job design to supervision.

CONCLUSIONS

Designing organizational interventions to prevent work–family conflict is increasingly necessary as government support for the work–family interface remains relatively low in the United States (Kelly, 2006; Kossek & Distelberg, 2009) and is uneven and faces reductions in many countries—even those with traditionally high levels (Varney, 2011). Consequently, it is increasingly important to shift the lens in work–family interventions to focus not only on individual strategies to reduce work–family conflict after it occurs, but also on the prevention approach to organizational change initiatives to reduce work–family conflict in diverse workplace and job contexts to proactively improve occupational health. This focus is critical because organizational groups and demographic (gender, racial, ethnic) identity groups often systematically overlap, which has implications for linkages between family and personal demography and occupational health.

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