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An examination of the current evidence for selection criteria between different types of stress management interventions

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Abstract

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In the public consciousness, poor workplace stress management has been considered a major cause of negative health outcomes for at least the past five decades, and in response to this, stress management interventions (SMIs) have arisen as a perceived solution. SMIs are intended to solve the perceived negative outcomes of stress on both the level of the individuals' wellbeing and on the level of the organization's efficiency. However, these interventions can vary significantly in their type and scope, and concerns are often raised that organizations are choosing the contents of their SMI inappropriately. This and ongoing mixed evidence on the efficacy of these interventions leads to serious concerns about the viability of SMIs in solving the problems they are intended to solve, which is not necessarily being reflected in the overall awareness of SMIs as it exists at the level of policy and legislature. The purpose of this thesis is to assess the overall state of the literature to conclude on how strong and reliable the existing data is regarding the suitability of different intervention types to different types of organizations, and whether it could be used to form criteria for organizations to decide what type of SMI would suit their unique needs. It is easy for researchers to point the finger at decision makers and accuse them of planning their SMIs inappropriately, but in order for them to do it right, resources must exist which give them the guidance needed to make correct determinations. This thesis has aimed to assess the degree to which this is the case and has made preliminary recommendations. In order to accomplish this, many interviews, literary sources, articles, essays, reviews, and studies were analysed and comprised into an overall literature review.

Keywords: Stress, Stress Management Interventions, Eustress, Distress, Wellbeing

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Glossary

Cognitive Behavioural Therapy (CBT) – a type of treatment in the field of psychotherapy that focuses on giving individuals tools to change unhelpful or unhealthy ways of thinking, feeling, and behaving.

Psychosocial environment – the interaction between individuals, communities, and the sources of stress in their environments.

Psychosocial safety climate (PSC) – Shared perceptions regarding policies, practices, and procedures for the protection of worker psychological health.

Randomly Controlled Trial (RCT) – a form of study design where the participants in the programme and the members of the control group are chosen at random from the same eligible population.

Stress Management and Wellbeing Intervention (SMI) – An intervention intended to alter the psychosocial environment of an organization to improve various outcomes (well-being, productivity, reduced turnover, etc.).

1 Introduction

The subject of this thesis is stress management and wellbeing interventions, also called stress and wellbeing interventions (henceforth referred to as SMIs or interventions), specifically analysing the currently available evidence for effective selection criteria between different types based on the unique needs of organizations. Stress, well-being, and specifically SMIs are widely researched topics. However, within this body of research, there is a limited amount of analysis dedicated directly to providing real, practical advice to organizations regarding how they may select between different types of SMIs and correctly identify the type of intervention that will bring relief to their particular circumstances. While analyses and papers exist that assess SMIs as broadly practiced and offer some instructions to organizations as to how to assess their needs, these frameworks and instructions are not the focus of their respective works.

As such, a literature review is necessary to gather currently available information regarding practical advice for selection criteria for organizations regarding what type of SMI is likely to suit their specific organization's circumstances. Type here is not meant to only imply the category of the SMI as it is traditionally defined but also how the SMI is implemented in practice. The purpose of this thesis is to see if it is possible, within the currently available body of evidence, to find information that would practically guide organizations regarding how to identify the method of intervention that will suit their specific needs and implement it. In doing so it is intended to offer an analysis that gathers the conclusions of many different groups of researchers in different sources and assesses the overall state of the SMI literature concerning how suitable available evidence is in answering these questions.

Through this process, this thesis is meant to give managers and other decision-makers at organizations real, practical advice that they can use to determine whether or not a specific type of SMI is suitable to their needs and therefore

avoid expending unnecessary resources on a costly long-term project which is unlikely to produce positive results. This is especially important given the prevalence of legislation in regions such as Europe to promote organisational-level SMIs as solutions to negative health outcomes in the workplace (Randall, Nielsen, Tvedt, 2009: 1).

2 Key Concepts

2.1 The origin of the stress concept and SMIs

Stress as a specific concept causing physiological and psychological symptoms in individuals is relatively new, having first been used to describe phenomena in animals and humans in 1946. During the latter half of the 20th century, SMIs arose as a response to an increased sense within the field of public health of poorly managed stress having deleterious effects on individuals and organizations (Bienertova-Vasku, Lenart, Scheringer, 2020). SMIs are a relatively general concept, referring to an enormous range of different types of managerial interventions, from major interventions on an organisational level to restructure corporate environments, to more modest, individual interventions to give employees greater ranges of coping tools, such as through the introduction of yoga. As such, SMIs are at once studied by practitioners of many different fields, such as psychology, endocrinology, sociology, etc. (Riva and Chinyio, 2018).

2.2 Stress management interventions

SMIs are an application of stress management principles to individuals and organizations that are experiencing mismanaged stress. Due to the wide availability of data on SMIs in larger enterprises, this thesis will be focused on them as they are practiced in that context. On an organisational scale, SMIs are planned interventions, intended to create changes in their practices, which are in turn intended to alter their psychosocial environment to be more conducive to

employee satisfaction and productivity. On an individual scale, SMIs are intended to support specific employees within the organization through various means. Through SMIs, organizations hope to increase overall employee well-being and productivity, decrease employee turnover, decrease absenteeism, increase levels of social support within the organization, improve communications between employees, especially between managers and subordinates, and improve overall job satisfaction (Johnson, and O'Connor, 2018).

2.3 Eustress-distress distinction

From a corporate point of view, SMIs can be seen as invaluable interventions in terms of their ability to address structural deficits within the workplace. It is widely perceived that mismanaged levels of organisational stress are a major source of potential lost productivity and cause significant unnecessary expenditure (Erickson, 2021). Organisational distress is defined as negative stress, arising in the workplace most typically from excessive workload, low levels of social support among employees, weak management, and an inability for workers to express concerns or grievances in a meaningful way. It is thought that organizations with high levels of distress experience higher costs from recruiting and staff shortages due to higher levels of employee turnover. Conversely, organizations with poorly managed psychosocial environments might experience insufficient levels of eustress; positive levels of stress which properly motivate employees and offer them sufficiently challenging work environments in which they have the opportunity to appropriately grow their competence. Eustress, being less well studied and defined, is sometimes referred to in the literature as adaptive stress instead. It should be noted that some researchers have contested the eustress/distress distinction altogether, preferring a more comprehensive definition, and indeed this distinction is absent in some of the relevant literature (Bienertova-Vasku, et al., 2020).

