

The importance of company size and work organisation for work environment management in the Swedish business sector

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Preface

Work is expected to be safe and secure while being characterised by development, participation, empowerment and learning. Research that focuses on these aspects is therefore important in the pursuit of a deeper understanding of how we can improve our workplaces, regardless of size and organisation. Against this background, this report compiles national and international research on how work environment management is carried out in companies in the business sector, with a focus on whether work environment management differs depending on company size or work organisation.

There is a need to examine the work environment from several different angles and with the support of different methods. The Swedish Agency for Work Environment Expertise has therefore launched the project *Analys av arbetsmiljö och arbetsmiljöarbete* [Analysis of work environment and work environment management] with two parallel studies that have the same purpose and research questions, but different approaches. One of the studies is based on data from the survey conducted by the Agency in 2019–2020 on the relation between work environment management and company size and work organisation in the Swedish business sector. The other study is a literature review presented in this report.

The literature review was written by human work science staff at Luleå University of Technology: Maria Johansson, PhD in human work sciences, Anna Berg Jansson, PhD in human work sciences, Leif Berglund, PhD in human work sciences, Lena Abrahamsson, professor in human work sciences, Saila Piippola, PhD in human work sciences. The report was reviewed on behalf of the Agency by Andrea Eriksson, Associate Professor at the Division of Ergonomics, KTH Royal Institute of Technology, and by Stig Vinberg, Professor at the Department of Health Sciences, Mid Sweden University. Hanna Dahlin, Librarian at Lund University of Technology, was responsible for the literature search on behalf of the Swedish Agency for Work Environment Expertise. The responsible process manager at the Swedish Agency for Work Environment Expertise has been Annette Nylund, PhD in Work Science, a Licentiate of Arts degree in Industrial Work Science and a Bachelor of Arts degree in Economics and Political Science, KTH. Liv Nilsson, who holds a Master of Science in Engineering with a specialisation in ergonomic design and production and is a process-leading analyst at the Swedish Agency for Work Environment Expertise, contributed with comments. Camilla Wengelin is responsible for communication, accessibility and layout management.

The authors of the systematic literature review are responsible for the results and conclusions presented in the systematic literature review.

I would like to thank our external researchers and quality reviewers as well as staff at the Agency who contributed to the production of this valuable systematic literature review.

Gävle, June 2023



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Summary:

The importance of company size and work organisation for work environment management in Swedish business

This review of existing knowledge aims to identify scientific articles that highlight the relationship between work environment management and company size and between work environment management and work organisation in the business sector.

This is explored using the following two questions:

- How is work environment management described concerning company size? What differences are identified between small, medium-sized and large companies, if any?
- How is work environment management described concerning work organisation? Does how work is organised create different conditions for the company's work environment management?

The results of the two research questions are presented under each heading below.

Some of the terms and concepts used in the original Swedish report have no direct equivalents in English, so they are directly translated. For instance, "arbetsmiljöarbete" in Swedish is translated into "work environment management" in English. In the reviewed articles in the report, different terms describe how companies handle health and safety issues, such as occupational safety and health and ergonomics. In cases where individual articles are presented, the specific term appears in the article.

Work environment management in relation to company size

Two themes were identified when analysing the articles related to the first research question: *Systematics and compliance* and *health promotion initiatives*. The results show 23 articles on the theme of *systematics and compliance*. Here, nine comparative studies indicate that there are certain differences based on company size, with larger companies often having more structured and systematic work environment management and a stronger safety culture. However, there is no consistent support indicating that company size is imperative for the quality of work environment management: instead, these

articles also highlight industry, economy, form of ownership, external context, organisational structure and culture as important aspects in relation to work environment management. Ten studies focus solely on the work environment management at small companies by highlighting the criteria for conducting systematic work environment management at small companies and how work environment management is prioritised and perceived at these companies. The results of these studies indicate a lack of implementation of work environment legislation at small companies while also pointing out that small companies are not a homogeneous group but are diverse and their work environment management is influenced by a number of factors. Instead, four studies deal with occupational health initiatives at small companies, and these studies emphasise the importance of initiatives that support increased exchange between occupational health services and small companies with a view to reinforcing work environment management.

The second theme, *health promotion initiatives*, comprises eight articles in total. Four compare the inclination to invest in health promotion initiatives based on company size. The results indicate that large companies are more likely to invest in health promotion initiatives compared to small companies. The remaining four studies instead highlight factors that promote or hinder the creation of healthy workplaces, specifically for small businesses. Committed managers, good internal relations between managers and employees, flat organisations and process-oriented approaches constitute opportunities for creating workplaces that promote health at small companies. A lack of resources, high workload, work environment legislation, a lack of time. Moreover knowledge and demands for profitability are instead identified as challenges in creating workplaces that promote health.

Taking the included studies as a basis, the review of existing knowledge concludes that company size is a significant factor in work environment management but is not an imperative aspect. Thus, other aspects – besides company size – emerge as important for work environment management. However, company size emerges as a significant factor in the inclination to invest in initiatives for creating healthy workplaces. Large companies are described here as investing more resources in health promotion initiatives than small and medium-sized companies. The review of existing knowledge also shows that there is less inclination to implement work environment legislation at small companies compared to large companies, and that small companies use occupational health services to a lesser extent than large companies.

Work environment management in relation to work organisation

Three themes were identified when analysing the articles related to the second research question: *learning, culture, cooperation and support, and participation and involvement in change processes.*

The results show ten articles on the theme of *learning*, two on the theme of *culture, cooperation and support* and ten on the theme of *participation and involvement in change processes*. The articles dealing with *learning* highlight a link between learning at the group and organisational levels and work environment management, as well as learning as crucial to reinforcing work environment management. Moreover, safety culture is highlighted as an important aspect for reinforcing learning processes, which are described as important to work environment management. Instead, the theme of *culture, cooperation and support* highlights the links between cultural aspects and effective cooperation and support, which are discussed as imperative for work environment management. Finally, the theme of *participation and involvement in change processes* highlights the importance of employee participation and involvement for successful work environment management. This is highlighted in articles where successful and less successful ways of implementing change processes are compared and discussed and in articles where the importance of participation and involvement among employees at an operational level, as well as among middle managers, is emphasised as key to conducting change processes to reinforcing work environment management.

Based on the studies included the review of existing knowledge concludes that learning processes at group or other organisational level – in the form of network-based learning, for example – are highlighted as important for reinforcing work environment management. The results also highlight continuous efforts to improve safety culture as an important aspect of reinforcing learning processes, which in turn contributes to work environment management. Furthermore, the results indicate that a high level of staff participation and involvement at all organisational levels reinforces work environment management.

Method

There are different types of specific literature with different focal points and approaches. Implementation of this review of existing knowledge can be likened to what is known as a rapid review, which is characterised by systematisation but does not claim to identify all relevant publications within the area in focus. The assignment was conducted in parallel with a survey with similar research questions, which the Swedish Agency for Work Environment Expertise implemented.

The review of existing knowledge includes 53 articles, of which 31 highlight work environment management in relation to company size and the remaining 22 highlight work environment management in relation to work organisation. We have focused on compiling and thematising the results of the articles. Only peer-reviewed articles were included in the review of existing knowledge in order to ensure the quality of the articles.

The articles are made up of a mix of quantitative studies, usually based on surveys, and qualitative studies, based mainly on interviews and participatory

observations. A total of 22 studies based on quantitative methods and 21 studies based on qualitative methods are included. A further three articles use both qualitative and quantitative methods. The remaining seven articles use other methods, such as specific literature.

Gaps in knowledge

The review of existing knowledge indicates the importance of investigating how work environment management is carried out in relation to both company size and work organisation, alongside other factors. Based on the articles included in the review of existing knowledge, there are areas that still need to be subject to further research, which is usually summarised under the heading “Gaps in knowledge”.

A general conclusion presented by the review of existing knowledge is that more research is needed to show *how* work environment management is conducted in organisations. The first screening of articles excluded many articles precisely because they dealt with how the work environment is rather than how work environment management is carried out. In the selection, many articles dealt with *method development* to improve companies’ work environment or work environment management. However, that differs from describing how work environment management is carried out. Here, we are of the opinion that being able, in a broader sense, to establish links between company size and work organisation in respect of work environment management, where the implementation of work environment management is examined and described in greater depth, also presents a challenge.

The review of existing knowledge indicates that larger companies have more structured and systematic work environment management, not least in terms of compliance, but that company size alone is not crucial for the quality of work environment management; there are also other factors that determine this. However, there is a need for more studies on what determines the quality of work environment management at larger companies. Larger companies have more resources, and usually, their communities have higher social expectations when it comes to living up to a certain standard. However, the activities of larger companies are usually more complex as well. Similarly, there is also a need for more research into what determines the quality of work environment management among smaller companies. Smaller companies often have an inverse relationship concerning the possibility of allocating resources for work environment management, but may have a less complex organisation and structure in their activities, which could lead to enhanced quality of work environment management with simpler initiatives and support such as occupational health services. The fact remains that work environment management for larger companies is usually more structured and systematic, but further conditions and connections remain to be highlighted.

Question 2 regarding the relation between work organisation and work environment management requires additional research that identifies the critical

aspects of planning, organisation, and management of a work environment that can influence the quality, focus, and scope of work environment management within organisations. Of course, a lot of research has been done in the field of corporate management, as well as quite a lot of research regarding work environment management. However, there has not been as much emphasis on planning, organisation, and management for highlight how it affects and is expressed in work environment management.

There is also a need to study the gender aspects of company size and work organisation with regard to work environment management. A significantly larger number of companies are run by men than by women, and for this reason, there is a need to examine how structures, organisation and cultures in both large and small companies, for example, affect opportunities among both men and women for a good work environment. Some research has been done in this field, not least as regarding gender issues with respect to power, gender equality, and equal opportunities in organisations. However, there is a lack of research into the combination of relationships highlighted in this review of existing knowledge.

