

Review

# Management and Leadership Approaches to Health Promotion and Sustainable Workplaces: A Scoping Review

Andrea Eriksson <sup>1,\*</sup>, Arne Orvik <sup>2</sup>, Margaretha Strandmark <sup>3</sup>, Anita Nordsteien <sup>4</sup> and Steffen Torp <sup>5</sup>

<sup>1</sup> School of Technology and Health, KTH Royal Institute of Technology, SE-100 44, Stockholm, Sweden

<sup>2</sup> Department of Health Sciences in Ålesund, Norwegian University of Science and Technology, NO-6025 Ålesund, Norway; arne.orvik@ntnu.no

<sup>3</sup> Faculty of Health, Science and Technology, Karlstad University, 651 88 Karlstad, Sweden; margaretha.strandmark@kau.se

<sup>4</sup> Faculty of Social Sciences, Oslo and Akershus University College of Applied Sciences, NO-0130 Oslo, Norway; anita.nordsteien@hioa.no

<sup>5</sup> Department of Health, Social and Welfare Studies, University College of Southeast Norway, P.O. Box 235, Kongsberg 3603, Norway; steffen.torp@hbv.no

\* Correspondence: andrea.eriksson@sth.kth.se; Tel.: +46-8-7909804

Academic Editor: Kristine Crondahl

Received: 23 December 2016; Accepted: 18 May 2017; Published: 23 May 2017

**Abstract:** Whole-system approaches linking workplace health promotion to the development of a sustainable working life have been advocated. The aim of this scoping review was to map out if and how whole-system approaches to workplace health promotion with a focus on management, leadership, and economic efficiency have been used in Nordic health promotion research. In addition, we wanted to investigate, in depth, if and how management and/or leadership approaches related to sustainable workplaces are addressed. Eighty-three articles were included in an analysis of the studies' aims and content, research design, and country. For a further in-depth qualitative content analysis we excluded 63 articles in which management and/or leadership were only one of several factors studied. In the in-depth analysis of the 20 remaining studies, four main categories connected to sustainable workplaces emerged: studies including a whole system understanding; studies examining success factors for the implementation of workplace health promotion; studies using sustainability for framing the study; and studies highlighting health risks with an explicit economic focus. Aspects of sustainability were, in most articles, only included for framing the importance of the studies, and only few studies addressed aspects of sustainable workplaces from the perspective of a whole-system approach. Implications from this scoping review are that future Nordic workplace health promotion research needs to integrate health promotion and economic efficiency to a greater extent, in order to contribute to societal effectiveness and sustainability.

**Keywords:** health promotion; scoping review; workplaces; sustainability; leadership; management

## 1. Introduction

Health is created within the settings people live their lives [1], and one of the most important settings for health is the workplace [2]. The work environment affects the health of workers directly; however, the productivity and efficiency of work organizations also affect the health and living conditions of all people in a society [3]. That is, the welfare and health of a population depends on work organizations being productive and sustainable from a long-term perspective. Despite the

positive effects work may have on health, it has been indicated that the last decades' strive for increased productivity and efficiency can be a threat to employee health and well-being at work [4].

The broad concept of health promotion generally embraces both individual and structural approaches. Applications of health promotion may include efforts of both primary prevention (i.e., to prevent disease and injury before occurrence) and secondary prevention (i.e., to reduce the impact of disease or injury that has already occurred). The authors of this article, however, adhere to the research tradition within health promotion that places an emphasis on the importance of improving the socioeconomic conditions and shifting resources "upstream" to prevent problems before they occur [5]. Furthermore, we see subjective feelings and resources for experiencing well-being as central parts of employee health and we do not see the concepts of health and disease as mutually exclusive to each other [6].