2.4 Commonly used categories of SMIs

Although SMIs are extremely varied in definition and practice, researchers who study the effectiveness of SMIs tend to divide them into three distinct categories: primary, secondary, and tertiary, following previously accepted principles in the field of human health, as shown in Table 1:

A typology of stress management interventions

Intervention type	Individual	Organisational
Primary	Selection and Assessment Pre-employment medical examination	Job Redesign Management training, e.g., mentoring Working time and schedules
Secondary	Mindfulness training Health promotion, e.g., exercise CBT Relaxation Meditation Personal and interpersonal skill training Acceptance and commitment therapy Psychosocial intervention training Coping skills training Resilience training	Improving communication and decision-making Conflict management Peer support groups Coaching and career planning
Tertiary	Employee assistance programmes Counselling Posttraumatic stress assistance Disability management	Vocational rehab Outplacement

Table 1: Typology of Stress Management Interventions (Adapted from Holman, Johnson, and O'Connor, 2018: 4)

Primary interventions are designed to prevent distress from occurring in employees. On an individual level, this could be done through stringent selection assessment, ensuring that managerial candidates are fit in terms of experience and character for the role and that the level and type of stress associated with the position suits them. It could also involve pre-employment medical examinations. On an organisational level, they involve redesigning jobs or workplaces more fundamentally to minimize sources of distress, adjusting

working times and schedules, for instance by implementing flexible working hours. They could also involve management training and mentoring. (Holman, et al., 2018: 3-4) Most primary organisational SMIs as reported in the literature could be classified as job redesign interventions, at least partially because there is strong empirical evidence that job characteristics are a key factor in causing organisational distress (Demerouti, et al., 2001).

Generally, secondary SMIs are intended to help employees and organizations develop compensatory mechanisms to manage stress responses in individuals once the stressful factor has already occurred. However, this category also tends to be applied to improvements in communications and decision-making when deficits in those areas could be considered stress factors themselves. On an individual level, they might involve various types of training to help employees develop the skills necessary to cope with and manage stress, such as through meditation, relaxation techniques, mindfulness training, etc. More complex multimodal interventions will involve a combination of these practices combined with cognitive behavioural therapy (CBT). On an organisational level, secondary SMIs aim to give employees coping mechanisms through peer support groups, communications training, and conflict management training. However, the distinction between primary and secondary organisational SMIs can be vague (Holman, et al., 2018: 5).

Finally, tertiary interventions are fundamentally reactive and are intended to minimize the consequences of stress-related symptoms after the initial stressful event has already occurred. The concept of stress management as it is used in organizations most commonly refers to either secondary or tertiary interventions. (LaMontagne and Keegel, 2007: 269). With the intent of treating injury caused to the employees of an organization by its poorly managed psychosocial environment, tertiary interventions involve counselling and employee assistance programmes on an individual level. On an organisational level, tertiary interventions are designed to create mechanisms by which employees who are suffering from burnout may be managed and rehabilitated.

Though there is some discussion as to whether all three categories apply to both individual, and organisational-level interventions, it is common to define primary, secondary, and tertiary interventions on both the individual and organisational levels (Holman, et al., 2018, p. 4). Sometimes in the SMI literature, individual, individual/organisational, and organisational-level interventions are thought incorrectly to correspond roughly to primary, secondary, and tertiary prevention strategies. Giga, Faragher, and Cooper (2003: 293) state that this assumption is incorrect, and all three categories can be practiced at all levels. This is the position that will be taken in this thesis as it seems to be the most contemporarily adopted and supported by evidence.

2.5 Psychosocial constraints

The four psychosocial constraints in the work environment can be classified as low job control (inability to make decisions about work, inability to use or develop important skills, lack of creativity, etc.), high job demands (excessive workloads, high time constraints, mentally demanding work, frequent interruptions, conflicting demands from managers, etc.), low recognition (not receiving warranted respect at the workplace, unreasonably low compensation, no promotion prospects, etc., no access to interesting tasks) and low social support (unfriendly, unencouraging social environments in the workplace, uncaring and otherwise incompetent supervisors). This is known as the Job Demand-Control-Support model and, these constraints are thought to significantly impact workplace mental health (Portoghese, et al., 2020) and must therefore be considered in the assessment of the workplace's psychosocial environment.

3 Purpose and aim of the research question

It is repeatedly noted by researchers in the field of stress management, such as in a 2018 systematic review of the manufacturing sector (Riva and Chinyio, 2018) and a notable review of SMIs in 1999 (Briner and Reynolds, 1999: 659)

that the type of SMI chosen by an organization should be based on a thorough examination of the unique factors and challenges facing it. However, it is not immediately clear from the available literature what exactly these factors are, how they should be systematically considered by managers in organizations, or how significant these individual factors are to the success of SMIs in organizations.

While many researchers pursuing a systematic analysis of SMIs in the workplace have evaluated the commonplaceness and success of different types (Holman et al., 2018, Chesak et al., 2018), the evaluation of how the circumstances of the organization being researched affected the success of the specific SMI seems to be more limited. The need for practical solutions to the issue of workplace stress was clearly described by Professor Sir Cary Cooper at the opening conference of the European Academy of Occupational Health Psychology in Rome, Italy 2010: “We have enough science on what causes people to get ill in the workplace... We know the problems, what we now have to do is get solutions” (Cooper, cited in Biron, 2017).

As such, if it is indeed the case that there are significant differences between the success of different categories of SMIs in general or based on their fit to an organization’s unique circumstances, these factors should be made as clear as possible to ensure organizations do not expend unnecessary resources and can choose the category and type or combination of different types of SMIs which most suits their needs. In this thesis, available literature has been assessed to determine what evidence there is currently available to indicate to organizations what type of SMI will be suitable to their needs. This has been done on a general basis by assessing the evidence indicating the effectiveness of different types of SMIs in general and on a specific basis by assessing available information on whether different types of SMIs are more likely to succeed in organizations under specific circumstances. With this information, what techniques or resources organizations might have available to make determinations regarding these factors in their organizations will be examined, and the overall state of the literature has been assessed.

4 Initial analysis of the strengths and weaknesses of relevant literature

To find appropriate sources, the electronic academic databases ResearchGate and PubMed were heavily utilised, focusing on more recent sources, when possible. However, other sources of information such as interviews found on platforms like YouTube and literary sources were also considered. Sources were chosen based on their suitability in assessing the overall state of SMI literature and their specific suitability in answering the research question. Within the sources listed, there is an enormous quantity of data and analysis regarding this topic, and to limit the scope of the thesis it was necessary to exclude directly analysing many other sources of equal scope which were of lower relevance.

4.1 Status of overall research on SMIs

Stress management interventions are a major ongoing subject of research, due to the emerging nature of stress management as an interest within many fields of business. Workplace stress as an issue has also recently been more widely recognized, with the American Psychological Association's 2014 *Work and Well-Being* survey noting that only 61% of Americans felt they had the resources to manage their working stress (Tetrick and Winslow, 2015: 2). Reviews assessing the overall state of SMIs can be quite positive, for instance, researchers writing a systematic review on SMIs in the field of manufacturing noted that every single study selected for the review had been at least moderately successful (Riva and Chinyio, 2018).