Given a Swedish context where the organisational and social work environment has been concretised in regulations (AFS 2015:4), as things stand at present there is little research focusing on how these regulations are put into practice. Older studies focus on workload, stress and various forms of victimisation, but research into the practice of the new regulations is largely lacking. There is a major gap in knowledge to be filled here, which is related to this review of existing knowledge. We do not know much about how these regulations are actually organised and implemented at companies of any size.

We note that many industries are represented in the studies included, but there are also newer industries which are not included, such as the computer games industry. Perhaps there is no directly stated reason always to examine new industries on the basis of the focus initiated by this review of existing knowledge, but new technological inventions and innovations frequently create new activities where the activity also affects how the company organises its work, as well as how the work environment is designed. This is why there is always a reason to explore new industries and their working conditions with curiosity.

Ensuring a good work environment for staff who need or choose to work from home presents many employers with another challenge. Opportunities and conditions have altered in several respects in this regard since the COVID-19 pandemic of 2020–2022. The technical criteria and the knowledge and experience of dealing with them have developed at many companies. That said, there are still no clear guidelines on employer responsibility for the work environment when staff work from home. Based on this review of existing knowledge, the issue of work organisation is important, not least regarding the challenges presented when staff do not socialise face-to-face with colleagues. We note that there is still a general lack of research into the impact of working from home and any hybrid solutions on work environment management within organisations.

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Appendix 2: Inclusion and exclusion criteria

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Appendices can be downloaded from the agency's website, www.sawee.se

1. Introduction

The requirements and expectations for a good and stimulating work environment are changing in line with other changes in society. An accelerating pace of technological innovation has greatly changed the landscape in many workplaces. In particular, we see how new media with increased opportunities for teleworking have not only transformed the conditions of work, but also changed social relations and the pace of life [1]. A generally higher level of education at many companies and other workplaces has, among other things, led to increased competitiveness for Swedish companies, as well as to new and heightened expectations of the work environment, for example in terms of safety, participation and skills development for employees. This, in turn, leads to increased demands for many employers to meet these expectations with well thought-out and developing work environment management. In recent years, the regulation on organisational and social work environment management (AFS 2015:4) can be seen as society's response to new requirements for employers to conduct work environment management that matches employees' changing social relations and pace of life.

In Sweden, most companies that have employees have only a very small number of employees, and research shows that time, personnel and knowledge of work environment management are often a limited resource in these companies and organisations [2-3]. For this reason, there is still a need to strengthen this large group of employers in their work environment management. Another important area is the organisation of work environment management. There is currently a strong consensus on the more general policy objectives for work environment management, not least with regard to risk and safety, workload and stress, victimisation and social equality. When it comes to translating these policy objectives into action in companies' operations, the picture is not always as clear and well-defined. At present, there is a need to understand more about the factors that lead to successful work environment management. There are several reasons for this, not least that the general demands on the workplace and working conditions have intensified. Work today is not only expected to be safe and secure, but should also be characterised by development, participation, personal responsibility and learning. Research that focuses on these aspects is therefore important in the pursuit of a deeper understanding of how we can improve our workplaces, regardless of size and organisation. Against this background, this report compiles national and international research on how work environment management is carried out in companies in the business sector, with a focus on whether work environment management differs depending on company size or work organisation.

The assignment

The work was commissioned by the Swedish Agency for Work Environment Expertise and is part of a larger project on work environment and work environment management in Swedish working life. The overall project is based on a survey on work environment and work environment management conducted by the Swedish Agency for Work Environment Expertise in 2019–2020. This survey has been divided into four themes for further investigation.

Within the framework of a theme dealing with work environment management and occupational health services in the business sector, the assignment was formulated to compile both a knowledge overview and an analysis report of the survey results. The component of the assignment dealing with systematic literature review is presented here in this report, while the analysis of survey material is presented in a separate report [4].

The original overall purpose of both the systematic literature review and the analysis report was to shed light on the relation between work environment management and company size and work organisation. Furthermore, the client had specified that the project, within the framework of the assignment, was also to examine publications that highlight occupational health services whilst also dealing with work environment management in relation to company size or work environment management in relation to work organisation. There was also an interest in examining work environment management in small companies.

The systematic literature review and the analyses in the project were intended to answer the following two questions:

- Is there a difference in work environment management that is attributable to company size? If there are differences attributable to company size, what form do these differences take and are they signs of gaps/deficiencies in work environment management or are they indications that other approaches to work environment management are used? There is a particular focus on small companies.
- What are the relation between work environment management and work organisation?

Purpose and research questions

The purpose of the systematic literature review is to identify scientific articles that highlight the relations between work environment management and company size and between work environment management and work organisation in the business sector.

This is investigated through the following two questions:

- How is work environment management described in relation to company size? What differences can be identified between small, medium-sized and large companies, if any?
- How is work environment management described in relation to work organisation? Does the way in which work is organised create different conditions for the company's work environment management?

Furthermore, the questions are delimited using definitions of key concepts (below) and in the literature studies' search strings (Appendix 3) for which literature is included for the respective research question.

Key concepts

Some of the terms and concepts used in the original Swedish report have no direct equivalents in English, so they are directly translated. For instance, "arbetsmiljöarbete" in Swedish is translated into "work environment management" in English. In the reviewed articles in the report, different terms describe how companies handle health and safety issues, such as occupational safety and health and ergonomics. In cases where individual articles are presented, the specific term appears in the article.

In our operationalisation of the concepts of **work environment management, healthy workplace, health promotion initiatives, company size and work organisation**, we have paid particular attention to the areas dealt with in the Swedish Agency for Work Environment Expertise's survey, which is described above [4]. The survey is based on both Swedish Work Environment Authority's regulation on systematic work environment management (AFS 2001:1) and a questionnaire for standardised collection of data on work organisation and learning at work. In Sweden, **work environment management** has generally become conceptually synonymous with systematic work environment management, which is not the case in the same way in other countries. In a Swedish context, the emphasis is on conducting work environment management in a systematic manner, i.e. planned, well thought-out, recurring, documented, evaluated and followed up. The regulation on systematic work environment management defines it as "the work done by the employer to investigate, carry out and follow up activities in such a way that ill health and accidents at work are prevented and a satisfactory working environment achieved" (AFS 2001:1 § 2). In other words, the purpose of systematic work environment management is to prevent ill health and accidents (AFS 2001:1). The new regulation Organisational and social work environment (AFS 2015:4) clarifies this preventive work, but with a clear focus on preventing issues that affect the psychosocial aspects of employees' well-being, such as workload, stress and victimisation, bullying and social exclusion.

There are different approaches to work environment management. The regulation on systematic work environment management is largely based on

a preventive approach that focuses on risk management. Another approach that can be related to “achieving a satisfactory work environment” is health promotion, which instead focuses on what is already working well, with the aim of either maintaining or strengthening it. These perspectives are complementary, as they contribute in different ways to creating safe and **healthy workplaces** where people feel good and thrive [5]. For this reason, **healthy workplaces** and **health promotion initiatives** are related concepts.

In this report, we searched for articles that describe and/or discuss how work environment management is conducted in companies in the business sector, regardless of whether the systematic nature of work environment management is emphasised or not. We also included articles that deal with how work environment management is carried out in relation to either **company size** or **work organisation**.

We have used EU’s definitions of **company size**, but adapted the categories of small and micro companies to the studies included in the project. The basic assumption is that micro companies have fewer than 10 employees or an annual turnover/balance sheet total below EUR 2 million, small companies have 10–49 employees and an annual turnover/balance sheet total below EUR 10 million, medium-sized companies have 50–249 employees and an annual turnover below EUR 50 million or a balance sheet turnover below EUR 43 million [6], and large companies have more than 250 employees. The articles included in the study use different definitions to determine company size, but number of employees is the method most commonly used to distinguish between company sizes. Some articles dealing with small companies include companies with less than 20 employees, while other articles include companies with less than 50 employees in the same category. In some cases, micro companies or self-employed are distinguished. Because of these differences, we use the term small companies when there are fewer than 50 employees and exclude micro companies when they are distinguished in the articles.

Work organisation is a concept that is defined somewhat differently in different contexts. In simple terms, work organisation often refers to an organisation whose activities involve the production of goods or services, but in organisational research it refers to something else more specific. Eurofund [7] argues that work organisation is about the planning, organisation and management of work and the processes by which responsibilities and tasks are allocated:

Work organisation is about the division of labour, the coordination and control of work: how work is divided into job tasks, bundling of tasks into jobs and assignments, interdependencies between workers, and how work is coordinated and controlled in order to fulfil the goals of the organisation. It encompasses the tasks performed, who performs them and how they are performed in the process of making a product or providing a service. Work organisation thus refers to how work is planned, organised and managed within companies and to choices on a range of aspects such as work processes, job design, responsibilities, task allocation, work scheduling, work pace, rules and procedures, and decision-making processes. (Eurofund)

Johansson och Abrahamsson [8 p. 73] write the following [translated from Swedish]:

Work organisation refers to the way in which technology and labour are organised to produce goods or services. A company's work organisation is in constant interaction with the surrounding community.

Based on these definitions, the concept of work organisation in this report includes how work is planned, organised and managed. Our premise is that each work organisation emphasises different factors in its way of planning, organising and managing work, which also creates different conditions for work environment management in the organisation. In this report, we paid particular attention to organisational factors such as learning and change, innovation and development processes and technological adaptation – factors that all have a bearing on work environment management. We looked for articles that describe or analyse the relation between the company's organisation of its work environment management (for example, whether it is proactive/reactive, systematic, based on employee participation, etc.) and the company's general work organisation.

