

Integrated approaches to worker health, safety and wellbeing: Review Update

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Accompanying documents:

Cooklin, A, Joss, N, Husser, E and Oldenburg B. 2013. Integrated approaches to worker health, safety and wellbeing. School of Public Health and Preventive Medicine, Monash University. ISCRR Research report No.: 1213-088-R1C

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Introduction

In 2013, Sorensen and colleagues defined IA as ‘a strategic and operational coordination of policies, programs, and practices designed to simultaneously prevent work-related injuries and illnesses and enhance overall workforce health and wellbeing’. IA integrates occupational health and safety with health promotion and human resource functions within the workplace.

A systematic review on integrated approaches to worker health, safety and wellbeing (IA) was conducted in 2013 by Cooklin, Husser, Joss and Oldenburg [ISCRR Project # 88]. This review has been accepted for publication in the American Journal of Health Promotion. This report is an addendum to the systematic review to provide an update of the evidence emerging since the original was published.

Methods

This review was conducted using identical methodology determined in the original review (Cooklin et al 2013) as follows:

Population: Employers, organisations and/or employees; Australian and international; small/medium/large; private, government and non-government sectors.

Intervention: Workplace programs implementing an integrated approach to worker health, safety and well-being. Integrated approaches are aimed at improving worker safety and health by integrating Occupational Health and Safety (OHS) and Health Promotion (HP) functions of the organisation via individual worker actions and behaviours and organisational change. The following classifications of integrated approaches were utilised based on the 5-criteria definition of integration utilised in this research:

High-integration: Collaboration between OHS and HP functions of the organisation, that is, integrated delivery of programs. Targets of intervention are both individual behaviours and organisational factors.

Medium-integration: Collaboration between OHS and HP functions of the organisation, that is, integrated delivery of programs. Targets of intervention are either individual behaviours or organisational / workplace factors.

Not integrated: OHS and HP delivered separately, targeting either individual or workplace factors. Studies reporting on these interventions were excluded from the evidence review.

Comparison: This review includes, but is not limited to, randomised controlled trials (RCTs); any comparison, control, baseline or referent group is included, where available.

Outcome: Worker health, well-being, safety, injury prevention.

Search Strategy

The search included the following databases: The Cochrane Library; MEDLINE; Embase; CINAHL; PsycINFO; Scopus; ISI Web of Science; and ProQuest. The following search terms were used in combination: (“Occupational health” OR “Occupational Safety”) AND (“Health promotion”) AND (“Integrated” OR “whole” OR “total” OR “combined” OR “complete” OR “comprehensive” OR “holistic” OR “whole worker”). The search was limited to English language papers, a date range of *September 2013 to September 2015* and peer-reviewed scientific journals. Papers were only included in the review if they were available in full text.

Inclusion criteria

Studies included in the review were required to meet ALL of the following inclusion criteria:

- Reported on an evaluation of a workplace intervention (or program);
- Reported on interventions targeting improvements in any or all of the following: worker health, well-being, safety, protection (and relevant term variations);
- Demonstrated integration of program delivery, either via:
 - OHS and HP management systems (medium integration), targeting individual behaviour only (medium integration - individual focus), or
 - OHS and HP management systems (medium integration), targeting organisational change only (medium integration – organisational focus), or
 - Both (high-integration).

Exclusion criteria

The following studies were excluded from the evidence review:

- Papers reporting on etiologic, conceptual or theoretical models regarding integrated approaches;
- Literature reviews, including narrative and systematic reviews;
- Studies reporting on programs / interventions with *no evidence of integrated approaches*, that is programs:
 - Targeting health promotion only, no integrated delivery with OHS, or
 - Targeting worker health and safety only via OHS, no integration with HR / HP, or
 - Reporting insufficient information to ascertain an integrated approach.

Data management

All studies meeting the eligibility criteria were reviewed in detail. Given the limited number of RCTs related to the subject, a wide range of study designs targeting a broad range of organisational and individual health, safety and well-being outcomes were included. Data were extracted in table form. Studies were grouped by the type of integrated approach used (high- or medium-integration) and appraisal of study quality. Study quality was classified according to the level of causal inference provided by the study design, using the following criteria adapted from La Montagne (27) attributing causal inference:

Level 1: Descriptive, anecdotal, authoritative;

Level 2: Evidence without intervention, observational following an 'event';