However, there are also strong voices of criticism speaking against perceived methodological errors and biases in the field. A 1999 literature review stated that "the available evidence suggests that these interventions often have little or no effect, and where they do have effects, these may be both positive and negative", and that "clearly, the research and writing surrounding organisational-

level stress interventions does not take the form of a neutral scientific debate” (Briner and Reynolds, 1999: 647-8). This influential source analyses the body of literature on SMIs and concludes that organisational-level interventions tend in practice to have mixed to negative effects and contests the underlying assumptions between the modern push for the widespread implementation of SMIs. These criticisms have continued in following decades, with a 2014 review finding that several systematic reviews assessing the impact of organisational-level interventions on outcomes such as “work-life balance, mental health, general health and well-being, job stress, injury prevention, and psychosocial and health effects” found a demonstrable lack of consistency for effects (Montano, Hoven, Siegrist, 2014: 1-2).

However, interest in the field of stress is still strong and many studies, reviews, and analyses continue to be published. For instance, a Web of Science search for “distress” in February 2020 showed 16,400 items (Bienertova-Vasku, et al., 2020: 1) and most of the 14 systematic reviews being analysed by a scoping review published in 2022 having been published between 2019-2022 (Fadel, Roquelaure, and Descatha, 2022).

4.2 Challenges in parsing literature

There are significant issues with parsing the available research on the topic. As a broad, multidisciplinary practice, stress management is vulnerable to poorly defined terminology, and the definitions used vary significantly between researchers, especially between different regions. When evaluating literature on SMIs, careful effort has to be made to interpret the terminology utilized as precisely as possible to be able to create like-to-like comparisons, especially between individual studies. This is especially the case since SMIs are not practiced consistently or systematically in practice, due to strong differences between different types of SMIs (Holman, et al., 2018: p.4).

4.3 Wellbeing definition and relevance

The subject of stress management also draws some of its current emphasis from the overall increase in public awareness of wellbeing. Wellbeing, though notoriously difficult to define can be understood as the combination of feeling good and functioning well and has been gaining increasing prominence in both the public consciousness as well as academia in the 21st century (White, 2010: 160-63). In the adult population, work constitutes a significant portion of waking hours and activities – for example, in the EU, the average working week is 37.5 hours long (Eurostat, 2023). Therefore, it stands to reason that an increase in social awareness and academic interest in wellbeing will correspondingly generate at least some increase in the awareness of workplace stress management, workplace stress being thought to be one of the most important factors influencing our experience of work, be that positive or negative (Erickson, 2021). The concepts of stress management and well-being are therefore linked, and it should be stated that much of the positive improvements being discussed in the literature as resulting from SMIs on the individual level can be defined as increases in overall employee well-being, and studied under this context (Lipovac et al., 2020)

However, it is wrong to fully conflate workplace stress management and employee wellbeing. The relationship between the two was analysed thoroughly in the 2006 paper titled: “Relationship between HRM, company performance and employee wellbeing”. The authors state that due to an increase in the overall level of international competition between companies in recent decades, HRM, according to them traditionally thought of as a “guardian of employee wellbeing” (though this definition is contestable) is now more so thought of as a tool of increasing employee efficiency (Vanhala, Tuomi, 2006: 242). Therefore, it is important to remember that the relationship between employee well-being and even an intervention like an SMI, the potential positive effects of which should clearly be directly beneficial to employees is not direct. Regardless of the strong overlap between the two in practice, interventions can be understood by organizations themselves as tools to increase workplace efficiency and

profitability, not necessarily to objectively improve the well-being of their employees.

5 Overall research results

5.1 Causes of SMI failure

One of the most effective ways it is possible to assess recommendations regarding SMI implementation is to observe the evidence in the literature describing how they fail. For this, this thesis examined Biron and her team's 2017 research paper "Conditions Facilitating Managers' Adoption of Organisational Interventions Designed to Prevent Mental Health Problems in the Workplace" (Biron et. al, 2017). This paper is highly valuable due to its focus on assessing the actual mechanistic causes of SMI failure, with researchers having noted the failure of the field to assess the actual mechanisms of SMIs previously (Briner and Reynolds 1999: 648). Biron also discusses these factors extensively in her 2017 video summary of the research paper (Biron, 2017), which also contains information about her personal experience with SMIs which is not revealed in the paper. The study noted 11 findings, the most relevant of which are described in the next section, leading to 3 general recommendations.

5.1.1 Pillars of organisational health interventions

Biron (2017) defines the pillars of organisational-level interventions as the content, process, and context of the intervention. Part of what makes an SMI work is the actual content of the intervention; and the activities that are going to be implemented to prevent stress and improve wellbeing. However, a significant factor determining the success of an SMI is the process of diagnosing issues, planning out the activities, conducting risk assessments, evaluating successes and failures, etc. The third major factor is the context of the organization; whether it is facing downsizing or other major changes, whether there will be major figures ultimately responsible for implementing the intervention etc. All of

these factors are highly relevant to the success of the intervention and the success or failure of the intervention is dependent on all three. There is a strong base of evidence for the influence of psychosocial constraints in workplaces on negative outcomes like absenteeism, personal health risks to employees, both mental and physical, lower job satisfaction, etc., and Biron (2017) insists as a consequence that the contents of SMIs should be focused on managing these constraints.

5.1.2 Psychosocial constraints

Multiple studies have demonstrated issues of low job control, social support, high job demands and an effort-reward imbalance in Canadian workers. Further, there is strong research that finds a relationship between social support from managers and negative health outcomes such as “high blood pressure”, “cardiovascular disease”, “depression/anxiety”, “job satisfaction”, “turnover rate”, “absenteeism”, and “productivity” (Biron, 2017). Consequently, managerial ownership of the intervention is a primary factor to its success; when managers feel that the intervention is being pushed upon them when they do not feel that it is something that they have decided or are not obligated to be committed to, the actual implementation of the intervention is much more likely to fail Biron (2017).

5.1.3 Factors leading to managers’ ability to implement practices

Biron (2017) describes the factors and beliefs that facilitate the ability of managers to implement healthy management practices. Extensive questionnaires were utilized to analyse the beliefs and resources of managers at various points in the study. Managers who adopted management practices “that foster mental health” at time 2 in the study had the following qualities at time 1:

1. A perceived strong Psychosocial safety climate – a perception that a commitment to the psychosocial safety of the workers is shared not only at the

employee level but through to the top level of management. According to Biron (2017), this concept has been linked to a significant reduction in the risk of depression and is a major cause of the success of SMIs in practice.

