



Promoting Public Managerial Sustainability: The Relevance of Social Support For Managers Coping With Work-Related Stress

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Abstract


Statistics reveal the concerning prevalence of mental health issues among Swedish public sector managers, highlighting the critical need for deeper insights into the relevance of social support in coping with work-related stress. This study aims to examine the relevance of various sources of social support for managers coping with work-related stress, an area relatively underexplored in public administration research. Data was collected using a survey completed by 172 managers working in Sweden. The results show that supervisory support, the support of a network of managers within the organisation, and a supportive communication climate were all significant predictors of how stress levels are coped with. Notably, the support of a network of managers within the organisation emerged as the most influential predictor. This study contributes, both theoretically and practically, by offering indicative insights into how organisations can support managers in managing their work-related stress.

Practical Relevance

- Public sector managers depend on social support for managing their work-related stress, just like any other employee.
- The relevant social support for helping managers to cope with their work-related stress includes supervisor support, a network of colleagues within the organisation, and a supportive communication climate.
- The most significant support for coping with work-related stress is provided by a network of colleagues within the organisation. The organisation should help managers to build such networks so that they can seek support from those with similar working conditions and hierarchical positions.
- It is crucial for public organisations to understand the significance of different sources of social support when it comes to helping managers cope with work-related stress in their demanding roles, thus enhancing managerial sustainability. This not only benefits the individual managers and their organisations, but also the public sector as a whole.

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Introduction

Sick leave statistics for managers in the public sector show an alarming increase in the number of sick days (Falck 2023; Previa 2019; Swedish Social Insurance Agency 2020). One-third of managers' sick days are attributable to fatigue, anxiety, and depression, primarily linked to work-related stress (Andrén 2018; Falck 2023, 2024; Lokke and Madsen 2014; Previa 2019). In addition, statistics also show that managers experience less job satisfaction, often feeling more psychological discomfort about going to work than do other employees in the public sector and employees in other sectors (Job Health Index 2020, 2022). This is a concerning trend, given that public sector managers play a crucial role as their leadership and decision-making significantly influence the efficiency and societal impact of organisations (Corin and Björk 2016; Jonsdottir et al. 2020; Kaluza et al. 2020; Lecours et al. 2022; Lokke and Madsen 2014). The fact is that public managers have an essential task in terms of navigating the democratic and political landscape, translating policy directives into daily operations while also managing resource constraints and legal obligations (Alford and Greve 2017; Berntson et al. 2012). This is a complex and multi-faceted task that entails managing the demands and expectations of a wide range of stakeholders. The obvious question, of course, is why managers' mental health has taken this turn, especially considering the significant social and economic cost this entails (Cregård et al. 2017; Cregård and Corin 2019; Hennekam et al. 2021).

Countless researchers have asserted that the work situation of public sector managers is neither reasonable nor sustainable. This work is described as stressful and mentally exhausting due to being characterized by unpaid overtime, high levels of sickness absence, and the constant need to be available (Andrén 2018; Tengblad and Vie 2012). This work situation is often characterized by high job demands and low job control, as well as insufficient job control and inadequate social support (e.g. Landstad and Vinberg 2013). What managers' fragmented work lives lead to is increasingly being reported on, i.e. a clear conflict between recovery, the use of time, and the work-life balance (e.g. Arman et al. 2012; Cregård and Corin 2019; Ford and Collinson 2011). Additionally, administrative responsibilities are often very demanding (Berntson et al. 2012): Work can consist of the operational responsibility for large groups of subordinates, as well as the strategic responsibility for supervisors and politicians (Eklöf et al. 2010). The significant pressure and stress inherent in managerial roles in the public sector underscore the importance of not taking managers' mental health for granted. Even though it is crucial to recognize that a manager's challenging work environment is not the sole cause of his/her work-related stress, this is still a critical issue that public organisations, as employers, have both the responsibility and the capacity to address, not least taking into account the fact that this work situation is most likely to persist given the challenges the welfare system is currently facing (Swedish Government Reports 2022:41; 2024:30; Dir. 2024:38; Swedish Social Insurance Agency 2023). This means that promoting managerial sustainability may not always, or perhaps never, be about avoiding pressure and stressful circumstances. The question is more a matter of how the organisation can support its managers in coping with these stressful situations.