Limitations

The searches were limited to include scientifically reviewed articles in English from 2000 to 2022. Thus, no book chapters or other literature have been included. In addition, included articles deal with companies in the business sector that are deemed to be of relevance in a Swedish context. This means that the systematic literature review includes articles that deal with industries and occupations that also exist in Sweden and that we have deemed relevant for conditions in the Swedish labour market. Thus, articles examining work environment management in coal mines, for example, have been excluded.

Outline

The next chapter briefly describes how the articles were identified, sorted and analysed. A more detailed review of the method can be found at the end of the systematic literature review (see Appendices 1–6). After the brief description of the method, we present the results of the study under three main headings: *Information on included studies*, *Studies that discuss work environment management in relation to company size* and *Studies that discuss work environment management in relation to work organisation*. We then summarise the results and discuss the method in the discussion section. In the final chapter, we present conclusions and gaps in knowledge.

2. Method

In parallel with this systematic literature review, the Swedish Agency for Work Environment Expertise conducted a survey study with corresponding research questions. The project therefore kicked off with a number of meetings between the process manager, researchers and information specialist in order to discuss the assignment and the purpose and research questions of the systematic literature review. The responsible researchers then drew up specific inclusion and exclusion criteria for each research question. A common element of these criteria was that the studies were to examine organisations in the business sector and be of relevance in a Swedish context. The implementation can be compared to what is known as a “rapid review”, which is characterised by systematisation but does not claim to identify all relevant publications in the area of focus [9].

We made decisions about search strings in dialogue between the researchers, information specialist and process manager at the Swedish Agency for Work Environment Expertise. At this point, we also decided to divide the searches into two parts, corresponding to the two research questions covered by the assignment. In the first search string, we wanted to capture articles that deal with how work environment management is carried out in relation to company size. In the second search string, we wanted to capture articles that deal with how work environment management is carried out in relation to work organisation. The information specialist conducted the final literature searches in the databases Web of Science, Scopus, Psycinfo, Socindex and Business Source Complete in April 2022 (see Appendix 3). The searches were limited to include scientifically reviewed articles in English from 2000 to 2022. The searches resulted in 1,693 hits for research question 1 and 1,435 hits for research question 2. Screening of the articles was performed in two steps, with each research question handled separately. In a first step, duplicates were removed and then the remaining 996 and 1,018 articles were scanned based on title and abstract according to the inclusion and exclusion criteria. During the initial scan, 45 articles were included, which means that 951 articles were excluded for research question 1. For research question 2, 139 articles were included, while 879 articles were excluded. During the full text reading, 131 articles were eliminated, usually because the studies dealt with method development or because they were not deemed to be relevant in a Swedish context. In the end, 53 articles were included in the systematic literature review (see Figure 1).

For research question 1, which concerns work environment management in relation to company size, we included articles that examine work environment management in organisations and that clearly discuss the significance of the results specifically linked to company size. Within the framework of these criteria, studies investigating small companies were also included. Research question 2 addresses work environment management in relation to work

organisation. Here we included articles that deal with the relation between the company's organisation of its work environment management (e.g. whether it is proactive/reactive, systematic, based on employee participation) and the company's general work organisation, i.e. the way the work is planned, organised and managed.

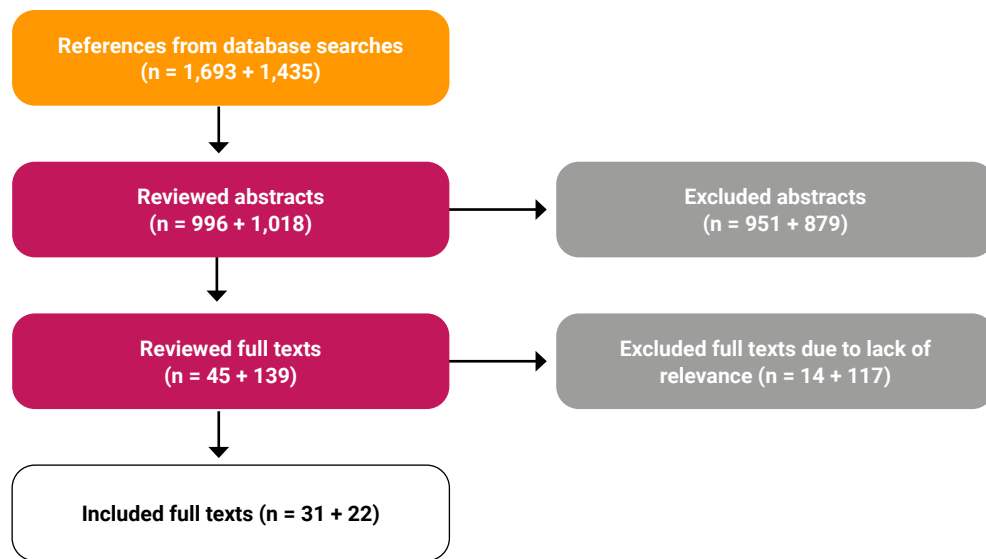
The material was processed and analysed separately for each research question. The articles included after the initial scan were read in their entirety and summarised in tabular form according to a compilation template (see Appendix 4). The compilation in the template served to provide an overview of the content of the articles. Our focus was on compiling and thematising the results of the articles. To ensure the quality of the articles, we only included scientifically reviewed articles in the systematic literature review. Thus, no book chapters or other literature have been included. The compilation of the articles was followed by conventional content analysis [10] in which the compiled material was read by the research team, who manually made notes on the results of the studies. We then compared and sorted the articles according to these preliminary categories. The sorting was discussed in several rounds, leading to the identification of the main themes of the report.

When we read through the articles' results chapters to answer the first research question about work environment management in relation to company size, we identified two different tracks. Both tracks concern how work environment management is carried out, but while the articles on the theme of *systematics and compliance* are based on the meaning of legislation and regulations, the articles on the theme of *health promotion initiatives* are based on how work environment management is carried out with a focus on maintaining or strengthening health in the workplace. Under these themes, the articles were sorted according to whether they compared based on company size, included small companies or dealt with external support from occupational health service providers.

When analysing the material related to the second research question on work organisation, which thus did not focus on company size, we identified the following themes: *learning; culture, cooperation and support; and participation and involvement in change processes*. When categorising material according to these themes, we based the classification on the main content of the articles. This means, for example, an article that somewhat examines safety culture but mainly discusses learning is categorised under the theme *learning*.

The main themes that we identified within the framework of research question 1 were *systematics and compliance and health promotion initiatives*, while those of research question 2 were *learning; culture, cooperation and support and participation and involvement in change processes*.

Figure 1: Selection of articles



3. Results

In the following section, we describe the results. We begin by presenting general information about the articles, and then describe the content and results of the articles. First, we describe studies that discuss work environment management in relation to company size, where we have identified two main themes, namely *systematics and compliance* and *health promotion initiatives*. Then we present studies that discuss work environment management in relation to work organisation, where we have identified three main themes, namely *learning; culture, cooperation and support; and participation and involvement in change processes*.

Information about included articles

A total of 53 articles are included in the systematic literature review. Of these, 31 relate to the research question on work environment management in relation to company size and 22 to the research question on work environment management in relation to work organisation. The articles are published in a number of journals (see Tables 1 and 2), and one a few journals have published more than one of the articles in question. One journal that stands out is *Safety Science*, which published 15 of the articles, almost evenly distributed between the two research questions.

Table 1. Journals, research question 1

Journal	Quantity
AAOHN Journal	1
BMC Public Health	2
Critical Public Health	1
Environment and Planning C-Government and Policy	1
Health Education Journal	1
Industrial Health	1
International Journal of Workplace Health Management	1
International Small Business Journal: Researching Entrepreneurship	1
Journal of Industrial Relations	1
International Journal of Networking & Virtual Organisations	1
Journal of Occupational and Environmental Medicine	1
Journal of Occupational Rehabilitation	1
Law & Policy	1
Occupational Medicine	1
Policy and Practice in Health and Safety	2
Policy Studies	1
Practice Periodical on Structural Design and Construction	1
Safety Science	7
Small Enterprise Research	1
Societies	1
Society, Health & Vulnerability	1
Work: Journal of Prevention, Assessment & Rehabilitation	1
Workplace Health & Safety	1
Total	31

Table 2. Journals, research question 2

Journal	Quantity
Accident Analysis & Prevention	1
Human Factors and Ergonomics in Manufacturing	2
International Journal of Emergency Management	1
International Journal of Industrial Ergonomics	2
International Journal of Occupational Safety and Ergonomics	1
International Journal of Workplace Health Management	1
Journal of Health and Safety at Work	1
Journal of Occupational Health Psychology	1
Journal of Risk Research	1
Journal of Safety Research	1
Journal of Workplace Learning	1
Safety Science	8
Work: Journal of Prevention, Assessment & Rehabilitation	1
Total	22

Several of the studies were conducted in the Nordic Region: 10 in Sweden, 7 in Denmark and 1 in Norway. In addition, 5 studies cover both Sweden and Norway. One article covers studies from Sweden, Denmark, Germany and the rest of Europe. Most of the remaining studies (18) were conducted in different European countries. Some studies were also conducted in other countries, such as Australia (4), USA (2), Canada (4), Iran (1) and Israel (1). The organisations examined in the studies are spread across several industries, and it is also common for organisations in several industries to be examined in the same study (see Appendix 5).

Table 3. Countries

Country	Quantity
Australia	4
Belgium	1
Cyprus	1
Denmark	7
International	1
Iran	1
Israel	1
Italy	1
Canada	4
Netherlands	2
Norway	1
Poland	1
Scotland and Norway	1
UK	6
Sweden	10
Sweden and Norway	5
Sweden, Denmark, Germany and rest of Europe	1
Germany	2
USA	2
Austria	1
Total	53

Several methods are represented, as the material contains a mixture of quantitative studies, usually based on surveys, and qualitative studies, mainly based on interviews and participant observation. In total, there are 22 studies based on quantitative methods and 21 studies based on qualitative methods. A further 3 studies used both quantitative and qualitative methods. The remaining 7 studies used other methods, such as literature studies (see Appendix 5).