2. Greater job control – managers who feel overloaded with work, who experience cuts to their workforce or staff shortages in general, who do not receive adequate budgets etc. are significantly less able to implement interventions. In addition, managers who do not feel that they have the resources to control their employees' psychosocial constraints also fall into this category, as exemplified by the following quote from an interview of one of the participants of the study.

“When someone enters my office and I see that they are not feeling well, I listen, I open the door to chat. I can refer them to the EAP if needed. This is the part I can control. But collectively, we are not yet there, we are unable to manage psychosocial constraints. ... it is the sphere that has been the most neglected at the moment” (Biron, 2017).

3. Lower psychological distress – managers who are themselves experiencing heightened levels of distress are less able to provide aid to their employees. As Biron (2017) states, “You are unable to offer what you do not have”. It is difficult for managers to promote the psychological health of their employees when they feel overworked and have inadequate social support. This aspect of the workplace psychosocial climate is overlooked by implementors of interventions, despite its obvious importance (Biron, 2017). If the managers of an organization are facing significant amounts of distress, this should be the priority of any intervention, as it will be difficult to properly implement any other processes otherwise.

4. Relationship with subordinates – if the managers have an unhealthy relationship with their subordinates their ability to implement and make recommendations for processes will be negatively impacted (Biron, 2017)

The effect sizes of these factors as observed in the study are displayed in Figure 1:

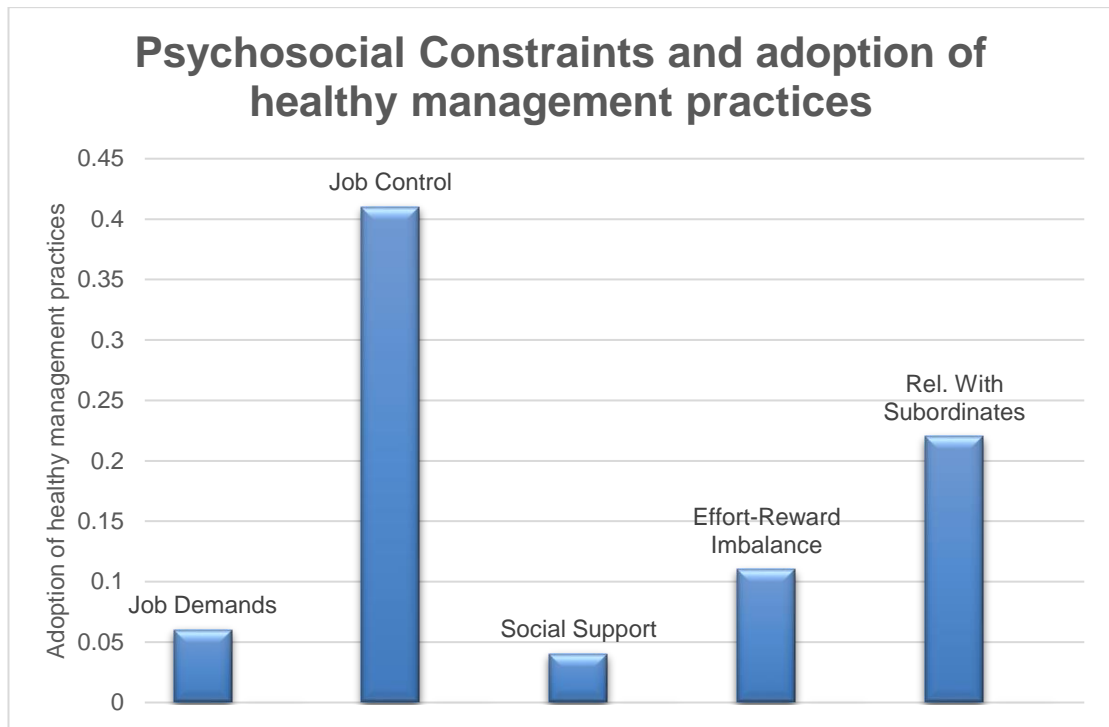


Figure 1: Psychosocial constraints and the adoption of healthy management practices (adapted from Biron, 2017)

Job control was the most important factor influencing the adoption of healthy management practices, with relationships with subordinates being a significant secondary factor, and job demands, social support, and effort-reward imbalances also having a noted effect.

5.1.4 Effective portions of interventions can be invisible to participants

Biron (2017) notes that often the aspects of interventions that have the most significant impact on the mental health and stability of the organization are not necessarily obvious or even conceptualized by the employees of said organizations as actually being part of an intervention. In many cases, even when being directly interviewed, managers at organizations in which interventions were taking place answered directly that they did not believe that any interventions were being conducted, although this was actually the case,

and they were participating in them. Leadership programmes especially are often not seen by managers at organizations as SMIs, despite having a significant impact on the overall psychosocial climate of the organization. Biron (2017) believes that often the aspects of interventions that have the greatest impact on psychosocial risks are those that target management practices, and not necessarily the aspects which are most flashy or visible.

5.1.5 Management commitment

There is an overall of the overall literature to find that management commitment is a significant facilitating factor in the success of the intervention. While not necessarily the most important, it is the factor that is most reported by the participants, possibly due to its visibility. Participants mention “strained labour-employer relations”, “complexity of the prevention approach” and a “lack of physical proximity of workers” as significant factors hindering managerial commitment to the intervention” (Biron (2017). The impact of management commitment is not only practical but psychological; when higher levels of management are openly committed to the intervention it helps sell them to lower levels of management and workers.

5.1.6 Misallocation of resources and lack of managerial tools

It is important to assess the circumstances of the organization in a risk assessment phase of the intervention in which the psychological distress faced by workers is assessed. However, Biron (2017) notes that organizations will often dedicate a grossly excessive amount of the overall resources dedicated to the intervention in this phase, thus leaving completely insufficient resources for the actual implementation of the intervention. Managers also need to be provided with real, concrete tools for the intervention to have any practical effect. A quote by a manager interviewed during the study describes this issue; “I think that things stall because managers don’t know where to begin, and the committees don’t know exactly what to work on (...) I think it’s really a question of ignorance...” (Biron, 2017).

The factors most often reported by study participants as enabling or obstructing the intervention are displayed Figure 3:

SPECIFIC FACTORS MOST OFTEN REPORTED BY PARTICIPANTS (N=22 interviews)

SPECIFIC FACTORS	Enabling		Obstructing		TOTAL
	N	%	N	%	N
CONTEXT					
Top Management's commitment	13	59	9	2	15
Promotion of the process	8	36	9	2	10
PROCESS					
Line Managers' Commitment	5	23	18	4	9
Employees' commitment	6	27	18	4	10
Financial resources available, Steering committee	8	36	-	-	8
CONTENT					
Lack of relevance/tools to enable managers to act	-	-	32	7	7

Table 2: Specific factors most often reported by study participants (adapted from Biron, 2017).

