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Process evaluation of a participatory organizational change program to reduce musculoskeletal and slip, trip and fall injuries

Dwayne Van Eerd[a,b,*], Era Mae Ferron[a], Teresa D'Elia[a], Derek Morgan[c], Frances Ziesmann[c], Benjamin C. Amick III[a,d]

[a] Institute for Work & Health, 481 University Ave, Toronto, Ontario, Canada
[b] School of Public Health and Health Systems, University of Waterloo, 200 University Ave, Waterloo, Ontario, Canada
[c] Public Services Health and Safety Association, 4950 Yonge St #1800, North York, Ontario, Canada
[d] Robert Stempel College of Public Health and Social Work, Florida International University, 11200 SW 8th Street, AHC5 505, Miami, FL 33199, USA

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ABSTRACT

Background: Long-term care (LTC) workers are at significant risk for occupational-related injuries. Our objective was to evaluate the implementation process of a participatory change program to reduce risk.
Methods: A process evaluation was conducted in three LTC sites using a qualitative approach employing structured interviews, consultant logs and a focus group.
Results: Findings revealed recruitment/reach themes of being "voluntold", using established methods, and challenges related to work schedules. Additional themes about dose were related to communication, iterative solution development, participation and engagement. For program fidelity and satisfaction, themes emerged around engagement, capacity building and time demands.
Conclusion: Process evaluation revealed idiosyncratic approaches to recruitment and related challenges of reaching staff. Solutions to prioritized hazards were developed and implemented, despite time challenges. The iterative solution development approach was embraced. Program fidelity was considered good despite early program time demands. Post implementation reports revealed sustained hazard identification and solution development.

1. Introduction

Long-term care (LTC) facilities are demanding environments where workers are at significant risk for work-related injuries. Musculoskeletal disorders (MSDs) and slips, trips, and falls (STFs) are major types of occupational injuries for healthcare and LTC workers (Holtermann et al., 2013; Kamioka et al., 2011; Wahlström et al., 2012; WSIB, 2013). Despite the hazardous nature of LTC work environments, there remains little intervention research showing effective approaches to reducing hazards and injuries (Tullar et al., 2010; Van Eerd et al., 2016). Participatory ergonomic (PE) programs are one popular intervention approach to reduce occupational MSD hazards and improve workers' health (Carayon et al., 2006; Pohjonen et al., 1996; Rasmussen et al., 2013, 2014; Rivilis et al., 2008; Van Eerd et al., 2010).

Evidence on PE intervention effectiveness is mixed with some showing an effect while others not showing an effect (Driessen et al., 2010a; Haukka et al., 2008; Pehkonen et al., 2009; Rivilis et al., 2008). The lack of consistent findings is potentially related to the implementation process (Cole et al., 2009; Driessen et al., 2010b; Wells et al., 2009). To be successful, PE programs must be well implemented, engaging and supported by management, labour and workers (Van Eerd et al., 2010). A process evaluation can help uncover barriers to successful program implementation and aid in developing suitable short-term program success indicators (Baril-Gingras et al., 2006; Linnan and Steckler, 2002)).

Linnan and Steckler (2002) proposed a comprehensive process evaluation framework for health promotion program implementation. They highlight seven key process evaluation components: context, reach, dose delivered, dose received, fidelity, implementation and recruitment. While this framework has been used in PE interventions (Driessen et al., 2010b; Rasmussen et al., 2016), challenges persist in collecting data for each component.

Qualitative approaches to evaluate implementation provide an opportunity to understand the process and contextual factors involved (Baril-Gingras et al., 2006; Nielsen et al., 2006, 2007). Baril-Gingras et al. (2006) point out that a qualitative approach provides information

* Corresponding author. Institute for Work & Health, 481 University Ave, Suite 800 Toronto, ON M5G 2E9, Canada.
E-mail address: dvaneerd@iwh.on.ca (D. Van Eerd).
URL: http://www.iwh.on.ca (D. Van Eerd).

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not usually available in quantitative studies. Nielsen et al. (2007) found participants' appraisal of an intervention mediated the relationship between participation and outcomes, such as job satisfaction and working conditions. Understanding the relationship between participation and outcomes through process evaluation can help with more effective program design.

The current study aims to evaluate a participatory change program implementation process within LTC facilities in Ontario (Canada). To accomplish this with minimal burden on participants working in busy LTC environments, a qualitative process evaluation was conducted during a pilot program implementation.