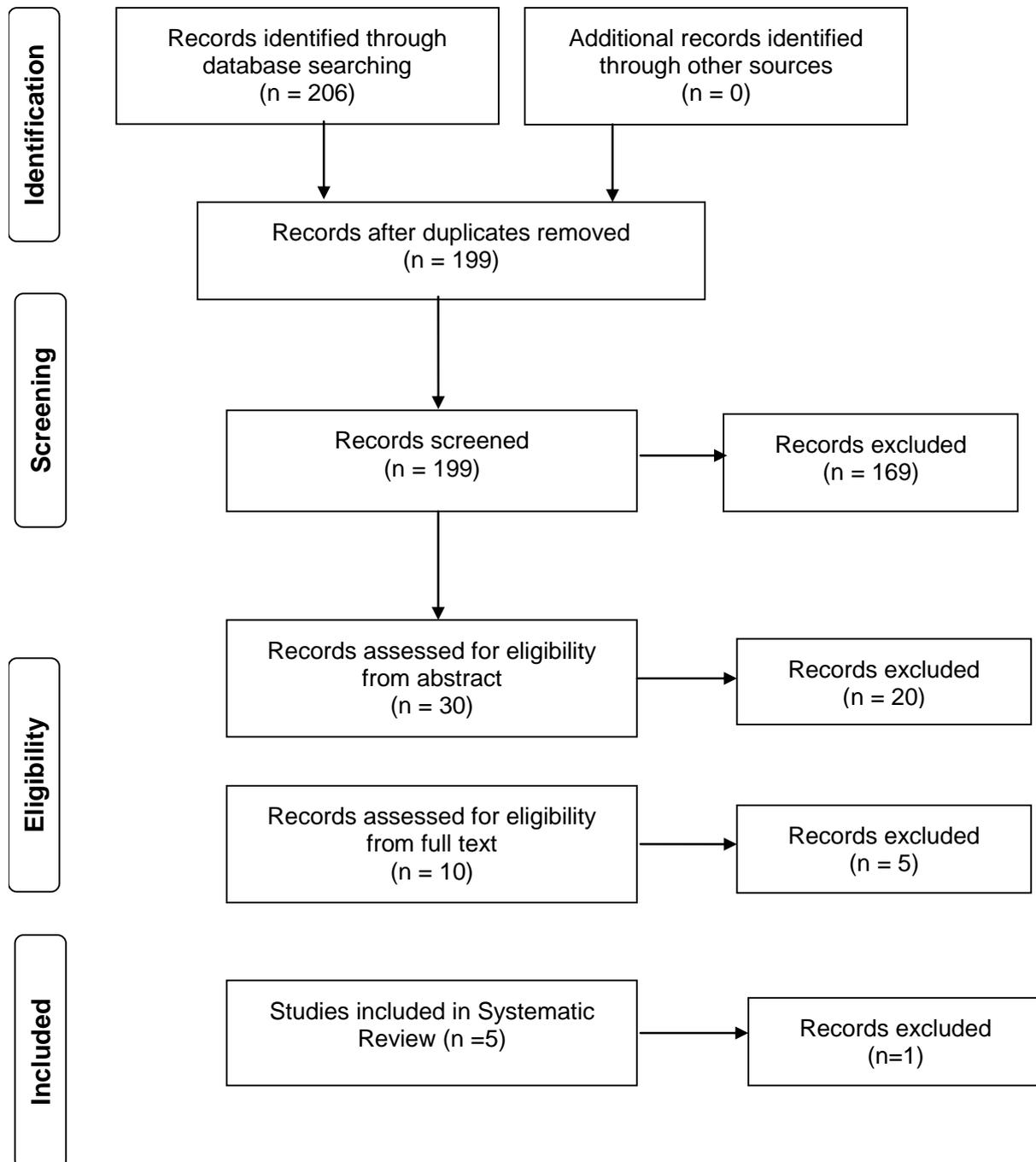
Level 3: Evidence obtained with evaluation, but uncontrolled, no randomisation;

Level 4: Evidence of properly conducted study, pre- and post- testing with control group, non-randomised;

Level 5: Properly conducted, randomised controlled trial.

To estimate a likely causal relationship between the interventions in included studies and outcomes reported, only levels 3, 4 and 5 were considered.

Figure 1. PRISMA Flow Diagram



Results

Five studies were included in this update of the evidence review as per the inclusion and exclusion criteria detailed above. Currently, the full text of one paper was unable to be sourced and so was excluded.

Table 1: Description of studies included in evidence review

Level of integration/evaluation quality	High quality (levels 4 & 5)	Mixed quality (level 3)	TOTAL, n (%)
High-integration	2	1	3 (75%)
Medium integration – individual behaviour	1	-	1 (25%)
Medium integration – organisational change	-	-	-
			N = 4

Individual studies are described below in Table 2.