From this table, it is clear that factors in the context of the intervention (top management's commitment, promotion of the intervention) were reported as enabling the intervention and rarely reported as obstructing it. Interestingly, "financial resources available, Steering committee" was the only factor that was never reported to have an obstructing impact on the intervention – showing the importance of financial resources.

5.1.7 Recommendations and Conclusion

Based on these findings, the study (Biron, 2017) makes 3 recommendations about SMI practices.

First, “implement preventive interventions aimed at the managers’ psychosocial environment” – one of the primary benefits of the study is that it highlights the need to manage the manager's psychosocial environment as part of the intervention protocol. Managers who are in a good mental state and perceive their organizations as being committed to mental health are the only ones who will be optimally able to implement interventions. Organizations often underestimate the effect of the manager's psychosocial environment, which tends to have a cascading effect on the overall level of stress in the organization.

Second, “support the implementation of interventions on psychosocial constraints by providing managers with tools and resources” – one of the primary issues cited by managers in the study is the lack of tools and resources they were provided to actually improve their psychosocial environments during interventions.

Third, “identify the relationships between the various organisational interventions underway and employees’ mental health” – management practices are often “informal and unstructured and not regarded as an integral part of preventive interventions”, in contrast to the findings of the study which found that management practices are an integral part of the outcome of the intervention.

These recommendations provide valuable context in assessing the other findings of the thesis.

5.2 Primary, secondary, and tertiary categorisation system of SMIs

The categorisation of SMIs themselves should be a subject of scrutiny. The “primary, secondary, tertiary” categorisation system of SMIs follows the categorisation of disease prevention in other fields of human health – primary interventions meant to intervene before disease occurs, secondary interventions meant to identify disease in the earliest stages, and tertiary interventions meant to manage disease which has already been diagnosed (IWH, 2015) Within

these categories, there's a generally accepted principle that interventions earlier, primary, or at least secondary interventions, are ideal and produce better results: as the saying goes, "an ounce of prevention is worth a pound of cure". Briner and Reynolds pointed out this underlying principle as a cause of the overall push for organisational, vs individual-level stress interventions: "First, tackling the presumed causes of stress is seen as more effective than simply trying to deal with the presumed effects of stress – in other words, prevention is better than cure" (1999: 649). A significant distinction between the prevention of stress and the prevention of disease is that stress can be positive and even vital, while the same can rarely be said for disease. Therefore, direct parallels between disease prevention and stress prevention can be dangerous and overly simplistic, since SMIs should be intended to manage workplace stress in a more nuanced manner. In some cases, professionals should even recommend an increase in the overall level of stress factors for some positions, for instance through increased responsibilities and workloads, often in the form of increased job control. This begs the question of whether the primary-secondary-tertiary categorisation system is even effective concerning the issue of SMIs or if it does not mislead researchers and practitioners towards applying concepts from other fields of human health inappropriately. And indeed, the primary-secondary-tertiary system is not mentioned in some literature, even when the context of the study might call for it (Fadel et al., 2022).

5.3 Recommendations between different fields

Different fields of business have significantly different operating environments and therefore, the sources of stress and the mechanistic nature of daily work can be radically different depending on the organization. Consequently, it seems possible that approaches to SMIs should vary based on if the organization being targeted is, for instance, a healthcare provider, a manufacturer, or a marketing agency.

The nature of SMI literature makes creating recommendations for specific fields of business difficult – the vast majority of the sources assessed for this thesis

made no comment on the field of business SMI's were practiced in, whether this had an effect on the SMI, or whether SMI's of different categories or in general tend to be more effective in specific fields.

In the SMI literature, this information tends to come in the form of meta-analyses and literature reviews that assess SMI practices in specific fields, such as Riva and Chinyio's (2018) review of the manufacturing sector or Chesak et al.'s (2019) review of SMI's in the nursing sector. These analyses, to at least some extent, attempt to break down SMI practices in these specific fields and assess the effectiveness of different categories in different contexts. By using these types of analyses, it seems possible to form a sort of selection criteria based on the field of business of one's organization. This seems to be the highest level of analysis that is currently available regarding this issue. No review or analysis was found that assessed this question directly (whether the field of practice significantly affects the success rate of different types of SMI's) or even strongly commented on it.

5.4 Controversies within the field, progress since early studies

One of the first things noticed during the research phase of this thesis is that within the field, there is an enormous amount of disagreement and public debate. These controversies range from various issues such as the efficacy of different types of interventions, the efficacy of organisational-level SMI's in general, what types of organisational interventions should be classed as SMI's and whether the supposed negative effects of stress have been proven (Briner and Reynolds, 1999), the causes underlying SMI failure (Biron et al., 2017), how the stress factors faced by organizations should be conceptualized, regarding either the eustress-distress distinction (Bienertova-Vasku, et al., 2020), whether randomly controlled trials (RCTs) are adequate for assessing organisational-level SMI's (Montano et al., 2014) or whether the effects of SMI's should be conceptualized positively or negatively (Pandey and Gaur, 2005: 1-3) and so much debate that it cannot all be named here and could itself be the subject of a full literature review.

The issue of SMIs touches at once on a number of highly politicized issues within the fields of public health, psychology, management, and more, and consequently invites a significant amount of debate regarding SMIs themselves and how they and the investigations into them are conducted. A movement urging caution in the study of SMIs which started with articles like Ivancevich et al.'s (1990), which stated that "(the) present knowledge about SMIs is largely based on anecdotes, testimonials, and methodologically weak research" lead to Briner and Reynolds (1999) claim that the study of SMIs is subject to overt positive bias, and that "the research and writing surrounding organisational stress interventions does not take the form of a neutral scientific debate". This is perhaps an inevitable consequence of the complexity of the issue at hand; the issue of stress, having only recently been scientifically conceptualized (Bienertova-Vasku et al., 2020) is difficult to understand, politically important, impactful in our daily lives, and highly nuanced.

Therefore, in answering the research question, it is necessary to reconcile the highly varying views on SMIs and the severity of the stress issue as it is discussed in different papers. Research papers such as "The costs, benefits, and limitations of organisational level stress interventions" (Briner, Reynolds, 1999) and "The Development of a Framework for a Comprehensive Approach to Stress Management Interventions at Work" (Giga et al., 2003) heavily criticize the methodology of SMI research, the absence of clear evidence for negative health outcomes associated with stress, and the effectiveness of SMI practices. Similarly, a 2014 review found inconsistent outcomes for a range of positive effects in organisational-level SMI reviews (Montano, et al., 2014: 1-2). In contrast, some more recent studies (and the older studies that the aforementioned analyses were intended to criticize) such as "Conditions Facilitating Managers' Adoption of Organisational Interventions Designed to Prevent Mental Health Problems in the Workplace" (Biron et. al, 2017), and "Stress Factors and Stress Management Interventions: the Heuristic of "Bottom Up" an Update from a Systematic Review" (Riva and Chinyo, 2018) speak positively about at least specific types of SMIs. In her summary of the work (Biron, 2017), Biron makes the claim that organisational-level SMIs tend to

produce either neutral or positive results, and rarely bad ones (a stark contrast to claims made by Briner and Reynolds).

