

# Facilitating and straining factors affecting the health and sustainability of young managers in a modern mining industry

Self-fulfilment and development - a buffer for young managers?

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# Abstract

To be able to attract, retain and develop talented individuals to managerial positions is important for organizations. Recently, however, there are indications that young professionals are reluctant to accept a leadership role. There is a lack of research exploring the reasons for this reluctance and investigating the working conditions and health of young managers; especially within heavy industries such as mining. The aim of the study is to gain a deeper understanding of the factors affecting the health and sustainability of young managers in the mining industry. A qualitative case study is conducted based on in-depth interviews with 10 managers aged 35 years or younger at a large international mining company in Northern Europe. A content analysis indicated several straining and facilitating aspects of the work situation in terms of maintaining sustainability and good health. The resulting themes are analyzed and discussed through the lens of the Job-demand-control-support (JDCS) model. Perceived stimulation, growth, and development seems to have a facilitating role in promoting sustainability and health, and is one theme that stood out from complete adaptation to the model. The study contributes with insights into how this model can be applied to a specific professional group (young managers) and in a certain context (mining and similar heavy industry). The findings have practical implications for organizations regarding the ability to ensure good, healthy, attractive, and sustainable working conditions for young managers.



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# Introduction

There is considerable evidence identifying leadership as a central aspect in the functioning, performance, and success of organizations (Zaccaro et al., 2001; Yukl, 2012). To attract, retain and develop talented individuals to managerial positions is hence vital for the survival of organizations (Epitropaki, 2018). However, recent indications suggest that an increasing number of professionals, particularly young individuals, are reluctant to take on the responsibility of a leadership role (Chernyshenko et al., 2017). Several of the explanations given for this development are related to the perceived possibility of maintaining a balanced, healthy, and sustainable life situation in a leadership role. A Swedish survey (Rörström, 2005) indicates that young people do not consider a managerial career as desirable, because of the high demands and expectations that organizations place on managers today. In a similar way, an American study concludes that young professionals appear to hesitate to take on a managerial position because they fear having to sacrifice work – life balance, and that young people tend to be less inclined to accept a work situation that is not viewed as healthy or attractive on a long-term basis (Torres, 2014).

Based on those findings, application of the concept of sustainability to employees in an organization may be considered central in understanding what makes managerial roles attractive to young professionals. Sustainable employment has been defined as the extent to which employees are able and willing to remain working for the organization in the present and in the future, and is determined by a healthy organizational culture (van Dam et al., 2017; Mohrman and Worley, 2010). It is hence an important organizational matter to offer young managers preconditions that promote health and employee sustainability in the managerial role.

In terms of health and wellbeing, previous leadership research has focused primarily on the effect of leadership on the health of their subordinates. Several studies have concluded that leadership performance and leader behaviors affect both organizational outcomes such as quality and productivity as well as individual outcomes such as employee health and the experience of the work environment (Bass and Bass, 2008; Larsson and Vinberg, 2010). The health and wellbeing of the managers themselves, however, has been significantly less researched. For example, few studies have focused on factors that contribute to managers' job satisfaction, health and well-being, sustainability in the role or intention to leave (Rörström, 2005).

An exception is a Swedish study of 1,088 managers in the public sector investigating the risk of stress and illness in relation to managerial level and gender. The study revealed that women with lower-level management positions suffered significantly more of work-related health problems than women in higher level management and male managers (Björklund et al., 2013). One conclusion from this result was that organizations should not only focus on offering managers support in developing their leadership skills, but also pay increased attention to conditions in the work environment that ensure the health of managers.

A few studies have also focused on the relationships between manager health, leadership behaviors, and subordinate health and wellbeing. For example a systematic review study showed that a low stress level and well-being of managers had a positive influence on their subordinates' stress level and well-being (Skakon et al., 2010). These results may be explained by the findings of an interview study with 42 managers in a large industry study showing that the managers felt better equipped to promote and show interest for the well-being of their employees when they themselves were of good health (Lundqvist et al., 2012). The apparent effect of manager well-being on subordinate health and performance further emphasizes the importance of gaining increased insights into factors affecting the health and sustainability of managers.