During recent years, researchers have increasingly been underlining the importance of organisational support for striking a balance between the individual's and the organisation's responsibility to manage and prevent work-related stress (Arman et al. 2012; Barling and Cloutier 2017; Karasek and Theorell 1990; Palm and Eriksson 2018). Arman et al. (2012, p. 123) have this to say: "To decrease stress and to support a balanced working situation for the individual manager, we suggest more effort should be paced on organisational support structures". In this context, several researchers specifically emphasise the issue of social support in coping with negative work-related stress, with the relevance of social relationships being particularly highlighted (Jolly et al. 2017; Skagert et al. 2008). Jolly et al. (2017, p. 242) put it like this: "/---/ intrapersonal and interpersonal processes play important roles in the system of social support at work". Numerous studies have established positive correlations between social support, e.g. relationships with colleagues and supervisors and the communication climate, and reduced stress in employees (Dellve et al. 2016; Corin et al. 2016; Orvik et al. 2013; Riaz et al. 2018; Åkerström and Severin 2020). In practice, there are also well-developed routines and policies for managing work-related stress among employees (Barling and Cloutier 2016).

Although managers are employees just like any other, they are formally responsible for both the organisation and its employees (Velten et al. 2017), entailing that some sources of social support may be more important than others. However, a significant gap in scholarly understanding remains with regard to the sources of social support relevant to managers (Cooke et al. 2020; Hennekam et al. 2021; Jonsdottir et al. 2020). Consequently, the need remains to further understand which sources of social support managers consider relevant, and how public sector organisations can better support their managers in coping with work-related stress (cf. Liff et al. 2017; Quinane et al. 2021).

Against this backdrop, this article aims to examine the relevance of various sources of social support enabling managers to cope with work-related stress. Previous research has predominantly focused on employees (St-Hilaire et al. 2019) regarding the importance of social support for mitigating negative work-related stress. In this study, we focus on managers' own perceptions of which sources of social support they consider relevant. This has been done by means of a quantitative study conducted using a digital questionnaire answered by managers in the public sector (N = 172). The empirical context for the study is the Swedish public sector, where 26 % of all managers work (Statistics Sweden 2021a). In the study, we have chosen to focus on managers as a distinct group. This choice is based on all public organisations sharing a common overarching mission, i.e. translating political intentions and decisions into value, for both citizens and society (Alford 2016; Danielsson and Westrup 2024; Osborne et al. 2021). Managers, regardless of level or organisational type, are thus subject to clear demands and expectations as regards conforming to this mission, putting inherent and inescapable pressure on those who can be said to unite them as a group (e.g. Osborne et al. 2021). In this study, the theoretical framework mainly includes literature drawn from psychology and work life research. This enables us to illuminate social support from multiple perspectives, with a particular emphasis on managers and work-related stress. Thus, the study contributes theoretically by advancing knowledge of the field of managerial sustainability, and more generally to public management and administration research. Furthermore, in practice, organisations' efforts to improve the conditions for sustainability in management can simultaneously strengthen those organisations by means of a perception among managers that their mental health is valued and that their socio-emotional needs are being met. This, in turn, creates an obligation to reciprocate by contributing positively to the organisation (Eisenberger et al. 1986; Eisenberger et al. 2001; Kleine et al. 2019; Settoon et al. 1996). The insights gained from this study might thus have some significant practical implications on the strategic organisational level as regards how organisations (employers) can design and implement social support systems aimed at fostering conditions that are conducive to managerial sustainability practices within the public sector.

The paper is structured accordingly: The next section provides a brief overview of the working conditions of public managers. Thereafter, the study's theoretical framework is presented, with four hypotheses on sources of social support being clarified; i.e. supervisory support (the term *supervisor* refers to a management position higher up in the hierarchy), the support of co-managers in the workplace, a network of managers within the organisation, and a supportive communication climate. The study's method and materials are then presented. In the next section, the results of the four hypotheses tested are shown using hierarchical multiple regression analysis. This is followed by discussion, conclusions and, finally, discussion on the limitations of the study.