Part of the discrepancy in attitudes can be explained by the belief that despite flawed evidence, organisational-level interventions are based on accepted, sound principles. Many researchers continue to believe that since organisational-level interventions are usually based on well-validated theory, they are unlikely to be inherently ineffective (Randall, et al., 2009: 2).

It should be considered whether the field of SMI research and practice has moved forward from the era of the 20th century and adopted more stringent methodological practices and more effective SMI design frameworks, or whether the more modern researchers are simply guilty of the same ideologically driven optimism described by Briner and Reynolds in 1999. This is extremely difficult to accomplish in practice, but credence can at least be given when the claims made by more modern researchers are sufficiently specific. Biron et al. (2017) for instance analyse and make conclusions on SMIs that fall under a specific model of practice and are not necessarily referring at once to the entire field, which possibly explains their significantly more optimistic results.

While there are some indications that optimism for research in the past two decades is warranted, the results are mixed. One more modern meta-analysis (Johnson and O'Connor, 2018: 794) concluded that there is now convincing evidence for the effectiveness of both individual *and* organisational-level SMIs. However, it still criticized the field for poor methodological practices and a lack of research on long-term effects – indicating that even if the results are valid, is still possible that organisational SMIs in practice have overall neutral to negative effects past the observation period of modern studies. A scoping review of systematic reviews of “Interventions on Well-being, Occupational Health, and Aging of Healthcare Workers” published based primarily on reviews published between 2019-2022 found negative results for a wide variety of interventions in terms of addressing mental health issues. In it, 13 reviews focusing on such types of interventions as “Wellness initiatives” and “Tai Chi Once a Week” were

found to have low to very low evidence for improving mental health (Fadel et al., 2022). Montano et al. (2014: 2) noted the absence of RCTs as a limiting factor in the current body of literature on organisational-level SMIs and argued that objections within the field to RCTs being inadequate for SMI evaluation were based on flawed reasoning.

Based on these sources it seems likely that there are enduring methodological issues affecting the accuracy of especially organisational-level SMI research even in the past 20 years, and the overall body of evidence for the effects of organisational-level interventions.

5.5 Broad vs narrow interventions

While some researchers (Cooper and Faragher, 2003: 294) will inevitably suggest that companies adopt wide-reaching, comprehensive strategies for stress management interventions, this seems like an easy claim to make given that a more comprehensive approach will typically yield better results since it covers a wider range of factors. However, limitations in managerial and financial resources can make these sorts of comprehensive interventions spanning every aspect of an organization costly and difficult to implement. Some evidence exists which supports the idea that more comprehensive interventions are more likely to be successful, for instance, a 2014 systematic review found that “Success rates were higher among more comprehensive interventions tackling material, organisational and work-time related conditions simultaneously.” (Montano et al, 2014: 1).

The overall results also seem to support this conclusion. Given that multiple reviews found that organisational-level interventions tend to produce neutral results (Brian and Reynolds, 1999, Fadel et. al, 2022; Giga et al., 2003), a more comprehensive approach that has the opportunity to produce positive results along multiple different axes of attack seems more likely to produce positive, rather than neutral, or negative results in the aggregate. This would not be the case if there was strong evidence to indicate that SMIs tend to produce

negative results, but the proof for this is weak, with none of the sources assessed in this thesis having found this to be the case in more than a minority of cases.

5.6 Examination of the causes of neutral results for organisational-level SMI reviews

There seem to be multiple different possibilities and factors assessing the nature of the mixed results and opinions held within the field regarding the effectiveness of organisational-level SMIs.

The first is that SMIs are systematically practiced in an incompetent or otherwise deficient manner. As Montano et al (2014: 1) found, success rates of interventions seem to be higher among “more comprehensive interventions tackling material, organisational and work-time related conditions simultaneously.” This conclusion is also supported by other studies, particularly “Conditions Facilitating Managers’ Adoption of Organisational Interventions Designed to Prevent Mental Health Problems in the Workplace” (Biron et Al., 2017), and appears to follow intuitively from the findings made, though it is far from proven. The overall attitude in the field seems to be that organisational interventions are based on sound principles and fail due to deficits in the way they are practiced (Randall et. al, 2009: 2). This assumption, if true, would be understandable. SMIs are complex, prone to failure for several major reasons, and seem to often be misunderstood by managers who are implementing them, to the point where occasionally interventions begin, and workers are unclear as to what activities the intervention is actually supposed to be comprised of. It could be the case that interventions seem to so often be found to produce mixed to negative results in practice simply because organizations commit to them without understanding the resource commitment needed to make them work, or without understanding the activities they are meant to be comprised of and rush to implement a poorly thought-out plan. SMIs, due to their complex nature, seem to require a high level of organisational cohesion and competence, and many of the underlying factors which lead to organizations experiencing mismanaged stress are also cited as factors negatively impacting

the success of the SMI – for instance, the manager's psychosocial environment (Biron et. al, 2017)

However, there are also other potential factors to consider. Another possibility is that there are fundamental underlying flaws in the way that SMIs are practiced in the field, and this inevitably leads to a failure to reach the desired results. This would mean that even when organizations that are sufficiently committed, cohesive, and competent implement a plan that follows broadly accepted principles, they will fail to produce positive results on average because those principles are flawed and unlikely to produce those results.

It is also possible that the role of stress as it is understood in causing negative outcomes in the workplace is exaggerated by the field. This is supported by Briner and Reynolds (1999) assertion that the overall body of evidence regarding the negative health effects caused by workplace stress is weak but is opposed by more modern and comprehensive research showing a statistically significant effect on several negative health outcomes (Mensah, 2021).