Work environment management in relation to company size

When we analysed articles related to the first research question, we identified the following two themes: *systematics and compliance* and *health promotion initiatives*. Most of the articles relate to the first theme and highlight various aspects of how work environment management is carried out in relation to work environment legislation and regulations. The second theme instead includes articles based on a health promotion perspective and highlights the importance of company size in relation to health promotion initiatives at workplaces, as well as opportunities and challenges for health promotion initiatives in small companies.

Systematics and compliance

Nine of the studies identified within the framework of this theme compare how work environment management is carried out in companies of different sizes, usually small, medium-sized and large companies [11–19]. Ten studies focus instead on work environment management in small companies and highlight the conditions for work environment management and how work environment is prioritised and perceived in these companies [20–29]. Four studies deal instead with measures performed by occupational health service providers in small companies [30–33].

Studies with a comparative approach

In some of the studies with a comparative approach, work environment management is described as being better in larger companies than in smaller companies because large companies often have more resources to invest in occupational health and safety (OHS), a more developed systematic approach to occupational health and safety management (OHSM) and a stronger safety culture [11, 13, 16, 19]. Based on a quantitative study, Nordlöf et al. [16] examine whether there is any association between OHSM practices and company size, safety culture and economy. The results show that larger companies had better OHSM practices compared to smaller companies. The results also show that companies with a stable economy and a strong safety culture also had better OHSM practices and vice versa, i.e. smaller companies with an unstable economy and a poorer safety culture had worse OHSM practices. Furthermore, Al-Bayati [11] discusses how larger companies have a stronger safety culture and better safety behaviour, based on a quantitative study of the importance of company size for safety culture, safety climate and safety behaviour. This is because smaller companies do not have the same resources for safety and health management systems as larger companies.

Based on a qualitative study in Italy of differences in employer perceptions of occupational health and safety management according to company size, Bonafede et al. [13] show that employers in micro companies did not see the benefits of working with occupational risk assessment and management activities. Unlike employers in larger companies, these employers also tended to consider occupational health and safety management as a work environment legislation requirement rather than a good thing in and of itself. A slightly

different picture is presented by Sørensen et al. [19], who, based on a quantitative study of physical, chemical and psychosocial work environment, show that the quality of health and safety management systems is higher in large companies than in small companies. However, small companies generally had better psychosocial working conditions compared to larger companies. Furthermore, Sørensen et al. [19] conclude that the type of ownership of the company is more important than the industry in which the company operates when it comes to work environment conditions. According to the article's results, no industry stands out when it comes to the relation between company size and work environment.

Instead, some articles present studies with an approach that compares smaller companies. These articles indicate that the smallest companies work less with learning and training, or that they work with learning in other ways. Furthermore, the results of the articles point to the different conditions and challenges of individual companies and highlight a need for adaptation [12, 17]. For example, Bluff [12] focuses on the requirements that employers have to provide information, training, instructions and supervision for employees in health and safety issues. The article is based on the results of a study of 46 small (0–19 employees) and medium-sized (20–249 employees) companies in Australia, and shows how the vast majority of companies, including all small companies, were characterised by limited work in areas such as informing and training staff in health and safety issues. One conclusion from the study is that it is important to take into account the challenges that smaller companies may face when applying health and safety regulations. However, a quantitative study by Nordlöf et al. [15] indicates that there is no association between small and medium-sized companies' priorities in relation to work environment. Based on a qualitative study, Pinder et al. [17] discuss various challenges in conducting occupational safety and health (OSH) research in micro, small and medium-sized companies, and how these challenges can be overcome. The results show that individuals' background, the type of industry involved, the type of work performed and the organisational culture influence OSH practices more than company size does. According to the authors, the OSH practices of these smaller organisations are characterised by tacit knowledge, "learning by doing" and improvisation, practices that the authors believe are not necessarily more unsafe than more formal OSH practices. The authors instead note that employers have developed the skill of constantly adapting rules and applying them in a changing environment.

Based on five different studies (conducted in Sweden, Denmark, Germany and two at the European level), Zwetsloot et al. [18] discuss successful OSH strategies in large, small, medium and micro companies and emphasise the importance of adapting OSH strategies to the size of the company. Zwetsloot et al. [18] argue that large companies are generally characterised by a better OSH than smaller companies, in part because the former often employ health and safety experts, source external expertise when necessary, and have a good systematic approach to OSH management. According to the authors, however, large companies tend to have a poorer psychosocial work environment.

According to Zwetsloot et al. [18], OSH strategies that work well in small and medium-sized companies involve employees being involved in the health and safety strategy, management commitment and the existence of a OSH management team. Knowledge transfer is important. The article highlights that small companies are in particular need of occupational health services. For micro companies, easy-to-read guides are recommended, which also contribute to a common organisational culture. A good strategy for increasing learning is described as providing company owners and employees with some good examples to work from. In conclusion, Zwetsloot et al. [18] point out that companies function differently depending on their size, organisational structure and culture, as well as a changing external context. The authors therefore argue that strategies for successful OSH management also need to vary and include both top-down and bottom-up approaches. Strategies also need to be adapted to different organisations.

Lehaney et al. [14] present the results of a survey study that examined attitudes to exchange between smaller and larger companies in the construction industry in the UK. The authors argue that it is important for larger companies to help smaller companies with their health and safety management, and suggest that virtual organisations may be one way to do this.

Studies on unique conditions in small companies

Ten studies are part of an ongoing discussion about compliance with work environment legislation and regulations in small companies [20–29]. Most studies show that owners of small companies are less interested in work environment legislation, and that they have a lack of knowledge about the legislation specifically and work environment management in general. This is also problematised in the studies, and differences within small companies and different ways of conducting work environment management are discussed.

Hasle et al. [26] believe that there has been too much focus on how actors outside the small companies can influence the work environment and too little focus on how the people in the small companies, especially the owners, perceive the work environment. The purpose of the qualitative study is to investigate how owners of small companies understand the work environment and the daily work environment management. Twenty-three interviews were conducted with owners of small companies in the construction and the metal industry in Denmark. The focus of the analysis is the social relations that are built up over time in the companies, the owner's identity process, and the significance of these for work environment management. Like Vickers et al. [29] and Baldock et al. [20], Hasle et al. [26] show that small companies are unique and therefore different, and that the interviewees have different perceptions of health and safety issues. The results also show that health and safety issues were considered important, but that the main driver of the interviewees was that they wanted to be good human beings. The interviewees tried to find a way to handle health and safety issues at a level that both employees and industry representatives considered acceptable, rather than trying to fulfil all health and safety requirements. As a result, there was a tendency to downplay risks, a perception

that the regulatory framework is too bureaucratic, and a tendency to shift some of the health and safety responsibilities to employees. The latter is interpreted by the authors as a way for owners to avoid feeling guilty if an employee is injured. Hasle et al. [26] argue that there is a need for other ways of working with preventive work environment management, ways that suit small companies' perception of the work environment and work environment management. MacEachen et al. [28]'s literature study on workplaces in small companies and their processes and understanding of occupational health and safety (OHS) also shows that there tends to be a lack of resources to engage in health and safety issues while, according to the authors, informal social relations can complicate the focus on health and safety needs.

Vickers et al. [29] examine knowledge of and attitudes towards OHS regulation in small companies with fewer than 50 employees in the UK, and how small companies respond to the demands of health and safety inspectors. The study was conducted through telephone surveys with 1,087 participants and 108 interviews with owners and managers, employees, health and safety inspectors, and minority support representatives. The study by Vickers et al. [29] showed that knowledge of OHS regulation was generally low in the companies surveyed. Furthermore, the regulations were often seen as a burden and there was uncertainty among the companies about what requirements exist. The study also identified a perception that high competition makes it difficult to invest in OHS.

Based on the differences, the empirical data was sorted into the following three categories:

- *Avoiders* include companies that avoid legislation and contact with authorities, strive to cut costs and often have unqualified labour and poorer working conditions.
- *Reactors* is the category under which most companies in the study fall. The category includes two different types of companies. One is *minimalists*, who consider OHS a burden, want to cut costs, think that OHS management is a matter of common sense and do not like to comply with legal requirements, but are more visible than avoiders. The other is *positive responders*, who have greater insight into OHS regulation, greater acceptance of the legal requirements, and generally have a qualified workforce and better working conditions.
- *Proactive learners* consist of companies that have a fairly good knowledge of OHS regulation, where health and safety policies and practices are well integrated into the organisation's procedures. Companies in this category see regulations as opportunities for improvement and learning.

Similar results are also reported by Baldock et al. [20] in a quantitative study of small companies in the UK. The article describes small companies as generally having low awareness of legislation and a lower propensity to work preventively. However, the study could not identify any statistical correlation between knowledge of workplace health and safety (WHS) legislation and improvements in work environment. Champoux and Brun [23] examined OHSM in small

companies in the manufacturing industry in Quebec, Canada. Based on telephone interviews with owners or managers of 223 companies, this study also shows that the owners had a lack of knowledge of health and safety issues and did not understand the extent of the health and safety challenges within the companies. The respondents instead gave the impression that there were no problems. According to the authors, this is in line with previous research that has shown that such a perception may actually be due to the companies being isolated in their operations, having a lack of information/knowledge about these issues and a generally low level of preventive work. In spite of this, there was some preventive work within the companies, usually what is required to maintain production.

In a Swedish context, Gunnarsson et al. [25] examine whether implementation support to aid small companies (4–40 employees) with systematic work environment management has any effect. Analysis of 23 companies shows that the companies had difficulty meeting the requirements of the work environment legislation. The conclusion drawn is that implementation support for systematic work environment management for small companies has limited effect – especially considering the costs (time and resources) of the implementation support. Conversely, in a qualitative study of small companies (5–30 employees) in Scotland and Norway, Corneliussen [24] concludes that small companies do not necessarily have either less knowledge of health and safety standards or a lack of motivation to work with health and safety issues. In this study of small companies in biotechnology, the opposite was observed, i.e. that procedures and precautionary measures permeate the organisations.