Theoretical Framework

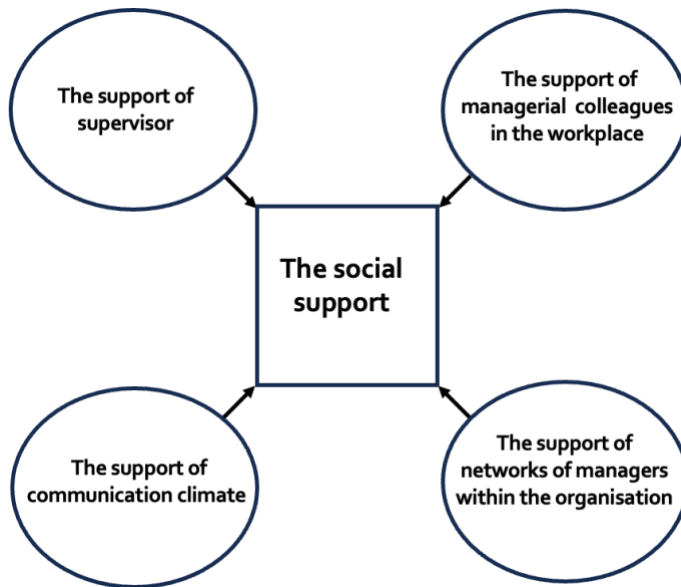
The challenging work environment of managers in the public sector, as identified in previous research, entails a high risk of work-related stress, possibly leading to various mental and physical health problems. Stress is defined in different ways depending on the context and involves the mobilization of physical and mental resources in response to challenges, strain, or threats (known as stressors). However, experiencing stress is rarely harmful, often being necessary in order for an individual to perform above and beyond. If stress persists over an extended period of time, from months into years, without sufficient opportunity for recovery, then it is more likely to become chronic stress, something which is harmful to work

performance, quality of life, and health. Examples of mental health issues primarily caused by stress include depression, anxiety, and cognitive difficulties. Stressors can be characterized as either acute stressors, which have a negative impact on the physical or mental health of the individual (van der Ploeg et al. 2003), or as day-to-day hassles (Lazarus 1999), which are typically the minor stressors of everyday life which, when accumulating or affecting areas relevant to the individual, can be highly stressful.

Work-related stress has drawn significant attention as a key factor influencing the mental wellbeing of working adults (Mensah 2021). As defined by Marshall and Cooper (1976), work-related stress concerns the negative environmental factors or stressors associated with a job, e.g. work overload, role conflicts, and poor working conditions. Marshall and Cooper (1976) identified five primary sources of work-related stress: (1) intrinsic job-related factors, including poor physical conditions and time pressures; (2) role-related factors, e.g. ambiguity or conflict in one's professional role; (3) career development issues, e.g. a lack of job security; (4) interpersonal relationships at work, including conflicts with colleagues; and (5) organisational structure and climate, e.g. limited involvement in decision-making. Prolonged exposure to these stressors is widely recognized as being detrimental to employees, e.g. poor mental (e.g. Stansfeld and Candy 2006; Pangarkar et al. 2023) and physical health (e.g. Kivimäki et al. 2006). Furthermore, extended periods of stress have also been associated with reduced performance (e.g. Virtanen et al. 2009), and also identified as a key risk factor in job burnout (e.g. Wu et al. 2020).

Many studies have investigated the role of social support in coping with work-related stress (e.g. Cohen and Wills 1985; Mensah 2021). Humans, as social beings, inherently rely on others for psychological and social functioning. The support of others has long been recognized as a crucial resource for coping with stress. Unsurprisingly, social support is one of the most widely-studied constructs in organisational research, consistently linked to a broad range of positive outcomes in the workplace (e.g. Elomaa et al. 2023; Jolly et al. 2017; Viswesvaran et al. 1999). These positive outcomes include higher quality relationships, increased performance, a positive job attitude, a buffer against the negative effects of stress. Social support is defined by Jolly et al. (2017, p. 229) as “psychological or material resources that are provided to a focal individual by partners in some form of social relationship”. When defining social support, three characteristics must be specified; i.e. form, source and type. In this article, we have focused on perceived social support (i.e. the form of social support). When it comes to the source of social support, we consider the interpersonal context of a manager, and hence all the relationships which that manager needs to deal with during day-to-day life. Hence, the sources of social support being considered come from both an upward direction within the hierarchy (supervisor support) and from other managers in similar managerial roles (co-managers). Social support can be categorized using different types, e.g. emotional, instrumental, and informational. The type of support often varies with the source. We consider here a mixed type of social support.

Against this backdrop, the following four types of social support are considered. Our first focus is on managers' perceptions of supervisory support. Managers' perceptions of the support provided by their co-managers are also of interest, and thus our second focus is the support provided by co-managers in the workplace, while our third focus is the support provided by networks of managers within the organisation. Fourthly, on the overall organisational level, the support managers gain from a supportive communication climate is also of relevance. To sum up, the four sources of support examined in this study are illustrated in the figure below (Figure 1).