It should be noted, however, that almost all the studies included in the review were quantitative and cross sectional. In the research of leadership health and its effect on the sustainability and retention of managers, as well as and other organizational outcomes, there is a lack of longitudinal and qualitative studies of good quality that take different contexts and mediating factors into consideration (Wallo and Lundqvist , 2020).

## The health of young managers

Looking into the existing research on manager health, hardly any include age or generational factors. This is notable because a recent Swedish study on an extensive number of managers within several different sectors revealed that young managers (under the age of 30) perceive their work environment as more challenging than middle aged and older managers, and that they are at significantly higher risk of suffering from psychological health issues, such as depression and fatigue syndrome (Larsson and Björklund, 2021).

Based on the few available studies on young and new managers there are reasons to believe that the demands perceived as straining by young managers might differ somewhat from those of their older colleagues; in terms of struggling with issues such as professional identity (Bolander et al., 2019; Sinclair, 2011), age discrimination (Snape and Redman, 2003), inexperience in handling emotionally straining interpersonal situations (Uen et al., 2009), and balancing work and family obligations (Torres, 2014). To achieve an attractiveness in the leadership role to young professionals, and to ensure sustainability of their health, several studies highlight the importance of providing the



right preconditions for this category of managers and to be attentive to the particular support that they request and value (Saifman and Sherman, 2019). According to one of the most accepted theories on occupational stress, the Job-Demand-Control-Support model (JDCS; Johnson and Hall, 1988; Karasek and Theorell, 1990), worker health is explained by the balance between different individual factors and organizational conditions. When the demands (e.g., strains and challenges) of a certain role are perceived as being overly high it can be stressful and detrimental to a person's health. The stress can, however, be counteracted by both a sense of control (e.g., autonomy, resources, competence) and perceived social support. The perceived demands and needs for support for specific individuals or organizational contexts needs to be identified in order for an employer to ensure a healthy balance between demands and controlling resources.

Even though the JDCS-model continues to be highly influential in occupational stress and health literature, it has been criticized for several methodological weaknesses such as variety and inconsistency in how the main dimensions are conceptualized and a lack of individual difference variables (Kain and Jex, 2010). Reviews on the model have called for future research to continue the development and further the understanding of the theoretical underpinnings, e.g., by updating the taxonomy of jobs frequently associated with different combinations of demands, control, and support, operationalizing the dimensions in a way that interactive effects can be identified, and designing industry- or role-specific measures of the dimensions to improve the consistency (Fila, 2016).

Still, hardly any studies have investigated the specific demands and challenges perceived by young managers in their leadership roles and even less investigating the factors that constitute a sense of control and support for this group of managers. Therefore, identifying role-specific factors perceived as demanding and facilitating for young managers contributes to increased knowledge of how to improve their health and sustainability in the leadership role from a JDCS-framework.

## Leadership in the mining industry

Provided that the functioning, health, and sustainability of managers depend to a large extent on organizational preconditions, it is reasonable to assume that this could vary between sectors and industries. Previous research has indicated high levels of unaddressed mental health problems in male-dominated work settings (Battams et al., 2014). ). As such, the mining industry has recently received attention at an international level as an industry in which research and interventions to improve mental health are warranted. For example, an Australian study focusing on mental health in mining found significantly higher levels of mental health problems in this industry compared to other industries, and that being a manager was one factor that contributed

significantly to bad health (Considine et al., 2017). Despite this, none of these studies focused specifically on the managers' own work environment.

The lack of research on the health and perceived working conditions of young managers, especially within mining and similar industries, highlights the need for, and relevance of studies that provide a deeper understanding of the complexities and interacting aspects of the multifaceted concept of health and sustainability of young individuals in a leadership role.

## Aim and research questions

The main aim of the study is to increase knowledge relating to the perceived work environment and working conditions of young managers in the mining industry. In particular, the focus is on facilitating and straining conditions for young managers pursuing a healthy and sustainable leadership career within the sector. Based on this aim, the two research questions of the study are:

1. What aspects of their work environment can be perceived as straining in the leadership role of young managers in a large mining company in Northern Europe, that might have a negative impact on their health, wellbeing, and job satisfaction?
2. What organizational conditions can be perceived as facilitating and desirable in dealing with these potential strains in the leadership role of young managers in a large mining company in Northern Europe?