Several studies emphasise that small companies are not a homogeneous group, but have unique conditions [20, 26, 29]. Baldock et al. [20] show that variations in this respect depended on the conditions and cultural context of the companies. According to Vickers et al. [29], these differences are mainly linked to company size, education, attitudes to WHS legislation, market position, economy and whether there were requirements from health and safety inspectors.

The study by Barrett et al. [21] is also based on the challenge that smaller companies are less likely to adopt and comply with OHS laws and regulations. However, through a literature study and analysis of various blogs and websites, the authors conclude that the public narrative about how small companies handle OHS can also influence how owners and managers of small companies then handle OHS regulations.

Landstad et al. [27] examine the experiences of small business owners in dealing with employer responsibilities in relation to OSHM. Nine business owners in the cleaning sector were interviewed, and the authors identify in particular a form of value-driven leadership that is described as an extension of the person's own values and perception of common sense. The leadership style described is characterised by three elements. The first element is a focus on building relationships with employees in which they are seen as family members and as key factors in the success of the organisation. The second element is that

some responsibility is transferred from the leader to the employee so that the employee has some room for manoeuvre in relation to their duties. The third element is leadership based on good intentions rather than on knowledge of OSHM or knowledge of systematic work environment management. The authors argue that there are both advantages and disadvantages to the leadership style. While some leaders are supportive and good at communicating (their leadership style is seen as contributing to a good psychosocial work environment for the employees), their work is governed by values rather than knowledge of OSHM. The quantitative study by Boustra et al. [22] examines the factors that influence safety performance in micro companies with fewer than 10 employees. This was investigated through a survey of 244 micro companies from different sectors in Cyprus, examining the demographics of the companies as well as factors previously shown to influence safety outcomes, such as whether workers are involved in safety decisions, workers' attitudes towards protective measures, and safety training. The results show that safety was positively affected by work environment policies, risk assessments and access to protective equipment. In contrast, employee involvement in safety decisions and the introduction of a quality management system were found to have less of an effect on safety outcomes.

The articles provide several tips for strengthening work environment management in small companies. Here are a few examples:

- More inspections by regulatory authorities to encourage improvements in work environment management [20, 27].
- Development of simpler and less expensive methods to implement systematic work environment management [25].
- Development of support for small business owners to strengthen their knowledge of work environment managerial work as well as the health and safety knowledge of their employees [27].
- Making it clear that decision-makers and occupational health service providers need to take into account the unique conditions of small companies compared to large companies [28].
- Making it clear that occupational health services play an important role in supporting small companies in their work environment management [27].

Studies on support from occupational health service providers

A few articles examine how smaller companies utilise occupational health service providers, i.e. companies that offer occupational health services. These articles touch on aspects such as the importance of company size and knowledge of health and safety issues in general and the role and range of occupational health service providers specifically [30–33].

Two studies examine the issue from the perspective of smaller companies. The quantitative study by Harrison et al. [31] examines the conditions that lead small and medium-sized companies with 30–250 employees in the UK to purchase services from occupational health service providers. Analysis of

survey data from 387 companies shows that company size and knowledge about occupational health services are important aspects that affect whether these companies purchase services. These aspects are also described by Gunnarsson et al. [30], Schmidt et al. [32] and Vinberg et al. [33] as influencing small companies' propensity to purchase services. In a survey study, Gunnarsson et al. [30] investigate how entrepreneurs in Swedish small companies with less than 50 employees use occupational health services. There were 496 respondents in the first round of the survey, and 251 respondents in a follow-up five years later. The results show that most of the responding companies do not have any agreement in place. This is the case for 80 per cent of the companies with employees and 97 per cent of the companies without employees. The results also show that the small companies that have agreements also showed more interest in health and safety issues and generally had more knowledge about health and safety issues in the company.

Two other studies examined how cooperation is perceived from the perspective of occupational health service providers. In a quantitative study, Vinberg et al. [33] investigate how representatives of occupational health service providers in Sweden and Norway perceive cooperation with small companies with fewer than 20 employees. 87 Norwegian and 51 Swedish occupational health service providers responded to a questionnaire. The results show that small companies in Sweden mainly requested individual health checks, other types of health services and rehabilitation. In Norway, support with work environment managerial systems, workload ergonomics and occupational hygiene were requested instead. The Norwegian occupational health service providers reported to a greater extent than the Swedish ones that they gave advice and information to the small companies and that they talked about the goals of the cooperation and evaluation of the service provider's efforts. The results also show that surveyed occupational health service providers in Sweden believe that small companies tend to have a low interest in occupational health services as well as a lack of knowledge about both health and safety issues and occupational health services. However, demand for training programmes was low in both Sweden and Norway. One of the challenges reported by occupational health service providers in Sweden is that small companies are prioritised less than larger companies because it is less profitable for the service providers to work with small companies. In summary, it is reported that Norwegian occupational health service providers work within a broad spectrum that includes both physical and psychosocial work environment, work organisation and leadership, while Swedish occupational health service providers seem to focus more on the individual with health checks and rehabilitation [33]. Schmidt et al. [32] conducted a qualitative study to investigate occupational health service providers' support to small companies. The survey involved interviews with occupational health service providers and small companies (fewer than 50 employees) that they serviced. A total of 67 interviews were held with occupational health service providers and small companies in their client base. After ten years, 25 follow-up interviews were conducted, which means that the article contributes a longer time perspective and thus enables comparisons over time. The results show that people in the small companies included in the study

felt that they were aware of the range of services offered by the occupational health service providers, but at the same time did not feel that they had any health and safety problems that required the aid of external support to resolve. The most sought-after services were health checks and rehabilitation. In addition, the results show that both occupational health service providers and the small companies were satisfied with the cooperation, which Schmidt et al. [32] say indicates that there will be no major changes over time. The authors also discuss challenges when legislation requires occupational health service providers to sell preventive services aimed at organisations, while such types of services are not desired by small companies [32].

In order to stimulate greater cooperation between occupational health service providers and small companies, the articles provide the following suggestions, among others:

- Creation of networks in which employer and employee representatives of small companies from different industries can meet and discuss health and safety issues, with a particular focus on occupational health services [30, 33].
- That providers adapt the occupational health services they offer to suit the specific challenges of small companies [32–33].
- That occupational health service providers target their marketing efforts specifically to reach small companies [33].
- Efforts to improve the dialogue between occupational health service providers and small companies to encourage such companies to take a greater interest in occupational health and safety [33].
- Efforts to increase small company managers' knowledge of work environment legislation [32] and occupational health services [33].
- Efforts to improve occupational health service providers' knowledge of the daily operations of small companies [32].
- Introduce financial incentives to motivate more small companies to use occupational health service providers [32–33].
- Recruit more health and safety inspectors [32].

Theme summary

To summarise, the studies we identified within this theme indicate that there are certain differences based on company size, with larger companies often having more structured and systematic work environment management and a stronger safety culture. At the same time, some of these studies indicate that the psychosocial work environment may be better in smaller companies. However, there is no consistent support indicating that company size is imperative for the quality of work environment management. Instead, industry, economy, form of ownership, external context, organisational structure and culture are highlighted as important aspects in relation to work environment management.

Studies in this theme also indicate that small companies tend to have little knowledge of work environment legislation and regulations, a lack of understanding of their own health and safety problems, and a lack of resources

to invest in work environment management. At the same time, several articles emphasise how small companies are not a homogeneous group, but rather a diverse one, and their work environment management is influenced by a number of factors. Because of this, several articles also present arguments for the need for other ways of working with preventive work environment management that are adapted to the unique conditions in small companies. Regulatory authorities and occupational health service providers are discussed in some articles as a support in work environment management.

Within the framework of the theme, small companies' interest in, and knowledge of, occupational health services is also described as rather low, and the studies show that the services purchased are mainly health checks. Furthermore, the studies highlight a need for better cooperation between occupational health service providers and small companies.

Health promotion initiatives

Eight articles deal with initiatives to maintain or improve what already works well in workplaces [34–41]. Four of these articles have a comparative perspective in which company size is identified as being of importance for the propensity to invest in health promotion initiatives. The remaining four articles focus instead on opportunities and challenges for creating health-promoting workplaces in small companies.

Studies with a comparative approach

Based on a quantitative study, Beck et al. [35] discuss company size as the main predictor of health promotion initiatives, and how larger companies thus work in a more health-promoting manner than smaller companies. Other predictors are a sound economy and access to internal health and safety specialists. Furthermore, Taylor et al. [38]'s quantitative study shows how smaller companies showed less interest in health promotion initiatives than medium-sized and large companies, even though the initiatives were judged to be effective. Tenney et al. [39] assesses total worker health (TWH) and show that larger companies are characterised by more extensive as well as more systematic health promotion than smaller companies. Thus, this article also discusses how company size is of great importance for health promotion initiatives. These results are also in line with Banwell et al. [34]'s discussion of how it is difficult to implement health promotion initiatives in small and medium-sized companies because it is difficult to find enough time and resources to meet everyone's individual needs and wishes in relation to the health promotion initiatives.

In order to succeed with health promotion, the articles suggest, among other things, the following:

- Taking company size into account and tailoring health promotion activities to different workplaces [38–39].
- To encourage more companies to invest in health promotion activities, the costs of such activities need to be kept down [38].
- Management needs support [38].