2. Methods

2.1. Participatory change program description

The Employees Participating in Change (EPIC) program was developed by occupational health and safety (OHS) consultants in a provincial health and safety association, Public Services Health and Safety Association (PSHSA) (Morgan, 2015). EPIC is a MSD and STF hazard reduction program implemented over 12 months. EPIC is designed to create an internal framework for PE that will enable organizations to respond to MSD and STF hazards while enhancing participation and building competency at all organizational levels (OSACH, 2009). EPIC is implemented by OHS consultants with ergonomics knowledge and experience who act as educators and facilitators. The program can be implemented in any sector and functions within the broader framework of an OHS Management System. EPIC requires a relatively mature health and safety infrastructure, including a well-functioning OHS Management System, to ensure that organizations are ready to support a change process. Consequently, a pre-implementation review of the OHS policies and procedures is conducted by program consultants to ensure organizations are ready for implementation.

The EPIC program uses a two-tiered approach to change – a Multidisciplinary Steering Committee (SC) and a Change Team (CT). A minimum of one volunteer Program Champion (PC) at each site is assigned as the key contact person between PSHSA consultants and the LTC facility. The SC includes: senior management, union representatives, human resource staff, Joint Health and Safety Committee (JHSC) members, and specialists within the organization (e.g., physiotherapists), as well as the PC. This leadership committee keeps the CT-directed implementation process on track and addresses any problems that become a risk to program implementation and sustainability (PSHSA, 2013). A consultant assesses the readiness of individuals to participate in the program and guides the SC through a process of selecting the units/departments of focus for implementation activities.

The CT includes frontline staff directly affected by, or exposed to, MSD/STF hazards (from the units/departments of focus). One team member is selected as the CT leader and acts as the liaison between the CT and SC. The primary function of the CT is to "identify and analyze relevant hazards and propose, implement or monitor potential solutions" (PSHSA, 2013). These steps are iterative as new hazards are identified. To identify hazards, the CT conducts hazard inspections on the targeted units. In this study, sites conducted unit/department hazard inspections once a month, during the data collection period (see Fig. 1 for data collection timeline). Once hazards are identified, the CT, with the support of the SC, develops solutions, also referred to as *hazard controls* to manage, prevent or eliminate hazards.

The EPIC program development process included a pilot field assessment of an earlier version of the program in hospital settings (Baumann et al., 2012). Currently, the EPIC program does not address hazards caused by patient handling.

2.2. Sample and setting

The process evaluation was part of a non-randomized field trial evaluating EPIC program effectiveness. The study was conducted in six LTC facilities, which are part of a large for-profit LTC organization – three were intervention sites and three were control sites. Two participating intervention sites chose to focus on reducing MSDs and the other STFs. One MSD site focused on two nursing units and the dietary department (n = 96); the other MSD site selected the environmental department (n = 26). The STF intervention site focused on four nursing units and the dietary department (n = 269). Department selections were matched at control sites for both MSD sites (n = 207, n = 22) and the STF site (n = 245).

At the intervention sites, individuals were recruited to participate in interviews and/or focus groups. Participants were recruited purposively to include the PC, site administrators, SC members, CT members, supervisors and various frontline staff (i.e., nursing, maintenance, dietary, environmental, housekeeping services) representing different shifts (full-time, part-time, casual). Six interview participants were recruited at one site and seven at the other two sites (n = 20).

In addition, two PSHSA consultants/facilitators provided detailed notes/logs about the intervention and process. The consultants were aware that the notes would be used to examine the implementation process. The two consultants were also the developers of the EPIC program so were well equipped to deliver all aspects of the program.

2.3. Data collection

A qualitative approach was used to examine all implementation process phases at the three intervention sites (based on Baril-Gingras et al., 2006; Driessen et al., 2010b; Linnan and Steckler, 2002). Fig. 1 lists the data collection approaches and timeline. Data were collected in three ways:

1) Consultant Logs

The two program consultants assigned to the intervention sites kept detailed notes in a site-specific log detailing program activities that involved consultant interaction throughout program implementation. The consultants completed the logs using the following categories: strengths, weaknesses, opportunities, and threats as the EPIC program was implemented. Since consultants were more active in the early intervention stages, their notes provide rich details about the pre-program activities and training but cover activities throughout the implementation cycle.

2) Interviews

Semi-structured open-ended interviews were used to gather detailed information about the EPIC implementation process including: barriers and facilitators of implementation and acceptance, attitudes about the program, and unintended outcomes (Baril-Gingras et al., 2006). Participants were interviewed three times over the course of the implementation process. Interviews were conducted by two research team members who were onsite regularly during pre-implementation and program implementation. All interviews were recorded and transcribed verbatim.

Interviews were conducted during months three, six, and nine of program implementation. Interviews were also conducted with PCs (n = 3) five months after the end of program implementation. The 30-min structured interview included questions related to each component of the process evaluation framework (see below) covering overall aspects of implementation, solutions and sustained activity. See Appendix A for the interview questions and prompts.

3) Interactive workshop and focus group

An interactive stakeholder workshop, including a moderated focus group (n = 13), was held six months after program implementation