5.7 CSPM Framework and the ongoing nature of stress management

“The Development of a Framework for a Comprehensive Approach to Stress Management touches” (Giga et al., 2003) touches heavily on several of the issues that relate to answering the research question. One of the issues the authors highlight is the dynamic, ongoing nature of stress and the need for the psychosocial environment of the organization to be continually assessed for positive outcomes to be maintained. This includes the CSPM Framework (as seen in Figure 2):

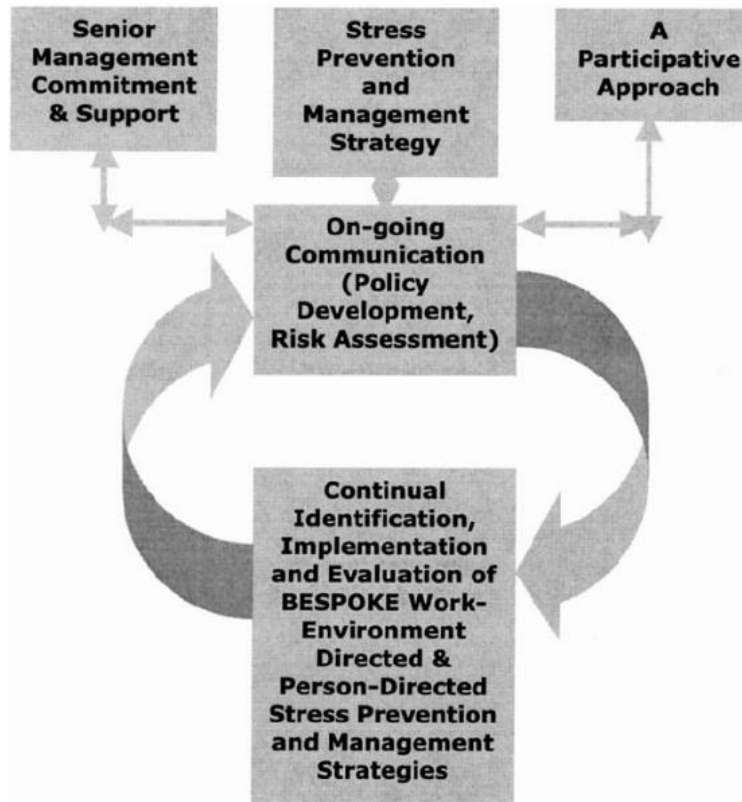


Figure 2: A framework for comprehensive stress prevention and management in the workplace (Giga et al., 2003: 290).

This model emphasizes the need for commitment to long-term change from senior management as part of the intervention process. In addition, it emphasizes the need for employee involvement in the “planning, implementation, and evaluation of change in organisational development and job re-design”. The paper’s primary claim in this regard is that any organisational-level intervention can only be implemented properly with long-term commitment by upper management and by considering the needs of employees at every level of the organization to form concrete, formal policies.

The paper concludes that stress management, rather than something that should be considered at the level of an intervention, should be considered a lifelong organisational commitment of which the SMI is only a part, and which must be followed by a rigorous attitude towards supporting the psychosocial safety climate (Giga et al., 2003). It seems possible that one of the causes of

the negative findings in literature regarding the effects of organizational-level SMIs is caused by this lack of long-term thinking.

5.8 Organisational vs individual-level interventions

According to some sources, initial evidence (between roughly 1970-1999) for individual-level SMIs was relatively weak (Briner and Reynolds, 1999). However, despite more promising and consistent later studies, general occupational health principles like the “hierarchy of controls (Montano et al., 2014: 1) lead to an overall movement to shift SMIs in practice from individual-level SMIs to organisational-level SMIs. Montano et al. (2014: 1) note the “WHO’s Global Strategy for Occupational Health for All (1994), the UK Management Standards, (and) the European Directive 89/391 – OSH” as examples of “influential policy statements and initiatives” in which this principle is evident, with the authors believing that this movement has stayed consistent in the 21st century. The emphasis in European legislation on the use of organisational-level stress interventions was also noted by a 2009 paper (Randall, et al., 2009: 1).

The ideological reasoning behind the push for organisational-level as opposed to individual-level interventions seems to be based on previously accepted public health principles and a desire to solve the underlying problem behind the negative effects of organisational stress. However, this is arguably a misunderstanding of the nature of stress management. Within the field, it seems that individual-level interventions are seen as temporary ad-hoc solutions that do not solve the underlying problems in the long-term, but under a more holistic view of stress management as an ongoing commitment within the organization, which is advocated by some researchers (Giga et al., 2003; Biron et al., 2017), individual-level interventions can be seen as one part of a more comprehensive, ongoing approach to stress management. If the effects of individual-level SMIs tend to wear off as suggested by Briner and Reynolds (1999), they could simply be implemented as part of a long-term commitment by the organization to a better approach to managing their psychosocial environment. This in

combination with evidence that more comprehensive interventions are more likely to succeed and the evidence for the effectiveness of individual-level intervention strategies (Montano, et al., 2014) seems to suggest that the inclusion of individual-level intervention strategies in the overall intervention protocol as part of a long-term commitment by the organization will be most likely to produce positive results, as was suggested by Giga et al. (2003). This is especially the case in light of the assertion that individual-level interventions target different results than organisational-level interventions – the target of them is often the individual participants' psychological state and its improvement, which is only tangentially related to the goals of organisational-level interventions (Briner, Reynolds, 1999).

5.9 Efficacy of different types of SMI activities

As seen in Table 1 (Holman et. al, 2018:4) a significant amount of potentially different activities (the active portion of the intervention) exists within the SMI field which are defined as belonging to the same category (within the primary-secondary-tertiary system) for instance, meditation vs. cognitive behavioural therapy (both secondary, individual-level interventions) or job redesign vs management training (both primary, organisational-level interventions). Given that many of these activities carry at least some fundamental differences, it would stand to reason that some of them would be more effective in either specific types of organisational contexts or in general. In the majority of the sources assessed in this thesis, SMIs were at best differentiated between based on the primary-tertiary-secondary system, and no specific attempt was made to analyse the differences between the efficacy of different activities either on the general or specific basis.

The exception to this was systematic reviews analysing research into specific types of SMI strategies, like “Tai Chi and Workplace Wellness for Health Care Workers: A Systematic Review” (Cocchiara et al., 2020). A scoping review was conducted by Fadel et al. (2022) which assessed 13 systematic reviews, specifically “to make an overview of the knowledge on interventions focused on

the health, well-being, or aging of healthcare workers”. Though focused on the healthcare sector and not completely on the issue of stress or wellbeing, the majority of reviews focused on assessing the outcome of the interventions on mental health. This scoping review concluded that “well-being forms of help, such as meditation, Tai Chi, and animal-assisted interventions” could at best be considered additional and were not a replacement for “an exhaustive assessment and prevention of occupational risk factors”. The review made no comment of the efficacy of specific types of activities, Tai Chi vs meditation for instance.

Since gathering large amounts of individual systematic reviews and comparing them to each other is outside the scope of this thesis, it is disappointing that even in instances where different SMI activities are assessed, direct comparison is not seen as being warranted. It seems best to assess the efficacy of these different types of activities by researching their effectiveness outside of the SMI context. For instance, individual-level secondary SMIs focusing on cognitive behavioural therapy can best be assessed by simply examining the evidence for the effectiveness of CBT in general. Organizational-level SMIs can similarly be studied by assessing the overall level of evidence, for instance for the effectiveness of job redesign or management training interventions.