Figure 1: Four sources of social support for coping with work-related stress

In what follows, the four sources of support will be discussed, and a hypothesis will be formulated for each.

The first source of discussion is supervisory support. The level of perceived social support has been proven to buffer the negative effects of work-related stress. In investigating this source of social support, which focuses on the support of the supervisor, we rely on the perceived organisational support theory as it has been developed by Eisenberger et al. (1986). High levels of perceived organisational support have been proven to foster vitality, and engender a sense of obligation in the employee to recompense his/her organisation by going beyond the call of duty (Eisenberger et al. 2001; Settoon et al. 1996). As supervisor support has most often been studied by means of substituting the term supervisor for organisation (Rhoades and Eisenberger 2002), one could reasonably argue that these findings regarding perceived organisational support could be similar to those of perceived supervisory support. This is also in line with the organisational support theory (Eisenberger et al. 2002), according to which supervisors serve as representatives of the organisation, whereby employees tend to interpret their supervisors' positive or negative attitude towards them in terms of reflecting the organisation's overall level of support (Eisenberger et al. 1986).

When supervisors have a strong desire to benefit others, also termed prosocial motivation (Grant and Berg 2011) or productive communication (Arman et al. 2013), their subordinates tend to experience high levels of psychological safety at work. This results in thriving employees, proven to be more inclined to engage in supportive behaviours towards their colleagues. A culture of prosocial motivation among supervisors can yield favourable outcomes for both employee wellbeing and cooperation in the workplace (Frazier and Tupper 2016). These findings were consistent with a study conducted by Cregård and Corin (2019), who examined the reasons behind voluntary turnover among managers who had worked in the public sector in Sweden. The presence or absence of task support, supervisory support, and co-worker support, among other factors, were determinants of sticking with, or leaving, a managerial job. A similar study of public sector managers in Sweden identified the support of colleagues, subordinates, and supervisors as important to job satisfaction (Skytt et al. 2007). Correspondingly, insufficient support and feedback were found to be reasons for leaving a job.

In line with these findings, previous research has identified positive correlations between perceived organisational support and thriving at work (Riaz et al. 2018), denoting a positive psychological state defined by vitality and learning (Kleine et al. 2019). Based on the aforementioned findings, the social support of supervisors should assist managers in coping with their work-related stress. The following is our first hypothesis:

Hypothesis 1: Higher levels of perceived supervisory support will predict lower levels of work-related stress in public sector managers in Sweden.

The second source of support is that of other managerial colleagues in the workplace. The support of colleagues has been proven to have a positive impact on the mental wellbeing of employees, also bringing increased job satisfaction (Cregård and Corin 2019; Skytt et al. 2007; Sloan 2012). Furthermore, this is a particularly beneficial form of social support due to its availability, and the fact that colleagues often share many similarities and are thus more easily able to both relate to and understand each other (Baethge et al. 2020; Hayton et al. 2012; Kim et al. 2017; Lively 2008; Sloan 2012). The support of colleagues has the potential to be especially beneficial when we consider that it is usually the most accessible form of day-to-day support vis-à-vis other sources of support within the organisation (Baethge et al. 2020; Kim et al. 2017). This view is also supported by findings emphasizing that individuals who share similarities tend to provide the most effective support during times of stress and difficulty (Lively 2008; Sloan 2012).

Key functions in support of colleagues include types of communication, e.g. disseminating information, offering advice and feedback (Mikkola and Valo 2019), as well as active-empathic listening (Albrecht and Adelman 1984; Jonsdottir and Fridriksdottir 2019). It has also been established that the support of colleagues plays an important role in improving resilience to work-related stress, as well as in fostering wellbeing (Baethge et al. 2020). The support of colleagues can help managers to cope with the negative consequences of their highly-demanding professional roles. The hypothesis is formulated as follows:

Hypothesis 2: Higher levels of support provided by managerial colleagues at work will predict lower levels of work-related stress in public sector managers in Sweden.

The third source of support is the support of a network of managers within the organisation. Sociologist Mark Granovetter (1973) offered a sociological viewpoint on networks and their antecedents, emphasizing the broader context in which interpersonal networks form. Granovetter (1973) explored the connection between micro level experiences and macro level social structures, concluding that individual experiences of interpersonal networks are closely connected with broader social structures lying beyond the control of the individual. Based on the network perspective on perceived organisational support, Hayton et al. (2012) argue that being embedded in a network brings a greater sense of organisational support due to the organisation being identified as the network. Being part of a network means being an accepted member of the organisational community, which is associated with feelings of belonging, fulfilment and mattering (Hayton et al. 2012).