Studies on the opportunities and challenges of health promotion in small companies

Two studies mainly describe the opportunities for creating healthy workplaces in small companies. Landstad et al. [37] examine what managers in small companies think is important for creating workplaces with a good work environment in which employees are healthy and thrive. The results show that managers take into account aspects at both the individual level and the organisational level in order to succeed with this. Among other things, factors such as employees being flexible, supportive, committed and social are highlighted as important for success. The authors also argue that a flat organisation in which managers build trust by creating good relationships and getting to know their employees is a good prerequisite for success in creating a healthy workplace and a health-promoting culture. With regard to management, the process-oriented approach is described as an important prerequisite for success; the importance of good communication is also mentioned here. The results show that the managers in the study are well aware of how they can work, i.e. that they have resources in the form of competence for this. In a qualitative study, Wiman et al. [41] examine the ways in which managers in small companies perceive that their company enhances employee health. Overall, the results show that healthy workplaces are created by managers prioritising health. Managers perceived that they can improve the health of employees and also believed that this was good for the company. The initiatives they implemented included providing opportunities for physical activity, free fruit and access to massage. Furthermore, the managers recognised that their own actions had an impact on the employees and they tried to act as role models. The managers believed that the initiatives led to increased job satisfaction and a better psychosocial work environment.

Two other studies focus on the challenges of creating healthy workplaces [36, 40]. In their qualitative study, Hedlund et al. [36] identify external aspects that prevent small companies from investing in health promotion. The study is based on case studies in 8 Norwegian and 10 Swedish companies. The results showed that it can be difficult to understand and implement legislation, and that there is a lack of time and methods to implement the regulations. The authors highlight various factors that can hinder small companies in their development of healthy workplaces: “rigidity” in work environment legislation, lack of available tools and methods adapted to the conditions of small companies, limited use of occupational health service providers and the social security system. However, the authors report that there is both a need for and an interest in increased competence in this area. In another quantitative study, Vinberg et al. [40] examine how small companies approach workplace health management (WHM) after participating in a health promotion development project. The overall results showed that middle managers were torn between creating healthy workplaces and maintaining profitability. Participating in the project led to increased knowledge about work environment and health-related issues for these middle managers, and through network participation, the managers gained both knowledge about WHM and tools to work with this in the workplace.

However, support from senior managers was also important. External factors, such as focus on profitability, demands from customers, legislation, etc., also affected how much the managers could invest in WHM. Middle managers were interested in WHM, but because their workload was so high, it was difficult for them to prioritise implementing the concept. The results are in line with the study by Landstad et al. [37], which also identifies money, the high workload of managers and work environment legislation as challenges to the success of WHM.

To support small companies in creating healthy workplaces, the articles provide the following suggestions, among others:

- Create local or regional networks for managers in small companies to meet and discuss health and safety issues [36, 40]. It is suggested that occupational health service providers can coordinate these networks to improve their cooperation with small companies [36].
- Adapt strategies and tools to support small companies in implementing work environment legislation [36, 40].

Theme summary

To summarise, articles identified within the framework of this theme highlight the importance of company size for the propensity to invest in health promotion initiatives. This is because the results of some of the included studies show that large companies invest resources in this area, while small and medium-sized companies do not do so to the same extent. In addition, some of the articles that we identified within this theme indicate that committed managers, good internal relations between managers and employees, flat organisations and process-oriented working methods represent opportunities for creating health-promoting workplaces in small companies. Lack of resources, high workloads, work environment legislation, lack of time and knowledge, and demands for profitability are instead identified as challenges for the same.

Work environment management in relation to work organisation

When we analysed articles related to the second research question, we identified the following three themes: *learning; culture, cooperation and support; and participation and involvement in change processes*. Ten articles highlight the link between learning at the group and organisational level and work environment management [42–51]. Two articles instead highlight the relation between cultural aspects and well-functioning cooperation and support, aspects that, in turn, are discussed as crucial to/for work environment management [52–53]. Ten articles highlight how the involvement and participation of employees and managers in change processes is important for successful work environment management [54–63].

Learning

One of the identified themes highlights the link between learning at the group and organisational level and work environment management. In some of these articles, learning is discussed as crucial for strengthening work environment management [43, 47, 51]. In other articles, safety culture is instead highlighted as an important aspect of learning processes, which are themselves discussed as important for/to work environment management [45, 48, 49]. Other articles included in this theme instead highlight deficiencies in learning at the organisational level and/or knowledge transfer in relation to work environment management [42, 44, 46].

Based on an action research project, Bottrup [43] examines learning in a network formed with the aim of developing the internal health and safety work of the participating companies (11 medium and large Danish companies). Using the results of this project, the authors discuss how network-based learning improves organisational learning about the work environment. Hasle and Jensen [47] draw on a number of case studies of Danish companies and discuss the importance of the health and safety organisation broadening its competence to include knowledge of organisational theory, change management and learning organisation in order to influence the work environment. In other words, how the ability to learn and change is a kind of prerequisite for strengthening the work environment. Vranjes et al. [51] also identify skills development as an important aspect of so-called high-involvement practices, which in turn are identified as important for the work environment.

Duryan et al. [45]’s qualitative study of knowledge transfer in OHS in the construction industry in the UK instead highlights safety culture as an important aspect of strengthening learning processes that are important for OHS. Based on the results of the study, the authors discuss safety culture as an important aspect for improving organisations’ learning from accidents and incidents, i.e. how a strong safety culture strengthened knowledge transfer. Furthermore, Kongsvik et al. [49] examine how external requirements related

to a health, safety and environmental culture are put into practice based on a qualitative study of two companies in the oil industry. The authors discuss how the results of the study show that the implementation of safety culture led to organisational learning and improved safety behaviour in the companies. Kiyantaj et al. [48] also highlight the relation between a learning organisation and a strong safety culture.

As mentioned above, some of the articles within this theme instead concern deficiencies in organisational learning (learning at the organisational level) and/or knowledge transfer in relation to work environment management. Based on a qualitative study and analysis of incident reports, Akseleson et al. [42] investigate deficiencies in learning from accidents in chemical process industries. The authors discuss how identified weaknesses were linked to undeveloped incident reports, insufficient analysis and inadequate analysis, i.e. that the studied organisations did not learn from accidents. Based on a quantitative study, Doytchev and Hibberd [44] examine organisational learning systems in German high-risk companies and study whether these systems support a safer work system. The results show how deficiencies in the flow of information result in information about accidents, incidents and other activities in the workplace being limited. According to the authors, this reflects a lack of organisational learning related to safety in the companies studied. In a case study of four organisations in Canada, Robson et al. [50] show that the organisations that have improved their OHS have done so through a combination of motivation at the organisational level, new knowledge and a change leader. Finally, Granerud and Rocha [46] use the results of a qualitative study to examine and discuss how certified work environment managerial systems support lower levels of continuous improvement in the management of health and safety issues, such as the reporting of accidents and incidents. However, more advanced improvement methods are linked to the company's overall organisational processes and ability to support more advanced forms of learning rather than an inherent feature of the management system. The importance of having procedures in place to promote staff involvement and the ability to make suggestions for improvement is emphasised here.

Theme summary

In summary, the articles that we identified within the framework of this theme highlight the link between learning at group and organisational level and work environment management. This is done either in studies that indicate how learning strengthens work environment management, or in studies that highlight deficiencies in learning and its consequences for work environment management. This link is illustrated via results that show how what is known as network-based learning can improve organisational learning about the work environment and thus develop work environment management in the organisations that are part of the network(s). It is also illustrated through results indicating that competence development within organisations is discussed as important in/for work environment management. The link is also illustrated through results that show the opposite – how various types of deficiencies in learning at the group and organisational level linked to e.g. insufficient

information and analysis of incidents and near-misses affect work environment and safety efforts in a more negative way. Finally, this theme also highlights how safety culture can strengthen learning processes in organisations that are important for the work environment, for example through results that show that a strong safety culture promotes knowledge transfer (learning) in connection with accidents and incidents.

Culture, cooperation and support

Another theme we identified highlights the link between cultural aspects and effective cooperation and support between people/groups at different organisational levels. These are aspects that are discussed as crucial in work environment management [52–53].

In a qualitative study, Atak and Kingma [52] examine safety culture in a large aircraft maintenance company in the Netherlands, including in relation to production interests during the organisation's development and growth phase. The analysis focuses on tensions between different positions within the company and how these are managed in practice. The study found that privatisation, increased competition and a focus on financial gain challenge the safety culture. Atak and Kingma [52] argue that the safety culture within the organisation was problematised by the maintenance technicians in the start-up phase of the company, but that management focused more on productivity and commercial interests. This, combined with the weak position of quality assurance staff within the company, meant that safety interests were somewhat neglected. Over time, however, management, quality assurance managers and maintenance managers worked closely together to develop a safety culture that does not compromise too much on quality, safety or profits. The approach has, above all, presented a dilemma for the maintenance managers who, under time pressure, have had to manage conflicts of interest between health and safety and productivity.

In a quantitative study, Bunner et al. [53] investigate safety professionals' experiences of organisational support and safety climate in Austria. The results show that well-developed organisational support leads to a stronger safety climate, but did not show that a strong safety climate was linked to the perception of organisational support.

Theme summary

To summarise, this theme highlights the relation between cultural aspects and effective cooperation and support, which in turn are discussed as crucial to/for work environment management.

Participation and involvement in change processes

This theme highlights the importance of employee involvement and participation in change processes for the success of work environment management. This is highlighted both by articles in which successful and less successful ways of implementing change processes are compared and

discussed [56, 58], and by articles in which the importance of involvement and participation among employees at the operational level [54–55, 59, 62–63] as well as among middle managers [57] is emphasised as being key to conducting change processes with the aim of strengthening WHP. Within the framework of this theme, two articles concerning adaptation during a crisis are also included [60–61].