# Method

## Methodological approach

A qualitative case study (Yin, 1984) with an inductive explorative approach was conducted in order to achieve a deeper understanding of the complexity and interaction of factors affecting the perception young managers have of their work environment and working conditions in relation to their health and well-being in their leadership role. Hence, the approach of the study can be considered as mainly phenomenological, in that it aims at investigating and describing a phenomenon on the basis of how it is perceived and given meaning by the subject or a group of subjects, without the researchers having any defined presuppositions (Giorgi, 1997).

## Data collection

Data was collected through semi-structured interviews with 10 young managers (defined as 35 years old or younger) within the Swedish operations in a large international mining company with headquarters in Northern Europe. The age of the interviewees was determined using the personnel system of the mining company. At the start of the interview, we confirmed the age of the 10 interviewees that were selected at random from the population of young managers at the mining company. The total number of managers in the Swedish operations is 342, of which 42 are 35 years or younger.

A semi-structured interview guide was designed to investigate the research question in depth (Oppenheim, 2000). The guide encompassed 34 questions that were based on previous research on issues related to work environment and health.

The interview study was conducted as part of a larger project on organizational and social work environment among managers at a large mining industry in Sweden, (Larsson et al., 2022), exploring a broader range of issues than those of the study reported here. A pilot interview was conducted with a first version of the interview guide which resulted in a few minor modifications to improve, for example, the clarity of the questions.

Data was collected during the autumn of 2021, that is, during the pandemic. This meant that it was not possible to conduct the interviews in person. Instead, the business communication platform Microsoft Teams was used. Two interviewers participated in each interview: the last author of the paper participated in all interviews and focused on asking questions from the interview guide while the other focused on posing in-depth and/or clarifying questions. The latter of these interviewers rotated between the 1st-4th authors of this paper. In other words, all five of the authors participated in the interviews.

On average, the interviews lasted 92 minutes, with a minimum of 68 and maximum of 133 minutes. This average excludes a few-minutes-break that was normally held halfway through the interview. During the first part of the interview, the interviewers presented themselves and the interviewee was informed about the study, its purpose, and their rights.

After ten interviews, an assessment was made that theoretical saturation had been reached. All the interviews were audio recorded and transcribed in full. The transcribed interviews resulted in a total of 416 pages.

## Analysis

A conventional content analysis (Hsieh and Shannon, 2005) was conducted on the transcribed material using the coding software NvivoR with the focus on the manifest content of the interviews (Graneheim and Lundman, 2004). First, the transcriptions were carefully read through to gain an overall understanding and familiarization of the content.

Second, sentences with content related to the aim of the study were identified and marked as meaning units. These meaning units were categorized into larger themes. We then further refined the content of the themes by dividing them into smaller meaning units that were provided with codes. In the next stage, the codes were compared with each other and those reflecting similar content were assigned to a sub-category. The emerging themes and sub-categories were read through to ensure that the coding had a good fit with respective content.

The initial coding process was divided between four of the authors, each author being responsible for the interviews in which they had participated. The authors met to discuss thematization and to ensure that the themes were stringent. Internal homogeneity and external heterogeneity of the subthemes was evaluated up until inter-researcher agreement was reached. Some subthemes, having a large overlap or being too similar to one another in content, ended up being combined as a result of these discussions. A few sub-categories were also eliminated in this stage of the analysis process as they were considered to fall outside the scope of the study. As the themes stabilized the transcripts were revisited to ensure the texts were coded into the appropriate, refined themes.

## Ethical considerations

All the interviewees were provided with detailed information about the project, their participation, use of the data, and their right to end their participation at any time. The study is ethically approved by Swedish Ethical Review Board, Dnr: 2021-01392.



# Results

The analysis resulted in two overarching themes. Each corresponded to either of the two research questions: one describing the straining factors and risks for mental ill health among the managers and the other describing facilitating factors promoting health and sustainability. These themes in turn consisted of several subthemes further describing what appear to constitute strains and facilitating aspects in the role of the young managers (see Table 1).