Furthermore, network characteristics, e.g., size, density and quality, are all positively related to perceived support. The larger the network – the wider the variety of instrumental and socio-emotional resources. A higher network density leads to more helpful behaviours, while greater network quality brings greater access to expert advice and aid (Hayton et al. 2012). Thus, these findings can be seen from an organisational perspective, i.e. the extent to which managers perceive themselves to be supported by their network of peers will be determined on the basis of the organisational structure and culture. Hence, belonging to a network of managers within the organisation should benefit managers when it comes to coping with work-related stress. The formulation of the hypothesis is:

Hypothesis 3: Higher levels of support provided by a network of managers within the organisation will predict lower levels of work-related stress in public sector managers in Sweden.

Lastly, a supportive communication climate may contribute towards coping with the negative effects of work-related stress. It is often argued that an open and inclusive communication climate promotes active listening and trustworthy behaviour in employees, thereby encouraging managers and employees to share information, explain decisions, and discuss issues openly (Whitener et al. 1998). Research argues that active listening is an important management tool, both for the organisation and as an instrument of increased wellbeing at work (Heide and Svingstedt 2023; Jonsdottir and Fridriksdottir 2019). Active and engaged listening has the potential for amplifying understanding and fostering relationships, trust and support (Heide and Svingstedt 2023). Additionally, active listening and having access to physical places for informal interpersonal exchanges were found to foster both workplace relationships and, in turn, mental wellbeing at work (Lecours et al. 2022).

Moreover, it has been argued that effective communication plays a crucial role in buffering negative work-related stress and fostering wellbeing at work in general, for both employees and managers (Ala-Kortesmaa and Isotalus 2015). Effective communication in the workplace also has the potential for mitigating the major job demands and workload experienced by public sector managers. Managers who perceived the communication climate to be supportive experienced higher levels of job satisfaction (Schad 2019). Therefore, it is reasonable to anticipate that a supportive communication climate might also be of relevance to coping with work-related stress. Based on these arguments, we formulate the following hypothesis:

Hypothesis 4: A supportive communication climate will predict lower levels of work-related stress in public sector managers in Sweden.

In the next section, we describe the methodology used in the study to test the four hypotheses developed by means of using a hierarchical multiple regression analysis.

Method

Participants and selection procedure

A total of 172 public sector managers participated in the study (age $M = 52.8$, $SD = 7.01$). Of the participants, 133 (77 %) were women and 37 (22 %) men, while 2 (1 %) chose not to disclose their gender identity. In the Swedish public sector, there are approximately 80,000 managers (Statistics Sweden 2021a): The study sample represents about 0.2 % of this population. The respondents represented a broad spectrum of management levels, including frontline, middle, and top management positions, spanning the municipal, regional, and national sectors. The participants' tenures as managers ranged from 6 months to 40 years ($M = 11.3$, $SD = 8.12$). The number of subordinates managed by the participants varied from 4 to 360 ($M = 43.6$, $SD = 44$). For a summary of the demographic data, please see Table 1. As illustrated in Table 1, the statistical distribution of the stress variable revealed that 28 % of the participants scored in the 75th percentile or higher, indicating higher levels of symptoms, while 23 % scored in the 25th percentile or lower. This distribution of the stress level is not surprising since previous studies have argued that managers in the Swedish public sector face difficult situations, leading to higher levels of stress. The level of work-related stress among the public sector managers in the study is thus in line with what previous relevant research has also shown (Berntson et al. 2012; Scharf and Berntson 2023).

Table 1. Demographic data of study sample (N = 172)

Variable	Sample frequency (%)
Gender	
Female	77
Male	22
Missing	1
Years as a manager	
1-5	29
6-10	31
11-15	16
16-20	14
>20	10
Number of employees	
1-20	24
21-40	48
41-100	21
>100	7
Stress symptoms	
Low	23
Average	49
High	28

The procedure for selecting and recruiting the participants consisted of collecting the email addresses of public sector managers from websites and via personal contacts. After that, we contacted these managers by email and asked if they wanted to participate in an on-line study of managerial support. A digital link to the questionnaire was attached to the invitation, with a description of the ethical principles regarding participation in the study. Each respondent was then asked to share the questionnaire with his/her managerial colleagues whenever possible, hence employing a snowball sampling procedure (Shaughnessy et al. 2012). The participants were obligated to accept informed consent before starting to fill out the survey. They were also informed that they would be anonymous and that all the data would be treated with confidentiality.