The settings approach to health promotion [7,8] argues that the most efficient way of promoting health among workers is to view health as a part of the core activities of the setting. In a work setting, that means the production of services and goods. Therefore, it is claimed that workplace health promotion activities cannot be implemented effectively without taking into account the productivity, efficiency, and power structures of a workplace. Applying such a whole-system approach [9] to workplace health promotion, thus includes addressing the most important positive and negative determinants for employee health, so as to empower workers and to develop management structures and leadership approaches, and to support employee health, safety, productivity, and efficiency simultaneously [10]. This kind of whole-system approach including simultaneous efforts to improve health and safety, productivity, and efficiency is in line with the definition of workplace health promotion of the European Network for Workplace Health Promotion (ENWHP). ENWHP has defined workplace health promotion as the endeavors of employers, employees, and society to improve employee health and well-being. ENWHP states that, "A healthy, motivated and well-qualified workforce is fundamental to the future social and economic wellbeing of the European Union" [11].

Overall, research suggests that leadership, organizational cultures, and the organization of work play an important role in developing the workplace as a health-promoting setting. As issues of productivity and efficiency are often prioritized in work organizations, the importance of integrating health needs into leadership practice has been highlighted [12]. The management of a workplace can facilitate sustainable workplaces, as they have a unique opportunity to build the organizational capacity for health and safety. In this context, leadership has been defined as inspiring and motivating people to work for a common goal, while management refers to organizing and controlling work activities [13]. Previous research shows that leadership styles and leadership approaches can have a direct impact on employee health; however, they can also have an indirect impact by influencing the social climate of a workplace [14]. Management is also important for employee health, as it concerns issues of planning and evaluating health interventions [12]. Furthermore, formal management tasks include legal responsibilities for employee health and safety. Overall, evidence is growing for the importance of integrative management approaches to developing working conditions that are beneficial for employee health and safety, as well as for quality and efficiency outcomes [4,15].

An organization with a management and leadership focus on both the "health" of the organization and the health impacts of the organization on the employees may be regarded as sustainable [16,17].

In general, definitions of sustainability, pollution, and the global environment are important aspects. In the context of the current study, this aspect of sustainability, although relevant, will not be the focus. Instead, we will use a more narrow definition of environment, that is, the work environment related to employee health and its relation to the productivity and efficiency of organizations. In this context, sustainability, from a workplace system point of view, has been defined as a work environment system that regenerates its human and social resources [18]. We, therefore, choose to define sustainable workplaces as work environments that embrace factors that contribute to employee health and well-being, as well as organizational efficiency. By integrating human and economic values, sustainable workplaces can even impact societal effectiveness.

The Nordic countries have a strong tradition of close collaboration between employee unions, employers' organizations, and the government, and it has been argued that such a system has led to positive effects for workers, work organizations, and the public as a whole. The system reduces conflicts and increases productivity and economic efficiency and, thereby, increases social prosperity for employees and society. Moreover, in relation to this aspect, the Nordic countries are regarded as relatively developed when it comes to workplace health promotion. They have a strong tradition of democratization of work, participatory management approaches in work organizations, and work environment legislation [19], emphasizing psychosocial and organizational factors, system-oriented thinking, participation, and the empowerment of employees [20].

Although whole-system approaches to workplace health promotion with a focus on management, leadership, and economic efficiency have been advocated for many years in the Nordic countries, we do not know whether such approaches are reflected in Nordic health promotion research. The aim of this study, therefore, was to map out whether such approaches have been used in health promotion research, and to investigate what kind of research, and in which of these countries, such research has been performed. In addition, we wanted to investigate, in depth, if and how management and/or leadership approaches related to sustainable workplaces are addressed in Nordic health promotion research.

## 2. Materials and Methods

This study was performed by members of the Workplace Health Promotion Group in the Nordic Health Promotion Research Network. To our knowledge, no other studies have investigated the current topic before. Therefore, we found it appropriate to use a scoping review design to overview the research that has been performed within this field in the Nordic countries, and in order to be able to suggest what kind of research is needed in the future to promote sustainable workplaces, including both health and economic perspectives. The inclusion criteria implied that at least one author had to be affiliated with an organization or a research institution in the Nordic countries, and the study had to focus explicitly on health related to workplaces. Literature searches were conducted in Web of Science, Scopus, Pubmed, Cinahl, Academic Search Premier, PsycInfo, and Embase. Search terms included combinations of subject headings and text words including health promotion, workplace, worksite, occupation, Denmark, Finland, Iceland, Norway, and Sweden. The search criteria were limited to the publication period 2009–2014, and limitation options like "peer-reviewed journal" or "research article" were chosen where applicable. No language filter was used (see search strategy in Cinahl in Box 1). A similar search strategy was applied to the other databases.