**Table 1.** Resulting themes with respective sub-themes, and the initially identified meaning units.

Meaning unit	Sub-theme	Theme
Had I received more and better information about my authority and what right I have to make decisions. That would make it a lot easier for me.	Ambiguous assignment	Straining factors and health risks
It feels difficult to take time off, and that is a stress, it is... you feel that you do not have time to get sick. [...] Because at present I cannot delegate those tasks to my workers.	Deficient routines and staffing challenges	
Too often it happens when you have a lot to do, the days just float together, you barely take a coffee break, but you pick up a cup and then you continue to work while drinking coffee.	Heavy workload	
...that you have to take a break while you are playing with your daughter because you realize that you have to send an email, or something like that.	Work-life spillover	
It then became a completely different thing to sit in an open office landscape because you take a completely different type of conversation. So in that sense, if you talk about the physical work environment, it is a bit of a challenge.	Physical workplace challenges	
It is difficult. [...] to communicate, to motivate. That is the hardest part, I think. To be understood regarding how I want it; clearly. It is a bit of a challenge. I'm a little insecure with that.	Insecurity and inadequacy	

I have always been able to lean against this management philosophy and say that "We do not need to send this higher up, instead we will decide on these things right here."	Guidelines and policies	Facilitating factors for health and sustainability
Purely administrative, get some help. Because you get buried by sitting and keeping track of each and all of the personnel. // I got a mentor in the first managerial role, and it was very good.	Formal and interpersonal support	
It might have been good if they had been more proactive, so that I felt that there is a plan for me as a manager, in the same way as there is a performance development plan for employees.	Training, growth, and development	
I definitely feel that I get listened to in many different forums. I do not feel like "okay, they do not listen to me because I am a young boss", instead I still feel that people really take my opinions and such seriously. So that... mm, I thrive in it.	Mandate, influence, and flexibility	

## Straining factors and health risks

The results indicate that the majority of the interviewed young managers are of good health and enjoy their work. Although there are some downsides to the work and there can sometimes be intense work periods, the general perception is that the work is rewarding, varied, and stimulating. Most of the interviewees state that they feel comfortable in their managerial role and generally feel that they have access to sufficient resources to lead their work group.

However, there are certain aspects of the manager position and the leadership role that have been identified as being perceived as straining. In the following, straining aspects that are claimed to, or could potentially, affect the health of the young managers negatively are presented.

### Ambiguous assignment

A factor perceived as important by the interviewees when it comes to contributing to sustainable working conditions as a manager is the extent to which the assignments and tasks in the role are clearly specified and explicitly communicated. Some of the participants noted that there was a lack of written guidelines related to the leadership role, which could lead to stress and insecurity.

Even though most of the participants state that their role description is relatively clear to them, several also emphasized the importance of clarity. One participant shared



how task clarity in the present position is providing a sense of confidence and security, whereas former job positions have been perceived as stressful due to role ambiguity:

*The last workplace I had; it was not at all clear. It was really "throw you in the lion's cage and here you go, survive". Maybe it was also a little bit like that now when you started: since you did not have much experience of it. But I still think that it... the work tasks are clear, and that is probably why I feel quite confident in this job as well.*  
(IP2)

A few of the respondents are expressing a perceived lack of clarity regarding what level of mandate comes with the managerial role. For example, not being clear about the extent to which you are allowed to make your own decisions, or within what areas you have the mandate to make decisions in relation to other organizational roles, such as project leaders, is perceived as a cause for hesitations and a waste of time spent on additional communication. This not only leads to a delay in production but also to a feeling of frustration and stress among these managers.

*My authority is not always clear. [...]. What can I do, what decisions can I make? Had I received more and better information about my authority and what right I have to make decisions. That would make it a lot easier for me.* (IP7)

In terms of unclear mandate, some participants also perceive a certain stress due to a perceived unclarity about the kind of managerial practices and behaviors that are considered accepted and valued by the management. One of the participants expressed this kind of uncertainty in relation to working from home:

*And it has been a bit like that, yes, you have to work from home, but at the same time it feels like a little pat on the back if you are at work, and do they really have confidence? I feel very loyal and almost have a bad conscience when working from home because it feels like "ah, they think... now I really have to prove that I do what I should" and such.* (IP8)

Another aspect perceived as demanding in the leadership assignment is prioritizing between tasks. Several of the participants claim that not having any clear structures or principles to follow when making day to day decisions regarding what to prioritize, may be stressful.