Measures

The first section of the questionnaire consisted of demographic items, including gender, age, number of years as a manager, and number of subordinates. The support provided by these managers' most immediate supervisor(s) was measured using 10 items from the Survey of Perceived Organisational Support (Eisenberger et al. 1986). Examples of these items include "Management really cares about my wellbeing" and "Management fails to appreciate any extra effort from me". All the items were measured on a Likert-type scale ranging from (1) Strongly disagree to (5) Strongly agree. The Cronbach's Alpha was .91, indicating excellent internal consistency.

The support of managerial colleagues in the same workplace was assessed using three items developed by the authors. Examples of these items included "Do you have a network of managers at your workplace that can support you?" and "I can count on the network of managers if something goes wrong". These variables were measured on a Likert-type scale ranging from (1) Strongly disagree to (5) Strongly agree. The Cronbach's Alpha was .87 for the workplace, indicating internal consistency.

The perceived support of the network of managers within the organisation was assessed using the same items as when assessing managerial support in the workplace. The difference here was that we exchanged the word workplace for organisation, i.e.: "I can count on my network

managers within the organisation if something goes wrong”. The items were measured using the same response option as above, a Likert-type scale ranging from (1) Strongly disagree to (5) Strongly agree. The Cronbach’s Alpha was .96, indicating excellent reliability.

The supportive communication climate was measured using seven items: Four of these were selected from a questionnaire put together by Schad (2019), in the context of the public sector in Sweden. Examples of these items included “At my workplace, communication between people is open and honest” and “People are keen on coming out with ideas”. These items were measured on a Likert-type scale ranging from (1) Strongly disagree to (5) Strongly agree. The remaining three items were based on one item selected from a questionnaire composed by Guzley (1992). These items referred to supervisors, managerial colleagues, and subordinates, respectively, reading as follows: “To what extent does your supervisor encourage you to let him/her know when problems occur at work?”. These items were measured on a Likert-type scale ranging from (1) To a very small extent to (5) To a very large extent. The Cronbach’s Alpha for this scale was .83, indicating good internal consistency.

Stress symptoms were measured using three items from COPSOQ (Berthelsen et al. 2020). An example of such an item was “How often have you been tense?”. The stress variable was measured on a Likert-type scale ranging from (1) All the time to (5) Not at all. The Cronbach’s Alpha was .85, indicating good internal consistency.

Statistical procedure

Statistical analysis and data processing were done in SPSS (version 23.21.0) and Excel. To investigate the hypotheses, we used a multiple regression analysis with bootstrapping (2000 re-runs). All the predictor variables were entered into the same block in the order shown in the material section. Although a few univariate outliers were found in our analysis, we did not detect any changes in significance/non-significance when these were removed. Therefore, we decided to keep the dataset in its original form. Further, no multicollinearity was detected among the variables (VIF-values: 1.81–2.34), and the plot of the regression standardized residual was normally distributed. Finally, there were no statistical differences between the genders in any of the investigated variables. Neither were there any significant correlations between the number of subordinates and the investigated variables. However, we found a negative significant correlation ($r = .22$; $p < .001$) between the number of years working as a manager and symptoms of stress, indicating that experienced managers feel less stress than more inexperienced ones. Running this factor exploratorily during the regression analysis indicated no effect on the other variables in terms of significance/non-significance.

Ethics

This study adheres to the ethical principles outlined in the Swedish Ethical Review Act (SCS 2003:460) and Regulation (EU) 2016/679 (General Data Protection Regulation), along with supplementary Swedish personal data protection laws (e.g. SCS 2018:218; SCS 2022:482). Participation in the study was entirely voluntary, and the participants were free to withdraw at any time without any obligation to provide a reason and without suffering any negative repercussions. The study was not intended to influence or harm the respondents. To guarantee confidentiality and anonymity, no personal data of a sensitive nature was collected, nor any information that could identify the individual participants. The only data collected on the participants was their gender identity, age, number of years working as managers, and numbers of subordinates. This information was collected to create a perception of the sample. To ensure their informed consent, the participants were required to read information about the purpose of the thesis, their participation, how the results of the study would be processed and presented, and the ethical aspects. Then, they had to actively agree to participating before continuing to complete the questionnaire.