### Box 1. Example of the search strategy of the scoping review.

Example of the search strategy in Cinahl:

S1 (MH "Health Promotion") OR "health promotion"

S2 "workplace" OR "worksite" OR "occupation\*"

S3 "Denmark" OR "Finland" OR "Iceland" OR "Norway" OR "Sweden"

S4 S1 AND S2 AND S3

S5 Limit S4 to Reacherch Article and Published Date ="2009–2014"

The searches resulted in a total of 791 records. Duplicates were removed, and 414 articles remained. The 414 titles and abstracts were screened, and articles that were not Nordic, peer-reviewed, or related to workplaces were excluded by author AN. One hundred and ninety-six abstracts remained and were read by AN and ST. Studies that did not focus on factors related to the work environment, production, or other workplace-related factors were omitted. Examples of excluded studies were those using workplaces to recruit participants to lifestyle studies related to diet, physical activity, and smoking, and therefore not concerned with the workplace per se. After excluding such publications, 83 relevant

studies (Appendix A) were included in this scoping review. The selection of articles is described in Figure 1.

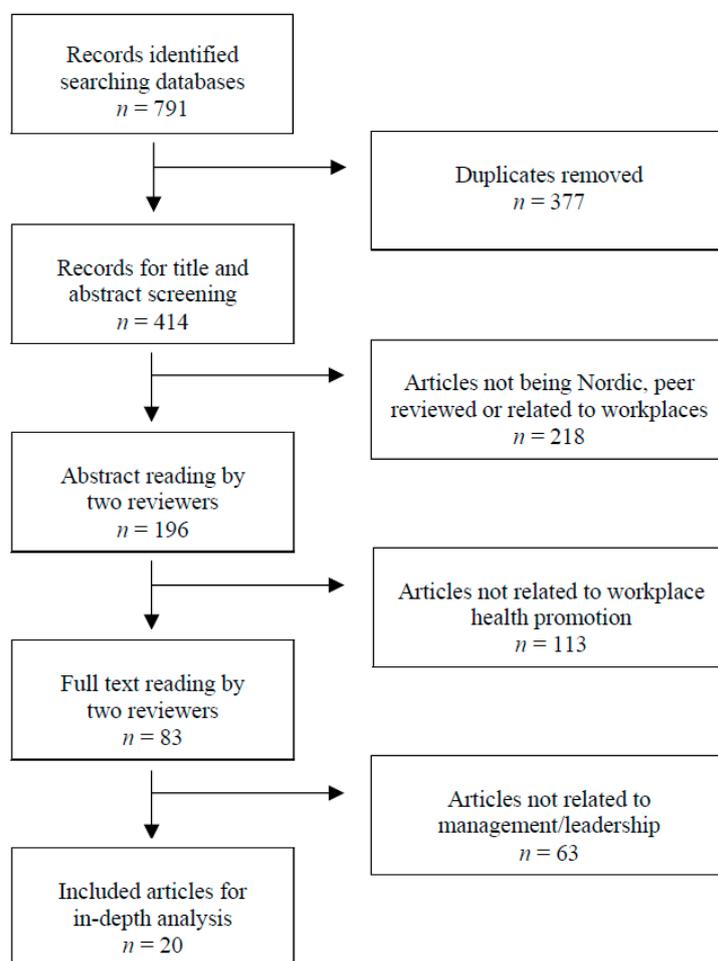


Figure 1. Flowchart of the article selection process.

### Analysis

The 83 full-text articles were read and reread by two reviewers (AE and AO) before we performed a qualitative analysis of what the studies focused on regarding how health promotion can contribute to sustainable workplaces. First, we registered the countries in which the different studies were performed, what kind of research methods they used, and their approaches to health and health promotion. Thereafter, we investigated whether the 83 included studies focused on how management and leadership may be used to promote health and to create sustainable workplaces. For a further in-depth qualitative content analysis, we excluded 63 articles in which management and/or leadership were only one of several factors studied or aspects of management and/or leadership were only mentioned in the background and/or discussion part of the articles.