*It is also sometimes, when I am alone, then I become more stressed*

*to get everything together, and insecure. And that is where this “Ah, have I done anything to make this job good? Did I forget something?” comes in. [...] “am I doing the right things?” A little confused in the role still perhaps, and maybe not really found a concrete way of working, how I should have my days. (IP8)*

Being unclear about what should be prioritized in a certain situation leads to worries about spending time on the wrong tasks, to miss out on something important, and to overtime work due to a fear of opting out on a task when not being able to differentiate between their respective importance. Unclearities regarding priorities is also claimed to result in more long-term, proactive tasks not being carried out at all, with potentially negative and unforeseen (by the young manager) consequences further along. According to several of the managers, a lack of clearly conveyed plans or policies on how to prioritize in order to achieve more long-term goals may contribute to frustration.

*There are many emergency on-call jobs, like: ‘This must be fixed now, because...’ But it would be preferable to have a more long-term perspective, working according to a plan. Not only for the day or next week. (IP10)*

Some of the managers explain that corporate politics and internal bureaucracy is perceived as a burden in the leadership role. According to these participants, the strains are rooted in uncertainty about informal rules, networks, and corporate politics. This becomes especially evident as a young and inexperienced manager explains that:

*Bureaucracy is an obstacle. And then there is also of course gaps in your own knowledge. You do not really know which paths to take and which threads to pull to get through your projects. I guess it is a matter of experience and networking. (IP3)*

Many of the young managers have high expectations of themselves and are eager to show good results and please the higher management. A desire to be a top performer within every area of the managerial role might also contribute to difficulties in prioritizing tasks. This might lead to a high sense of stress when having time for, and excelling in, every task within normal work hours turns out to be an impossible equation.

## Deficient routines and staffing challenges

Several of the interviewed managers claim that dysfunctional or badly designed corporate routines are factors that make the leadership role demanding and stressful. Functional routines are seen as important for the managers, considering the relatively high turnover

rates and generational change at certain departments. Some of the managers claim that it is actually more or less up to themselves to invent and implement proactive and systematic routines. This is perceived as particularly demanding as it often requires a lot of time, effort, and coordination with other managers in corresponding positions.

*And precisely in this case, we have huge structural problems and an ongoing generational change. [...] Large parts of my days are spent on that. Structuring and trying to build this structure, where we are not based on a dependency on certain individuals, but instead we become an organization that possesses all the information. (IP9)*

Routines for information and communication is another area that can be perceived as potentially challenging. Insufficient information from the top management about issues regarding your own managerial responsibilities can constitute a significant source of stress to the young managers. This is partly because of difficulties in conveying correct, clear, and relevant information to subordinates before they hear the news (or some version of it) from unofficial sources as well as perceived difficulties in managing and feeling in control of decisions affecting their own business area without sufficient information of what is currently happening in the company.

Badly functioning routines regarding staffing and recruitment is another part of leadership that many of the managers perceive as demanding. One challenge is to attract and recruit personnel with the right competence. Even though this might be a challenge to managers of all age groups in this sector, the results indicate that it may be particularly stressful for young managers without the same broad network and recruitment experience as older colleagues. Staffing is also perceived as pressing in terms of making ends meet with scheduling. Several of the managers invest plenty of their managerial time in finding solutions to cover up for personnel on, for example, sick- or parental leave. As one of the managers puts it:

*As I usually say, to manage staffing issues is a life-long puzzle.*

Two of the managers request relief in the managerial role when the workload gets too heavy. There is an expressed need for someone with adequate competence to delegate to and who have the ability to be able to cover up for the manager at work peaks, or, in the case of e.g., sickness absence. Being a young and relatively unexperienced manager, the participants indicate that having access to senior co-workers with the right level of competence in your team is viewed as particularly facilitating in terms of bringing a sense of security and control over the workflows.

*It is mostly about having someone to delegate to and having someone who is there when you are away, who takes over the rudder. So that you do not just jump out of the boat and let it float with the rapids, and what happens happens. (IP3)*

Several of the participants claim that the main reason for perceived strain in the managerial role is the absence of a specific role or function responsible for the planning of mining operations and maintenance activities. A lack of routines and resources to manage planning activities appears to have a potentially negative impact on the young managers sense of control as well as possibilities to take on more strategic managerial tasks.

*I may not have to go into town and buy one, a chisel or whatever it may be. [...] And you often get short breaks, but three days a week I have to jump in as a planner, then I lose some focus on something that I might want to get started on, which involves rather big changes. (IP8).*

Technical planning competence is of particular interest to those expressing a desire to get relief in managerial responsibilities through a specific planning function in the team. This competence is seen as the most relevant to have in the work group as technical planning tasks are often more difficult to delegate because of the need for more specific technical competence.