Results

Table 2 provides an overview of the mean and standard deviation of all the variables in the study. The mean refers to the scale of 1–5 for the items within each variable.

Table 2. Mean (M) and standard deviation (SD) of all variables

Variable	M	SD
Perceived support of most immediate supervisor(s)	4.07	.73
Support of managerial colleagues at work	3.56	1.41
Support of a network of managers within the organisation	2.46	.77
Supportive communication climate	3.96	.62
Stress	2.65	.95

Table 3 shows the bivariate correlations between all of the investigated variables. As can be seen, all of the support variables, except for the support of managerial colleagues, are significantly related to stress.

Table 3. Pearson correlations between the types of managerial support and stress

Variable	1	2	3	4	5
1. Perceived support of most immediate supervisor(s)	-	.47**	.47**	.69**	-.57**
2. Support of managerial colleagues at work		-	.61**	.57**	-.36**
3. Support of a network of managers within the organisation			-	.55**	-.47**
4. Supportive communication climate				-	.56**
5. Stress					-

Note: *** $p < .001$, ** $p < .01$

The result of the multiple regression analysis is shown in Table 4. As can be seen, the model was significant, explaining 40 % of the variance in the outcome variable. Of the four predictors, three significantly predicted a lower level of stress in the investigated sample. These predictors were; the level of perceived support by the most immediate supervisor(s), the level of support by the network of managers within the work organisation, and the level of the communication climate. Further, the predictor explaining most variance in the outcome variable was perceived to be the support of the most immediate supervisor(s). Hence, three of our hypotheses were supported.

Table 4. Prediction of stress

Variable	B	β	p	95% Confidence interval	
				Upper	Lower
Perceived support of most immediate supervisor(s)	-.13	-.32	<.001	-.19	-.06
Support of managerial colleagues at work	.07	.07	ns	-.09	.24
Support of the network of managers within the organisation	-.28	-.23	<.05	-.48	-.08
Supportive communication climate	-.16	-.25	<.05	-.28	-.04

Model summary: $F(4, 167) = 27.98$; $p < .001$; $r^2 = .40$; Bootstrap = 2000 reruns.

Discussion

The aim of this article is to examine the relevance of various sources of social support in enabling managers to cope with work-related stress. It appears from these findings that a higher level of perceived supervisory support predicts lower levels of negative work-related stress, thus supporting our first hypothesis. This finding is consistent with previous studies showing that perceived organisational support increases levels of positive psychological safety (Eisenberger et al. 2001; Riaz et al. 2018; Settoon et al. 1996). Furthermore, our results also appear consistent with the previously-mentioned research, showing that supervisors who strongly desire to benefit others tend to have subordinates with higher levels of psychological safety (Frazier and Tupper 2016). Supervisory support has also been emphasized previously as a determinant of staying in a managerial job in the public sector in Sweden (Cregård and Corin 2019; Skytt et al. 2007). We add to these findings by showing that managers' work-related stress also seems to be positively affected by supervisory support.

Our second hypothesis was not confirmed. The support of managerial colleagues in the workplace turned out to be a non-significant predictor of work-related stress. Previous research, however, emphasizes the support of colleagues as a particularly beneficial form of support due to its availability and the fact that colleagues often share many similarities, thus potentially finding it easier to relate to and understand each other (Baethge et al. 2020; Kim et al. 2017; Lively 2008; Sloan 2012). However, this turns out not to have been validated in our study as regards managerial colleagues in the workplace. One explanation here might be that it is easier to find managers with similar work-related issues within the organisation, instead of just in the workplace.

Further, the support of a network of managers within the organisation proved to be the most significant predictor of coping with work-related stress. Hence, our third hypothesis was also supported. The results of the current study support the claim made by Hayton et al. (2012), emphasizing the importance of building a network where managers can exchange ideas and seek support in order to cope with work-related stress.

Finally, our fourth hypothesis was also supported in that an improved perceived communication climate within the organisation predicted lower levels of work-related stress. We add to previous research by showing that stress also seems to be affected by a supportive communication climate.

In sum, the findings suggest that the higher levels of support provided by supervisors and a network of managers within the organisation, together with a supportive communication climate, predict lower levels of work-related stress among public sector managers in Sweden. Taken together, we believe that this study contributes valuable findings on the predictors of lowered levels of work-related stress in public sector managers in Sweden. However, it is important to note that the results are preliminary in nature, and should be interpreted with caution due to the limitations of the study.