The 20 articles included in the in-depth qualitative content analysis constituted a first step in condensing the content of each of the articles [21]. The in-depth qualitative analysis mainly focused on examining the nature of the research perspectives presented in the included articles and, by this kind of analysis, identified gaps in the Nordic literature on workplace health promotion [22]. In this first step, a manifest content analysis [23] was pursued, which embraced the manifest descriptive analysis of the characteristics of the whole content of the included articles. The manifest analysis focused on (1) if and how the articles included aspects related to sustainable workplaces, and (2) if and

how they included management and/or leadership approaches related to sustainable workplaces. An analysis of how the articles included aspects related to sustainable workplaces meant that we analyzed if and how the article included aspects of employee health and well-being and/or organizational efficiency (e.g., quality of work services or integration of economic figures in the steering of health promoting activities). Articles investigating relational aspects of and the social influence leaders have on subordinates were analyzed using leadership approaches. Articles investigating formal systems of organizing and controlling work activities were analyzed using management approaches [13].

Subsequently, based on the summarizing analysis of each article, thematic manifest and latent analysis [23] was carried out, which meant that the articles were sorted into different categories, focusing on how aspects of sustainable workplaces were included in the article. The main categories were identified by searching for similarities and differences in the data [21]. In this step, the analysis focused on if and how holistic approaches related to sustainable workplaces could be identified in the material, as well as if and how aspects of sustainability were approached in different ways in the detailed parts of the articles, sentence by sentence. For example, the manifest content analysis included an analysis of the explicit definitions of sustainability made in the articles, and the latent content analysis meant that the content of the article was compared to theoretical concepts of sustainability outlined in the introduction of this article, for uncovering if and how different dimensions of sustainability were included in the articles. An analysis of holistic approaches to sustainable workplaces included if participatory and structural approaches to workplace health promotion were included, and if a study had integrative approaches to employee health and productivity and/or efficiency. Four different ways of approaching sustainable workplaces were identified. Some articles were found to approach aspects of sustainable workplaces in several different ways and were thus included in the result descriptions of more than one category. This meant, for example, that an article could be analyzed as having a holistic approach related to sustainable workplaces, but that other kinds of approaches to sustainable workplaces could be found in detailed descriptions in different parts of the same article. AE was responsible for the qualitative analyses, together with AO. The other authors were consulted on issues of the inclusion and exclusion of studies for in-depth analysis, and the results of the analysis were discussed by all the authors.

### 3. Results

Studies focusing on workplace health promotion, management, leadership, and sustainable workplaces had mostly been performed in Sweden ( $n = 36$ ), followed by Norway ( $n = 18$ ) and Finland ( $n = 16$ ). There were relatively few studies performed in Denmark ( $n = 10$ ), and there were no studies from Iceland. Additionally, some studies were performed in collaboration between researchers from different countries (Sweden and Norway = 3, A Nordic country and a non-Nordic country = 7). Most studies used quantitative research methods ( $n = 53$ ) and about one third ( $n = 25$ ) used qualitative methods, while six combined quantitative and qualitative methods. Approximately one fifth ( $n = 18$ ) were intervention studies or studied aspects of interventions, while the rest had observational designs ( $n = 65$ ). Among the observational studies, ten were longitudinal, while the rest were cross-sectional ( $n = 73$ ). Approximately half of the studies included theories and methods that focused on health in an organizational setting, including several different factors interacting with and affecting employee health. Forty-six articles contained aspects of management and/or leadership and twenty of these had a main focus on management and/or leadership related to employee health. These twenty articles were included in the in-depth qualitative content analysis (Table 1).

**Table 1.** Overview of included articles with a leadership and/or management approach to sustainable workplaces: The categorization of the analyzed articles, countries in which the authors of the articles were affiliated, methods applied in the studies, and whether the studies included aspects of management and/or leadership.