6 Conclusion

Through the analysis of many different studies, reviews, meta-analyses, and research papers, at least some useful conclusions have been reached about SMI selection criteria. The majority of useful sources were focused on assessing organisational-level SMIs, whether they are likely to produce positive results, what mechanisms cause them to produce their results, and assessing the causes for their failure. Limited information was found that would help organizations determine what activities their chosen intervention should be comprised of based on field, size, or other relevant factors.

Initially, the focus of this thesis was going to be much more aligned towards assessing the distinctions between the typically reported categories of SMIs (primary, secondary, tertiary). However, it was quickly found that these categories are relatively unutilized, especially in more modern research. Even the individual-organisational distinction can become vague in sufficiently comprehensive interventions, and activities in both categories can blend into organizations' long-term stress management policies. Categories in the field of SMI research can be utilised to create useful distinctions, but often the analysis found in the field eschews them partially or totally in favour of a more comprehensive analysis. It seems that there's a strong possibility that principles associated with the primary/secondary/tertiary categorisation system from other fields of public health seep into the analysis and public recommendations for SMI practice in a manner that is not necessarily scientifically valid or logical.

A good amount of evidence was found which might help answer why there is so much evidence that organisational interventions often fail. In Biron et. al. (2017) numerous factors were explained which describe the factors that lead to SMI failure. They can help give some basic guidelines for organizations on what type of implementation might work. For instance, the manager's psychosocial climate was found to be a much more significant factor than was being assumed by organizations practicing the intervention – negative factors impacting it at time 1. significantly impacted the adoption of the intervention protocols at time 2. This among other stated findings implies that in many cases simpler individual/organisational primary and secondary interventions targeting specifically the manager's psychosocial climate will have more profound impacts than larger scale, organisational, primary, and secondary interventions which are less specific. This is especially the case since they would be negatively affected by the manager's poor psychosocial environment and lack of resources and thus be significantly less likely to produce positive long-term results. In any case, the manager's psychosocial safety climate must be considered as a factor when implementing organisational-level interventions.

Furthermore, evidence that showed that in practice interventions end up stalling due to an absence of clear direction (Biron, 2017) is highly concerning and shows that in many cases interventions are being practiced without clear rationale behind them – the number one, if rather obvious recommendation that can be made to organizations is that before implementing an SMI, they should have a clear idea of what the actual problems within the organization are and how they should be addressed. However, Biron (2017) also claimed that in some cases organizations waste all of the resources of the SMI on the planning stage and are left with inadequate resources for the actual implementation of activities.

It seems that for large-scale organisational SMIs to succeed, at least the following factors need to be in place. First, there must be a strong level of commitment within the upper management of the organization towards the SMI not only in the short but long-term, the managers' psychosocial safety climate must be appropriate for them to have the resources to operate the intervention, the needs of workers must be honestly assessed and incorporated into the planning of the intervention, the resources dedicated to the intervention must not be overtly dedicated to either the planning or implementation stage, the intervention must be approached with a clear plan, bringing in outside resources, especially for managers if the situation calls for it, and the intervention must be followed up with stringent monitoring and a long-term commitment to ensuring that the planned changes are implemented and do not dissolve at the conclusion of the intervention. This is a lot to ask for, especially given that the organizations in which SMIs are being practiced are often suffering from some degree of mismanagement, instability, lack of resources, or a combination of all three. In some cases, organisational-level SMIs can be likened to trying to save a sinking ship by steering it into a storm.

Despite this, due to ideological reasons and a strong sense of organisational level SMIs being based on sound principles, they continue to be pushed on the level of policy and legislation (Montano et al., 2014: 1-2; Randall et al, 2009: 1). And indeed, it is not the case that organisational-level SMIs never succeed – if

there are organizations with strong psychosocial safety climates and organizations with weak psychosocial safety climates, it seems impossible to suggest that an organization could not through the process of an intervention be pushed from one category to another. It seems similarly improbably that weak (overtly stressful) psychosocial climates do not cause at least some negative outcomes in the workplace. It seems more probable that organisational-level SMIs are simply difficult to implement properly and require a strong long-term commitment at all levels of the organization – factors that are often not present. Organizations that are seeking a quick, easy, and reliable fix to perceived negative outcomes are advised to steer clear of organisational-level interventions.

Enduring literature gaps and issues were found to remain. Despite some indications of an overall increase in the quality of SMI studies, the effectiveness of organisational-level SMIs still cannot be completely assessed with the current body of evidence due to concerns over methodology, including flaws like insufficiently long-term study protocols (Johnson and O'Connor, 2018) and a lack of randomly controlled trials (Montano et al., 2014). Though the use of some techniques like job redesign to implement job control follows principles that are often taken for granted by public health professionals, the overall indication of the body of evidence remains that organisational interventions are costly, time consuming, and often produce mixed results. It is most likely the case that many of these methodological flaws are caused by a lack of funding or time. Proper SMI research is challenging and requires long-term observation, and it is not the intention of this thesis to imply that researchers are lazy or deliberately choosing ineffective study designs. However, the overall dearth of analysis on the actual mechanisms which lead SMIs to succeed or fail that is seen in the literature is concerning.

Some modern research (Johnson and O'Connor, 2018; Montano et al., 2014) states that the current body of evidence for individual-level interventions is strong – which might indicate that these types of interventions should be seen as more viable and desirable than organisational-level interventions given the

enduring negative evidence for their efficacy. However as was pointed out by Briner and Reynolds (1999), individual and organisational-level interventions target different results. Individual-level interventions are perfectly fine at improving the psychological state of their participants – but this is hardly surprising, given that the principles utilized are extremely well developed and studied, like cognitive behavioural therapy (Cuijpers et al., 2020). The overall recommendation is to make the principles of individual-level intervention strategies part of the organizations' long-term stress management protocol if a reduction in negative outcomes is being sought.

In addition, the misaligned focus of researchers with the research question of this thesis in their work, as well as limitations in the overall body of research significantly limit our ability to answer the research question fully. The methodological flaws of SMI research are echoed by many of the cited sources (Briner and Reynolds, 1999, Randall et al., 2009; Johnson and O'Connor, 2018; Montano et al., 2014; Giga et al., 2003). Other than merely hoping for more research of a higher methodological standard, it is also desirable that in the future researchers align their focus more towards finding practical solutions that can be reliably implemented, and on researching and correcting the causes of SMI failure. The actual causes of workplace stress at this stage are fairly well understood – as Sir Gary Cooper stated, “*what we now have to do is get solutions*” (Cooper, cited in Biron, 2017).

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