Two articles compare different ways of conducting change processes to strengthen the work environment. Via a case study (two companies in Sweden with fewer than 50 employees), Karlton [58] examines how change processes can strengthen ergonomic improvements in small and medium-sized industrial companies. The study compares two different strategies for change work: action-driven change and vision-driven change. Action-driven change is described as an active experience-based improvement process in which problems are first identified, followed by efforts to solve the problems at once. Vision-driven change, on the other hand, is described as characterised by new ideas with a focus on thoughts about changes that could lead to goal achievement for the company. The results show that the changes led to the achievement of goals in one company, but not in the other. According to Karlton, the main reasons for this difference were the management approach and the financial resources made available. In the successful company, the positive outcome was reinforced by visible results, such as the immediate implementation of ideas for improvement. In the second company, the absence of visible results made resistance and passivity more legitimate, impeding change. Thus, according to Karlton [58], this suggests that a successful change process requires the company to quickly implement proposed actions and to make the positive results visible to employees. Through case studies in seven Canadian industrial companies, Harrisson and Legendre [56] explored how technological change was managed and combined with organisational changes that lead to greater worker participation, and with the introduction of a health and safety programme, and how this combination of changes affected the incidence of occupational accidents and diseases. The companies studied were divided into two groups, those with a traditional organisation and those with a modern organisation. In the traditional companies, technological changes were few and did not challenge the hierarchical and authoritarian management style, although workers questioned it. The prevention of occupational accidents and diseases was addressed at the same time as technological change, but the two processes were not closely integrated. Technological changes and minor organisational innovations had an ambiguous impact on health and safety at the workplace. Workers were critical of how changes were implemented without systematic consultation and without taking their needs and values into account. In the modern companies, many ambitious attempts were made to integrate technological and organisational changes with workplace health and safety. According to the researchers, the introduction of teamwork and increased autonomy should have resulted in increased safety, but it did not. The result was a “watered-down version of teamwork”, where the beneficial effects were dampened by the retention of an old authority structure, resulting in operational standards that were difficult for workers to endure. Harrisson

and Legendre [56] have shown that technical and organisational systems must act in harmony and not be governed by old authority structures if they are to contribute to a better work environment in the workplace.

Five studies specifically highlight the importance of employee involvement and participation in change management linked to work environment management [54–55, 59, 62–63]. Eklöf et al. [54]’s quantitative study shows, among other things, that employee participation in work environment management (efforts to improve the work environment) was linked to perceptions of improvements in the work environment via perceptions of lower demands, more social support and lower levels of stress. In a quantitative study, Ingelgård and Norrgren [55] examined the experiences of organisational change among representatives from 69 companies in the private and public sectors in Sweden. The purpose was to provide suggestions for improvement in terms of how organisational changes to strengthen the work environment (ergonomic improvements) can be implemented. Contrary to previous studies, management commitment was not found to be the most important factor for change results. Instead, employee participation and process-related factors were at least as important. The authors believe that strategies for implementing organisational changes to strengthen the work environment can be enhanced through an increased focus on learning where employees participate to a greater extent. The role of managers is also described as important, primarily in terms of involving employees in the change process and ensuring that they have the opportunity to influence that process. A learning strategy based on employee participation is therefore advocated as a complement to traditional change projects. In his qualitative study on OHS certification of companies, Kristensen [59] also highlights the importance of increasing employee participation in OHSM. In a quantitative study, Widerszal-Bazyl et al. [63] examined whether employee influence in organisations’ decision-making processes is significant for workplace safety. A questionnaire was answered by managers in 192 companies in Poland. The results show that employees’ direct participation in organisational decision-making, even if not directly related to work environment, had a positive impact on workplace safety. Furthermore, Roy [62] examined how the OSH management in twelve companies in Canada was affected by the introduction of self-directed teams. The qualitative study shows that the OHS management was greatly affected because the self-directed teams took over much of the responsibility for OHS management that was formerly handled by people with managerial responsibility. This meant that more decisions were made directly in the teams and that managers with health and safety responsibilities made fewer decisions. Although the results indicate that the reorganisation of OHS management resulted in increased well-being for the employees, there was some confusion about where the responsibility actually lay.

In a case study with more than 400 participants in six organisations in Denmark, Justesen et al. [57] examined organisational changes aimed at implementing WHP. The results show that it is challenging for middle managers to implement WHP initiatives in their workplaces, and that they demand more knowledge and also more time if they are to integrate the perspective into their

daily work. Justesen et al. [57] argue that middle managers play a key role in successful implementation in organisations and recommend that management offers more support to middle managers in their leadership.

Rather than examining planned change processes, Mengolini and Debarberis [60] and Rapaport and Kirschenbaum [61] examine adaptation within organisations during crises. In a qualitative study of thirteen organisations in Israel, Rapaport and Kirschenbaum [61] conducted observations of managers and employees during a crisis. The results show that the main contributor to maintaining daily operations during a crisis was employees adapting to the situation based on what they felt was expected of them as employees. The results thus show the importance of building organisational structures that enable employees to identify, discuss and address problems they experience in their daily work. In other words, it is giving employees more autonomy and room for decision-making – a kind of decentralisation – in order to “move” problems from the individual level to the collective level, thereby also improving the work environment. Finally, Rapaport and Kirschenbaum [61] show that employees in companies in crisis performed better if the workplace felt safe in the sense that management took care of them and their families and included them in decision-making. In a case study, Mengolini and Debarberis [60] analysed the progression of a crisis situation in a Dutch research reactor and the subsequent long- and short-term activities (top-down and bottom-up) undertaken by the organisation to address the safety culture deficiencies that the crisis was attributed to. According to the authors, the case represents an interesting example of how employee motivation and participation in improvement activities are key to managing the work environment and addressing safety culture issues. More specifically, it discusses, for example, how cross-functional improvement teams and follow-up interviews aimed at self-assessment have promoted a more open social climate and “blended” different sub-cultures (safety cultures) in the organisation. The authors discuss how this points to the most important lesson: the importance of involving staff in identifying necessary improvement activities.

Theme summary

In summary, this theme highlights the importance of employee involvement and participation in change processes for the success of work environment management. Here, some articles point to the importance of the change methods applied in connection with work environment management ensuring employee participation and for any successful results to be made visible as soon and as clearly as possible to those involved in the change process. Other articles point to the importance of pursuing a form of decentralisation in the context of health and safety change management in order to promote room for decision-making, autonomy and involvement of the people (employees) affected by the change. These articles also address the importance of promoting transparency in the organisation, so that any risks and problems related to the work environment can be identified.

4. Discussion

This section begins with a discussion of the results in which we summarise the results from the two research questions based on the results section. This is followed by a discussion about how the material can be evaluated. We then discuss the method and its limitations in a method discussion.

Discussion of results

As described above, we identified five themes when analysing the results of the included studies. These themes were *systematics and compliance*; *health promotion initiatives*; *learning*; *culture, cooperation and support*; and *participation and involvement in change processes*. The first two highlight work environment management in relation to company size, while the last three deal with work environment management in relation to work organisation. The results are summarised in the text below.

Of the 31 articles that highlight company size in relation to work environment management (i.e. research question 1), we identified 23 articles on the theme of *systematics and compliance* and 8 articles on the theme of health promotion initiatives. Within both of these themes there are studies that compare companies of different sizes. Overall, several comparative articles indicate that large companies often invest more resources in work environment management, which is described as systematic and structured, compared to small companies. In addition to company size, however, industry, economy, form of ownership, external context, organisational structure and culture are also discussed as important in relation to work environment management. Thus, these articles identify a number of aspects of importance for work environment management, rather than identifying company size as a single determining factor [11, 13, 16, 18]. Furthermore, 4 comparative studies highlight that company size is of great importance for whether companies choose to invest in initiatives to create healthy workplaces, with large companies described as investing more in this than small and medium-sized companies [34–35, 38–39].

Within the framework of the first research question, there are also 18 articles that focus specifically on the conditions of small companies. Some of these articles highlight how work environment management is conducted and perceived in small companies, and generally point to deficiencies in knowledge and implementation of work environment legislation and regulations. At the same time, some studies [18–19, see also 41] highlight how the psychosocial work environment tends to be better in small companies than in large ones. Several articles also emphasise that small companies are not homogeneous, and that how they conduct work environment management is affected by a number of factors, i.e. not just by company size [20, 26, 29]. Furthermore, some

studies describe small companies as well suited for health promotion initiatives because they are characterised by an open climate, close relationships and flat organisations – factors that are said to be advantageous for such initiatives [37]. However, there is also discussion of how profitability requirements, legislation, the high workload of middle managers and the lack of available tools and methods pose challenges for small companies in terms of investing in health promotion initiatives [36, 40].

Finally, occupational health service providers in small companies are also highlighted within the framework of this theme [30–33]. Occupational health service providers represent a support function with knowledge of health and safety and work environment management, which companies are required by the Work Environment Act to use when necessary. The results of the articles indicate a certain lack of interest in cooperation from both parties and that small companies have knowledge gaps in relation to health and safety. The studies also highlight how small companies with an interest in health and safety and work environment management are mainly those who sign agreements with an occupational health service provider, which shows the importance of strengthening the exchange between occupational health service providers and small companies.

Of the 22 articles that concern work environment management in relation to work organisation (i.e. research question 2), we identified 10 articles on the theme of learning, 2 articles on the theme of *culture, cooperation and support*, and 10 articles on the theme of *involvement and participation in change processes*. Overall, these articles can be described as pointing to the importance of clear work environment managerial work and organisation, cooperation and good relations. The articles emphasise how important it is that all employees' input is used to create improvements in health and safety/work environment management, and that at the same time there is an openness and interest in the organisation for learning, knowledge transfer and improvement work. Thus, learning is highlighted as important for strengthening work environment management [43, 47, 51], while deficiencies in learning and knowledge transfer/information are described in relation to deficiencies in work environment management [42, 44, 46, 50].

The articles also highlight safety culture/climate as important both in relation to learning [45, 48–49] and in relation to well-functioning cooperation and support between different levels in the company. This is discussed as being important for work environment management [52–53].