Included articles	Categories	Countries	Method	Management/Leadership
Aura, O., et al. (2010).	C	Finland	Quantitative survey	Management
Backstrom, I., et al. (2014).	A, C	Sweden	Quantitative survey	Leadership
Eriksson, A., et al. (2010).	B	Sweden	Qualitative case study	Management, leadership
Eriksson, A., et al. (2011).	B	Sweden	Qualitative interview	Management, leadership
Eriksson, A., et al. (2012).	B, C	Sweden	Qualitative case study	Management, leadership
Gronlund, A. & B. Stenbock-Hult (2014).	C,D	Finland	Qualitative interviews	Mainly leadership
Hasson, H., et al. (2014)	B	Sweden	Qualitative interviews	Management, leadership
Kinnunen-Amoros, M. & J. Liira (2014)	C	Finland	Quantitative survey	Management
Larsson, J., et al. (2009).	A, B, C	Sweden	Interventions	Mainly management
Larsson, J., et al. (2011).	A, B, C, D	Sweden, Norway	Interventions	Management, leadership
Larsson, R., et al. (2014).	B, C	Sweden	Quantitative survey	Mainly management
Ljungblad, C., et al. (2014).	B,C	Sweden	Quantitative survey	Mainly management
Midje, H. H., et al. (2014).	C	Norway	Quantitative survey	Mainly management
Nielsen, K. & L. M. Pedersen (2014).	B, C, D	Denmark	Qualitative interviews & Quantitative survey	Mainly management
Niskanen, T., et al. (2012).	B, C	Finland	Quantitative survey	Management
Perko, K., et al. (2014).	C	Finland	Quantitative survey	Leadership
Sirola-Karvinen, P., et al. (2010).	A, C	Finland	Intervention study	Management
Stoetzer, U., et al. (2014a).	C	Sweden	Qualitative interviews	Mainly leadership
Stoetzer, U., et al. (2014b).	C	Sweden	Qualitative interviews	Mainly leadership
Vinberg, S. & B.J. Landstad (2014).	B, C	Sweden, Norway	Qualitative interviews, Document analysis & Quantitative survey	Mainly management

The qualitative analysis of the articles revealed that half of the twenty articles primarily focused on management, while a quarter mainly concerned leadership. The last quarter included an approach to both management and leadership. Four main categories connected to sustainable workplaces emerged from the articles: (A) studies applying an explicit **whole-system understanding**, in which management and/or leadership was linked to health promotion, with an explicit aim of measuring the effects on workplace sustainability; (B) approaching sustainability by studying **success factors for the implementation** of workplace health promotion; (C) studies using sustainability for **framing the importance** of the study; (D) studies highlighting that an **explicit economic focus can counteract sustainability**.

#### A An Explicit Whole-System Approaches to Sustain Ability

Four of the studies [24–27] can be described as using a whole-system approach to sustainability. This means that the four studies connected the implementation of health promotion to the ordinary and overall management of the workplace. For example, management models inspired by established business models were applied for analyzing the implementation of health promotion into work organizations. To some extent, this can be interpreted as using business logics in the field of health promotion, with the agenda to encourage work organizations to integrate health aspects into their ordinary management.

These studies were all intervention studies. Three of them [25–27] mainly embraced *management approaches* to workplace health promotion, i.e., the planning and evaluation of health interventions, while one of the studies [24] embraced *leadership approaches* by focusing on leadership culture, including the commitment to health interventions. Although not all studies defined or focused explicitly on sustainability, a whole-system approach to sustainability was obvious, as management and leadership

approaches for, respectively, steering and creating broad participation for health promotion at the workplace were included.

Two of the studies [25,27], included indicators and/or measurements related to employee health, the work environment, and economic performance. In collaboration with stakeholders from different workplaces, the study by Larsson et al. [25] developed and tested a management model for including health aspects in ordinary workplace management. The study's research design relates to a whole-system approach to sustainable workplaces, as it described and analyzed the implementation of a management model that integrated health and economic figures with reflective and participatory improvement processes. The strengths of the study include a longitudinal research design meaning that implementation of the model was studied by qualitative interviews over a two-year period. The weaknesses included only studying qualitative results of the implementation process and not having a study design that included quantitative measures on the effect of implementing the management model [25].