Author(s), Date and Country	Population, workplace type (industry, sector, size)	Study aims; target(s) of intervention*	Intervention & Program details: Type, dose, delivery, components	Outcomes assessed in paper	Effectiveness against targeted outcomes	Integration evidence and rating
Grossmeier et al (2013) USA	US BP employees, their partners and retirees (n=29,642)	Assess the influence of participation in a population health management program on health care costs.	Be Wellness Program. Health assessment, health information portal, health advisor call, personal record, interactive web based classes, physical activity campaigns, web based health improvement programs, financial wellness, classes, 52 week intensive weight management program, biometric health screening, 24/7 Nurseline, case management and EAP. Also, health coaching.	Medical and pharmacy claims, program participation, ROI	Program yielded a positive return on investment after 2 years participation in wellness program and 1 year of integrated disease management.	High integration. High quality intervention.
Hengel et al (2014) Netherlands	15 Departments across six construction companies specializing in house, commercial or industrial building (n=293).	Analyse the cost-effectiveness and financial return from the employers' perspective of a prevention program.	Prevention program to improve the health and work ability of construction workers. Economic evaluation. 6 month intervention including control group. Consisted of two training with physical therapist, a fatigue awareness raising instrument and two empowerment training sessions.	Work ability, health status (physical and mental), musculoskeletal symptoms. Absenteeism and presenteeism costs.	The intervention was cost-saving to the employer due to reduced sickness absenteeism costs in the intervention group.	Medium integration. High quality intervention.
Schwarz et al (2015) Sweden	12 units in a country hospital in Sweden (n=500).	Test the effects of integrating health protection and health promotion with a continuous improvement system	Quasi-experimental study design with randomized and control intervention groups. N=500 employees. Baseline, 12 month and 24 month follow up.	Work ability, productivity, self-rated health, sickness absenteeism, integration, support and resources of workplace health promotion.	Integration promotes staff engagement as well as improve understanding of link between work and health and engagement in continuous improvement.	High integration High quality intervention.
Sun et al (2013) China	9 privately owned enterprises in China (n=4,590)	Examine the effectiveness of a workplace-based intervention program to improve mental health, work ability and work productivity.	Comprehensive health promotion enterprise Program – healthy work environment, psychosocial interventions, access to health services, workplace stress and resilience training.	Depression, injury, asthma, eating disorders, anxiety, other psychosis and other diseases (arthritis, body pain and obstructive pulmonary disease)	Improve ability to work, job control, and ability to meet mental demands of work. Reduced probability of absenteeism related to depression.	High integration. Medium quality intervention.

Evidence from “high-integration” interventions

Three papers (75%) reported interventions which demonstrated evidence of high integration; of which, two were also ranked high quality studies – Grossmeier et al and Hengel et al . Schwarz et al.

Grossmeier et al. (2013), USA

This study reported on a comprehensive health management program called the *Be Wellness Program* which integrated health, safety and wellbeing at both the individual and organisational levels. The multicomponent program covered a range of topics including coaching, back care and a weight management program. The study showed that savings were made and there was a return on investment of \$3 for every dollar invested.

Schwarz et al. (2015), Sweden

This study tested an integrated approach to worker health, safety and wellbeing in a district hospital in Sweden which employed approximately 500 staff. The study used a continuous improvement model and offered a health promotion program focusing on physical wellbeing and safety meetings. Integration of health protection and promotion improves staff engagement and awareness by employees about the importance of work health.

Sun et al. (2013), China

A workplace health intervention was provided in nine privately owned companies in China. Using a prospective cohort intervention design, the study measured job stressors, resilience, work ability and job performance. The program showed effectiveness in work performance, reducing depression and absenteeism. There was no correlation between the reduction in depression and absenteeism. The study supports the integration of a variety of processes including policies, programs and training to improve worker health, safety and wellbeing.

Evidence from “medium-integration” interventions

Hengel et al.(2014), Netherlands

A randomized control trial measured the cost effectiveness and financial return on a 6 month prevention program aimed at construction workers; focusing on physical health and fatigue. The program focused on the individual through training sessions, empowerment, communication and responsibility for worker health, safety and wellbeing. The results of the RCT, which looked at the program from the employers’ perspective, showed that the program was cost saving through the reduction of sickness absenteeism costs but not for work ability or health.

Summary

A handful of studies (n=4) have been published on integrated approaches to worker health, safety and wellbeing in the two years since the original systematic review was conducted by Cooklin et al (2013). The original review generated 32 studies bringing the total number of studies published from January 1990 to September 2015, to 36.

In this review, three of the four studies have been categorised as high integration. In the original review, 17 of the 32 studies were categorised as high integration. Therefore, 20 studies have been identified in the peer reviewed literature showing a high level of integration for worker health, safety and wellbeing.

All studies included in this review show positive outcomes when integration occurs. These outcomes are:

- Return on investment,
- Reduced sickness absenteeism costs,
- Reduced probability of taking sick leave,
- Reduced job stress levels, improving job performance, and
- Improved staff engagement.

This review is consistent with the original review conducted in 2013 which suggests that an integrated approach to worker health, safety and wellbeing is associated with positive outcomes which go beyond improving health and safety of workers. There are multiple impacts to this approach, as shown by both the original and updated review. The empirical evidence from the original review showed that there is:

Evidence of strong support for integrated approaches to:

- Manage, reduce and prevent MSDs,
- Improve mental health (depression, anxiety) and reduce stress,
- Demonstrate reduced medical and health-care costs,
- Reduce leave usage and absenteeism,
- Improve reach and participation of workers most 'at-risk'.

Moderate support for integrated approaches to:

- Improve psychosocial job aspects (demand, control),
- Manage weight and nutrition,
- Improve physical activity,
- Ameliorate organisational health climate,
- Reduce mortality.

This update of the review shows that the evidence emerging in the last two years focuses on a set of new outcomes to build on the argument that an integrated approach to worker health, safety and wellbeing has multiple benefits at both an individual and organisational level.

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