The articles identified on the theme of *involvement and participation in change processes* particularly highlight how successful work environment management is dependent on employees at the operational level being involved and participating in change processes [54–55, 59, 62–63]. The important role of middle managers in change processes is also emphasised [57]. Two articles comparing different forms of change processes point to the importance of management implementing measures quickly and making these measures visible to staff [58]. The opposite, that staff do not feel that their input is taken

into account, is described as being worse for the work environment [56]. The importance of an organisational structure in which staff have their own room to manoeuvre and feel that management has their best interests at heart [60] is also highlighted, as is the importance of staff being motivated to adapt to crises [61].

In summary, the results highlight the importance of structured work environment management, which in combination with other structural and cultural aspects creates clarity in work environment management. Cultural aspects involve, for example, taking advantage of input from staff at different levels as well as promoting openness and interest in learning and constantly improving work environment management.

Evaluation of the data

The included studies have investigated different research questions, in different types of companies in different industries in different countries. There are both national differences in how work environment management is regulated in different countries and differences between industries, making it challenging to compare the results of the studies – especially since they also examine different aspects and use different terminology. One example of such a challenge is the Swedish regulation on organisational and social work environment (AFS 2015:4), which is not discussed in the same explicit way in other countries. It is also important to realise that the emphasis on work environment management can be seen as an expression of other societal debate and policy-making.

At the same time, the fact that several of the included studies examine multiple industries is a strength of the material, as it means that the results can be relevant to people in several industries.

The methods used in the studies are fairly evenly distributed between quantitative (22) and qualitative (21) approaches, which contributes to the breadth of the material. Results from the studies with quantitative approaches can, to varying degrees, be generalised outside the context in which the studies were conducted, while results from the studies with qualitative approaches contribute knowledge about the issues studied in their specific context. When similar issues are investigated, the results complement each other. For example, Beck et al. [35] argue that the results showing that small companies invest less resources in health promotion activities compared to large companies can be generalised to countries other than Germany, where the study was conducted. This suggests that the results are also interesting in a Swedish context. Studies with a qualitative approach [38, 40] that investigate similar issues contribute to a deeper understanding of the challenges that small companies face when investing in health promotion activities, in this case in Sweden and Norway. Ten studies use case studies as a method, which is expected since the studies selected would be about how organisations conduct work environment management. Case studies are often considered a suitable methodological approach for this purpose. There is a variety of data in these studies. While some articles examine 10–12 organisations in several industries [see 34, 47,

62], others examine how work environment management is carried out in one or two organisations [see 52, 58, 60]. Some case studies use quantitative methods, while others use qualitative methods, and some use both quantitative and qualitative elements. The generalisation claims therefore vary widely even within studies using case study methodology.

Discussion of methodology

Den här litteraturstudien ledde till en kunskapssammanställning som täckte This literature study led to a systematic literature review covering 53 articles, of which 31 highlight work environment management in relation to company size and the remaining 22 highlight work environment management in relation to work organisation. The included articles were published in English in scientific journals between 2000 and 2022 and have undergone a scientific review process prior to publication. The systematic literature review was conducted in two parallel tracks based on either work environment management and company size or work environment management and work organisation. Separate searches were thus conducted for the respective tracks, and the searches differed from each other. The literature search for articles dealing with work environment management and work organisation resulted in a number of articles with clearly varying content. We therefore chose to include more articles in the initial screening in order to get a clearer picture of the content by reading full texts. After the reading, we only included articles that could be said to be about how work environment management is conducted in the organisation, which meant that most of the articles from the initial screening were excluded. If these articles had been excluded in the initial screening, time would have been saved.

At the request of the Swedish Agency for Work Environment Expertise, we conducted the literature searches in five databases instead of two, as previously recommended by the Agency for knowledge syntheses. This meant that we identified several duplicates, which had to be deleted manually in the Rayyan program.

An important aspect to discuss when it comes to literature studies is the extent to which bias may have affected the selection of articles. We have taken several measures within the framework of the review to minimise the risk of this. First of all, the work was carried out by a group of researchers, not just one person. This means that several people worked together to formulate search strings and inclusion and exclusion criteria, and that at least two people were involved in discussions on the inclusion and exclusion of articles. In addition to the research team, a process manager and information specialist were also involved in parts of the work. However, it should be noted that the research team comes from the same research field and has thus sorted and read abstracts and full texts based on this field – in this case mainly from a sociological perspective on work environment management. This means that if researchers from another discipline had conducted the same search, they might have made a slightly different selection.

The systematic literature review focuses on results that emerged in previous studies, hence elements such as methods and theories were not in focus. However, these elements were included in the reading of the full texts in order to provide a holistic view of the studies included. Since, as mentioned, the results of the studies were the focus and since all articles had already undergone scientific review before they were published, less time was spent on the quality review of included articles. Instead, the research team noted concerns about quality and discussed these within the group. However, a rigorous quality review of the included articles would have strengthened the credibility of the review.

5. Conclusions

The purpose of the systematic literature review was to identify scientific articles that highlight the relation between work environment management and company size and between work environment management and work organisation in the business sector.

This was investigated through the following two questions:

- How is work environment management described in relation to company size? What differences can be identified between small, medium-sized and large companies, if any?
- How is work environment management described in relation to work organisation? Does the way in which work is organised create different conditions for the company's work environment management?

Based on this systematic literature review, the importance of company size for work environment management emerges as an important but not decisive aspect. In addition to company size, other aspects also emerge as important for work environment management. When it comes to the importance of company size for the propensity to invest in initiatives to create healthy workplaces, a more unambiguous result is revealed, whereby large companies are described as investing more resources in health promotion initiatives than small and medium-sized companies.

The results of the systematic literature review also show that small companies are less inclined to implement work environment legislation than large companies. The results also show examples of how small companies approach work environment management in somewhat different ways than large companies, such as "learning by doing", and consequently variations are also demonstrated within small companies. The results also show how small companies utilise services from occupational health service providers to a lesser extent than large companies.

Based on this systematic literature review, learning processes at the group and organisational level are highlighted as important for strengthening work environment management. The results also point to safety culture as an important aspect for strengthening learning processes, which in turn contributes to work environment management. Furthermore, the results indicate that a high level of involvement and participation on the part of staff at all organisational levels strengthens work environment management.

Gaps in knowledge

The systematic literature review shows the importance of investigating how work environment management is carried out in relation to both company size and work organisation, alongside other factors. Based on the articles included in the systematic literature review, there are a number of areas that still need to be the subject of further research, which is usually summarised under the heading of "Gaps in knowledge".

A general conclusion that the systematic literature review shows is that more research is needed that actually shows *how* work environment management is carried out in organisations. The first screening of articles resulted in many articles being excluded because they dealt with what the work environment is instead of how work environment management is carried out. In the selection, many articles dealt with *method development* aimed at improving companies' work environment or work environment management. However, that differs from describing how work environment management is carried out. Here we believe that the challenge also lies in being able to establish relations between company size and work organisation, respectively, with respect to work environment management, where the implementation of work environment management is examined and described in a more in-depth manner.

The systematic literature review shows that larger companies have more structured and systematic work environment management, not least in terms of regulatory compliance, but that company size alone is not the deciding factor for the quality of work environment management, but that there are also other factors that determine this. However, there is a need for more studies on what determines the quality of work environment management in larger companies. Larger companies have more resources and usually higher social expectations from the surrounding environment to live up to a certain standard, but larger companies usually also have a higher complexity in their respective operations. In a similar way, there is also a need for more research on what determines the quality of small companies' work environment management. Smaller companies usually have an inverse relation regarding the possibility of allocating resources for work environment management, but may have a less complex organisation and structure in their operations, something that with simpler efforts and support, such as occupational health services, could lead to increased quality in work environment management. The fact remains that larger companies usually have more structured and systematic work environment management, but there are additional conditions and relations to be highlighted.

Based on question 2 on the relation between work organisation and work environment management, there is also a need for further research that highlights aspects of the planning, organisation and management of a work organisation that are important for the quality, focus and scope of work environment management in organisations. There is, of course, a lot of research in the area of business management as well as some on work environment management, but not as much with a focus on planning, organisation and management in order to highlight how it affects and is expressed in work environment management.

There is also a need to study the gender aspects of company size and work organisation in relation to work environment management. A significantly larger number of companies are run by men than by women. For this reason, there is a need to investigate how, for example, structures, organisation and cultures in both large and small companies affect women's and men's opportunities for a good work environment. There is some research in this area, not least on gender issues regarding power, gender equality and

equal opportunities in organisations. However, there is no research on the combination of relations highlighted in this systematic literature review.

Based on a Swedish context, where the organisational and social work environment has been concretised in a regulation (AFS 2015:4), there is currently not much research focusing on how these regulations are put into practice. There are older studies that focus on workload, stress and various forms of victimisation, but research application of the new regulation in practice is largely non-existent. There is a major knowledge gap to be filled here, which relates to this systematic literature review. We do not know much about how this regulation is actually organised and implemented in companies, either large or small.

We note that many industries are represented in the included studies, but there are also newer industries, such as the computer games industry, which are not included. There is perhaps no directly given reason to always investigate new industries based on the focus areas that this systematic literature review initiates, but new technological inventions and innovations often create new operations that also affect both how the company organises its work and how the work environment is designed. For this reason, there is always a reason to curiously examine new industries and their working conditions.

Another challenge for many employers is to ensure a good work environment for those who need or choose to work from home. Since the 2020–2022 COVID-19 pandemic, opportunities and conditions have changed in this area in several respects. The technical conditions and the knowledge and experience of dealing with them have developed in many companies. At the same time, there are still no clear guidelines for the employer's responsibility for the work environment when employees work from home. Based on this systematic literature review, the issue of work organisation is important, not least in terms of the challenges that may arise from not physically socialising with colleagues. We note that there is still a general lack of research on how working from home and any hybrid solutions are important for organisations' work environment management.

6. References

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