Sirola-Karvinen et al. [27] developed, through a pilot project at four workplaces, methods for managing development processes that aimed at linking aspects of health promotion to general management practices, as well as human resource management. The article relates management approaches to sustainability by presenting a holistic model that integrates issues of well-being into ordinary organizational strategies by, for example, including both an evaluation of economic measurements and participatory approaches to measurements [27]. However, the article mainly contains a description of the content of a management model, and it lacks a research design with valid and reliable qualitative and/or quantitative evaluations of the implementation of the model.

The articles by Backstrom et al. [24] and Larsson et al. [26] had, to some extent, a more limited approach to sustainability compared to the two other studies mentioned above. The study by Larsson et al. [26] designed and discussed control charts for health outcomes that could be used to promote integrated workplace health management. The study was analyzed using a whole-system management approach to sustainability, as the control charts were developed in close contact with the participating workplaces and included results of both the implementation process, as well as a statistical analysis of health improvements. The development of control charts was motivated by humanistic, economic, and societal perspectives, but the control chart developed in the study included more limited health indicators, i.e., self-rated health and new sick-cases at the workplace. The study by Backstrom et al. [24] investigated how health promoting activities contributed to the total quality management (TQM) of health-related issues. This article was analyzed using a whole-system approach to aspects related to sustainable workplaces, as it focused on connections between holistic and participatory approaches to building school leaders' and teachers' capacity for health and quality management at the workplace. This study can, however, be said to have a more limited approach to the concept of sustainable workplaces, as the study only included measures of cultural changes for studying quality management, and excluded the financial figures commonly used in other studies on the effects on quality management.

#### *B Approaching Sustainability by Studying Success Factors for Implementation of Workplace Health Promotion*

Four articles [28–31] explicitly investigated how management and leadership factors contributed to ensuring that workplace health interventions were successfully implemented and sustained over time. The results of these articles were in line with each other. For example, they all showed the importance of integrating interventions into ordinary organizational processes, the significance of clearly defined strategies of health promotion interventions, and the importance of the involvement, collaboration, and role descriptions of different stakeholders in the interventions. Important stakeholders identified included managers at different organizational levels and partners from human resources departments.

Successful implementation can be related to aspects of efficiency, meaning that investing resources, such as time and money, in health promotion is worthwhile, as they actually contribute

to improved health. In other words, the resource-efficient implementation of health interventions may also contribute to the development of sustainable workplaces. In light of this reasoning, eight other studies [25–27,32–36] implicitly included aspects of the sustainability of interventions, by concluding with or highlighting factors critical for the efficient management of interventions. Factors highlighted included social processes [34], the integration of health aspects into organizational structures and work processes [25,27], systematic and comprehensive approaches to managing health [25,26,32,33,35,36], adequate training [34,35], and a high degree of involvement or participation among stakeholders [25,35,36].

The study of success factors can be related to *management approaches* to sustainable workplaces, as it connects to formal management decisions of how to implement health interventions. The success factors identified in the articles analyzed also largely include other aspects of management, such as factors relating to how health interventions are planned and evaluated. However, *leadership approaches*, including, for example, social processes contributing to engagement in the interventions, were also included in the identified success factors.

### C *Approaching Sustainability in the Framing of the Studies*

A majority of the management and leadership studies ( $n = 17$ ) [24–27,30,32–43] included aspects of sustainability in the background and the discussion sections of their articles, in order to frame the importance of the studies. Most ( $n = 15$ ) of them were observational studies. Only one study mentioned sustainability explicitly [36], while the other studies related the health aspects to productivity and costs in general. This means that the authors motivated and/or discussed the results by stating that aspects related to *management approaches* and *leadership approaches* to health promotion could contribute to decreased costs for organizations and/or society, without actually investigating whether this is the case. The results of the studies did, however, focus on aspects of management and leadership related to health and excluded broader approaches to sustainability, such as how to combine aspects of employee health and productivity in a workplace setting.