Limitations of the study

Voluntary response sampling carries a number of risks vis-à-vis the validity of the study. First, there is the risk of self-selection bias, entailing that certain individuals are more likely to voluntarily participate than others, thus preventing a completely generalizable result. For example, this may have excluded managers suffering from clinical levels of stress or exhaustion, thus lacking the energy or capacity to participate. To be able to screen for that, we would have needed to use a mental health questionnaire instead of just collecting data on stress symptoms. However, even though that would have improved our study, we still think that the distribution of high and low scores on the stress variable suggest that we have captured something essentially independent of clinical status. Second, there is a risk of the data suffering from a social desirability bias in that some participants wanted to present themselves in a more positive light. However, our reasoning is that this risk is low due to the fact that the study had not been distributed through their work organisation. Third, there is also a risk of gender bias: In the current study, 77 % of the participants were women. However, this is well in line with the composition of the Swedish public sector, where women make up 65 % of all managers (Statistics

Sweden 2021b). Additionally, we recognize that the small sample size may limit the generalizability of the study. We also recognize that the applicability of the findings may be restricted to a Swedish context, further impacting the study's broader relevance.

This study is set in a Swedish context, making it particularly interesting on the basis of several characteristics of the Swedish public sector. First, in Sweden, approximately one-third of all employees work in the public sector (Statistics Sweden 2024). By international comparison, Sweden has long maintained a large public sector (Furåker 2023), which is still larger than in most other OECD and EU countries when measured by public expenditure as a percentage of GDP (The Swedish Agency for Public Management 2018). This makes the potential benefits of reducing negative work-related factors especially significant. Second, Sweden, with its strong welfare state and robust labour market regulations, characterized by high union membership and collective bargaining, demonstrates a strong commitment to promoting a good work environment (Anxo 2019; Johansson and Abrahamsson 2009). However, the Swedish public sector currently faces significant challenges, heightening the need for organizational reforms and efficiency measures. Moreover, managers' health has become a growing concern, with hazardous working conditions and high rates of sick leave affecting both employees and managers (Berntson et al. 2012; Scharf and Berntson 2023). These aspects jointly make the Swedish public sector interesting to study.

Conclusion

This study draws several conclusions of importance when it comes to developing organisational support in order to cope with negative work-related stress among Swedish public sector managers. This is a field that has been relatively under-explored as previous research has focused on social support for employees. One conclusion here is that public sector managers should be given opportunities to build networks within their organisations, from whom they can seek support. Considerable benefit accrues from supporting individuals with similar working conditions who hold equivalent positions within the hierarchical structure. Yet another conclusion here is that the support of their most immediate supervisors plays an important role in maintaining managers' psychological safety, thus enabling them to cope with negative work-related stress. Finally, public sector organisations should focus on fostering a supportive communication climate based on active listening and collegial interactions which have the potential to help managers cope with negative work-related stress levels. In the light of these conclusions, we would like to emphasize that coping with negative work-related stress will be achieved by integrating these three sources of support, i.e. supervisory support, managerial networks, and a positive communication climate. None of these three sources of organisational support is enough on its own. It is important to emphasize here that we are not suggesting that social support is the only form of support available to managers as regards coping with work-related stress: However, it is likely to play a significant role.

The results of the present study have also raised new questions that require further investigation. There is hardly any research on the social support provided by networks of managers in relation to work-related stress. However, the potential benefits that this may have with regard to managers coping with negative work-related stress indicate the need for further research. As managers' mental health issues have been emerging lately as a rapidly growing problem, the social support sources identified in the current study should be prioritized on the strategic organisational level, e.g. as regards how management support of the promotion of networking practices is provided and organised. This is due, not least, to public sector managers possessing the prerequisites that are crucial for organising and leading effectively, in doing so contributing to the improvement of citizens' quality of life and their access to justice. Furthermore, it would be relevant in future studies to examine social support from the perspective of various parts of the public sector, and different types of organisations. Also, future research should delve into the diverse roles and professions existing within the public sector, focusing on distinguishing between the managers of various types of organisations, whether by sector or occupation. Such differentiation is crucial as managers in different settings operate under significantly different conditions. As such, these results can be of value to the

organisations within the public sector, potentially contributing towards our understanding of how to cope with work-related stress for managerial sustainability.

Ethical Statement

The study did not require any ethics approval under Swedish regulations.

Conflict of Interest

No potential conflict of interest was reported by the authors.

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Data Availability Statement

The datasets generated during the current study will be made available by the corresponding author in response to any reasonable requests.

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