Among the seventeen studies in this category, thirteen studies [24–26,30,32,33,35–41] related their results on management and/or leadership and health promotion to outcome measures, such as decreased sickness leave/absenteeism and/or improved health. In turn, such outcomes would, theoretically, result in decreased costs for organizations and society. Almost all articles [24–26,32–34,36–43] were framed and/or discussed results in terms of how the management and leadership of workplace health promotion contributed to prosperous, productive, and efficient organizations, including improved performance and quality of service production. One article [42] pointed out that leadership is important for well-being—which, in turn, is important for the quality of care given in healthcare, as well as for staff retention.

### D *An Explicit Economic Focus Counteracts Sustainability*

Three of the included studies [25,34,42] identified, in their results and/or concluding discussions, how management and/or leadership approaches that are narrowly focused on economic aspects could counteract the development of sustainable workplaces. This means that the articles identified health threats from management and/or leadership approaches characterized by a unilateral focus on economic aspects. For example, employees interviewed in the study of Larsson et al. [25] saw health threats arising from using economic figures in *management approaches* to health strategies. They feared that the result could be that workers felt compelled to contribute to saving costs by not taking sick leave when actually being sick. Another article by Nielsen and Pedersen [34], studying *management approaches* to health interventions, identified that a production orientation instead of competence orientation in management decisions could hamper human resource practices for supporting safety interventions. Interviews with employees on health-promoting *leadership approaches*, made by Gronlund and Stenbeck-Hult [42], revealed that a task-oriented leadership style, focusing on hard values, such as performance figures, was perceived as a threat to employee health.

#### 4. Discussion

A whole-system approach to workplace health promotion has been advocated during the last decades [2], especially since the Ottawa Charter [1]. It states that the development of health cannot be separated from other individual and societal goals, as societies are complex and interrelated. A whole-system approach to workplace health promotion and sustainability implies the importance of interrelated factors that contribute to employee health and well-being, as well as to organizational efficiency. The aim of this study, therefore, was to map out whether such approaches have been used in health promotion research, and to investigate what kind of research and in which of these countries such research has been performed. In addition, we wanted to investigate, in depth, if and how management and/or leadership approaches related to sustainable workplaces are addressed in Nordic health promotion research.

The results of this scoping review focusing on management and sustainable workplaces show that most of these studies were performed in Sweden, most studies used a quantitative research design, and few studies were intervention studies. The in-depth analysis of twenty studies including management and/or leadership approaches revealed four different categories, presented above, including a whole-system understanding and approach studying the success factors for the implementation of workplace health promotion, using sustainability for framing the study and highlighting health risks with an explicit economic focus.

It should be noted that few articles included or defined concepts of sustainability in their articles, and that most articles contained implicit approaches to aspects that could be related to sustainable workplaces. The analysis revealed that few studies had a whole-system understanding and approach to sustainable workplaces, i.e., including factors that contribute to employee health and well-being, as well as organizational efficiency. A majority of the studies included in this review instead used aspects of sustainable workplaces for framing the importance of the study in the background and/or discussion sections. Our results might indicate that there are now enough drivers for collaboration between Nordic researchers and work organizations for implementing a whole-system approach to sustainable workplaces.

The studies that did adopt whole-system approaches to sustainable workplaces were intervention studies, developing and implementing management models inspired by established business models. Such models can catch essential aspects of whole-system approaches to sustainable workplaces. Additionally, change in complex organizations also calls for institutional perspectives on implementation and intervention [44]. By expanding established management models and including health figures, work organizations may institutionalize aspects of health in their daily steering and management processes. The importance of the integration of workplace health promotion into daily management procedures was also highlighted in the included studies that approached sustainability by studying the success factors for implementation and for sustaining health promotion activities over time [28–31].

The importance of integrating workplace health promotion into other organizational and social processes is in line with other research within health promotion that claims that organisational development and change management, in combination with highly visible projects (e.g., specific health interventions), are key approaches for developing health promoting workplaces [45]. This kind of integration may contribute to the notion that programme ideas are sustained and survive the turnover of specific employees who are engaged in the implementation of the programme [46]. Thus, integration can prevent health and safety management from being seen as a ‘side-car’ in the general management and activities of organizations [47]. Management approaches contributing to changes in the rules and processes of work organizations [48] can, in this context, be especially important for health interventions contributing to the development of sustainable workplaces from a long-term perspective.

However, one study [25] expressed some fears connected to implementing management models and steering with health figures included. For example, workers could feel compelled to contribute to saving costs by not taking sick leave when actually being sick. It can, thus, be stressed that a mere

application of management models including health figures may not become a whole-system approach to sustainable workplaces if participatory leadership approaches, including employees' experiences of well-being, are not included. Leadership can, in this context, be seen as playing an important role in inspiring and motivating employees [13] to participate in the development of a sustainable workplace. Participatory leadership may be health-promoting in itself [49], but may also increase positive forms of work engagement [50]. This, in turn, can contribute to both individual employee health and to employees' willingness to engage in improvements to work processes [50,51].

In general, Nordic countries have a rather good reputation when it comes to workplace health promotion with their strong tradition of democratization at work, well-functioning cooperation with employers' associations and trade unions, and work environment legislations emphasizing empowerment and systems-oriented thinking. Therefore, it could be expected that research on health promotion was more closely related to leadership and sustainable workplaces than this scoping review reveals. One reason may be that research is not the same as practice, meaning that it is possible that managers and health and safety personnel collaborate and integrate their perspectives in practice, but that researchers from different fields (management/leadership and health field, respectively) do not collaborate in the same way. A reason for poor collaboration between the scientific "silos" may be that research programs do not encourage such collaboration.

In summary, the studies by Larsson et al. [25] and Sirola-Karvinen et al. [27] can be recommended as a starting point for those who conceptually wish to learn more about the implementation of whole-system approaches to sustainable workplaces. For complementary knowledge on leadership processes that support leaders' capability to craft sustainable workplaces, the recently described framework for a leadership program that supports knowledge and the capability to craft sustainable work practices in daily practice and during organizational change can be recommended [52].

#### *Methodological Considerations*

The occupational health field is broad, with contributions from many scientific disciplines, and there is extensive research that could potentially be defined as workplace health promotion, despite not being indexed as such. This means that other kinds of approaches to sustainable workplaces, as well as more examples of studies, could have been found if we had used other search terms. A broader search for all relevant articles would, however, have resulted in such a high number of articles that it would not be realistic to analyze them all within the time and resource constraints of the author group. Many studies within workplace health promotion are published in the grey literature, such as reports from universities and other research institutions. This study omitted such publications, as the quality of such studies is debatable, since they have not been peer reviewed. We believe that the studies included are representative of Nordic research and research groups that want to be associated with the health promotion tradition.

## **5. Conclusions**

Four main categories connected to sustainable workplaces emerged from the in-depth analysis of the articles: (A) studies applying an explicit whole-system understanding, in which management and/or leadership was linked to health promotion with an explicit aim of measuring the effects on workplace sustainability; (B) approaching sustainability by studying the success factors for the implementation of workplace health promotion; (C) studies using sustainability for framing the importance of the studies; (D) studies highlighting that an explicit economic focus can counteract sustainability.

This scoping review revealed that few articles addressing management and/or leadership in workplace health promotion explicitly included aspects related to the development of sustainable workplaces. Furthermore, the articles that were explicitly related to concepts of sustainability rarely defined if and how aspects of sustainable workplaces were operationalized in their studies. Overall, aspects of sustainability were, in most articles, not operationalized but, rather, included for framing

the importance of the studies. Only a few intervention studies addressed aspects of sustainable workplaces from the perspective of a whole-system approach. The results of this scoping review imply that future Nordic workplace health promotion research needs to integrate health promotion and economic efficiency to a greater extent in order to contribute to societal effectiveness and sustainability. Future research on interventions combining the implementation of management tools with leadership processes that aim at facilitating the development of sustainable workplaces can be recommended.

**Conflicts of Interest:** The authors declare no conflict of interest.

## Appendix A

**Table A1.** Articles included for analysis in the scoping review.

1. Andersen, I., et al. (2010). Changing job-related burnout after intervention—a Quasi-experimental study in six human service organizations. <i>Journal of Occupational and Environmental Medicine</i> 52(3): 318–323.
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