*Because it would also mean that this technician could be redundant. As it is now, it is the case that when I am not here, then there is no one to replace me. And what happens is that everything just hangs in the air. It feels difficult to take time off, and that is a stress, it is... you feel that you do not have time to get sick. [...] Because at the present I cannot delegate those tasks to my workers. (IP3)*

Because of this weakness in staffing, several of the managers express a desire to increase the opportunities for competence transfer within the personnel group. In this way the work situation of these managers would be less vulnerable.

## Heavy workload

Around half of the participants claim to have a high workload in their position. This situation is often viewed as being a result of the job description that is comprised of too many different tasks, i.e., production issues, personnel responsibilities (e.g., development, administration, health issues, and conflict resolution), planning of maintenance, and work environment responsibilities.

In addition, technological stress also adds to the workload. The managers are expected to use several administrative software tools in performing their managerial responsibilities. However, when these systems become numerous and badly integrated with one another it can be experienced as more stressful than helpful. Some also express

challenges related to software not being sufficiently user friendly or integrated with each another in a way that facilitates doing the administrative tasks in question. Troublesome IT-systems are claimed to take an unreasonable proportion of the young managers work time and contributes to a heavy workload.

*Some are good systems, but some are less good if I say it like that. They can be very tedious to work with and... well, not user friendly. A lot of unnecessary clicking. [...] So, it takes a little extra time when you have to sit here in the evenings and weekends, when you may not have anyone to ask either. (IP10)*

Some of these managers cope with their situation by working overtime, while others try to prioritize among tasks but experience a certain stress caused by feelings of inadequacy. A high workload may lead to the managerial role not being perceived as sustainable in the long term, particularly by those with children. As one manager put it:

*"It is clear that with the combination of toddlers and this type of role, the workload would perhaps need to be a little better so that you can survive in the long run as a person as well." (IP6)*

Administrative tasks in the managerial role are viewed by several managers as burdensome. Some are of the opinion that internal support functions (e.g., HR and Business administration) are constantly pushing these tasks on to the managers themselves. This is considered by many to be time consuming and contributes to a sense of stress in the managerial role.

*It feels like they start pushing out more and more. [...] All the time there are things that we should do that maybe HR has done before. But it just ends up being more and more on us. That we should do it as managers, and I think that is not really right. (IP 5)*

According to some managers the time spent on increasing administrative assignments, controls, and complicated personnel issues may well result in a lack of time for other important leadership issues: such as development of routines and operations. One manager describes a sense of lack of control when the workload is experienced as being high, as certain tasks may fall between responsibilities and are not done properly. At times when the workload is not as high, however, the manager feels a need to recover lost assignments rather than using the calmer period for recuperating activities and more strategic reflection. Apart from being an issue of numerous assignments, this outcome is closely related to the young managers need for support in making priorities.

*And then it means that you do not get as much time for reflection,*

*to stop and think “what do I need to do?” Instead, you just work on different projects and throw yourself a little here and a little there. (IP3)*

Another possible consequence of a heavy workload is insufficient time for the social aspects of leadership. These social aspects are considered to be important both in terms of finding room for recovery in a social context, even as a leader, and to get the opportunity to walk around and be present among subordinates to get a sense of their everyday work situation. The more social and interpersonal tasks in the managerial role are seen as particularly important by the young managers because many value and express an intention to perform a relational leadership focusing on developing good and motivating relationships with their subordinates and in their team rather than a more task and structure-oriented leadership.

*Too often it happens when you have a lot to do, the days just float together, you barely take a coffee break, but you pick up a cup and then you continue to work while drinking coffee. Lunch is also taken when you have time. Sometimes I do try to prioritize taking time. Just sit in the coffee room even though I do not really have time, tune in to the team, talk a little and so on. (IP5)*

A heavy workload can also be perceived in terms of an emotionally demanding work situation. One person shares how it can be straining to be emotionally engaged in some personnel errands and personal issues among their staff. According to the participants, this personal dedication may contribute to difficulties as a young manager to let go of thoughts about work outside of work hours.

*It is both a personal commitment and even that there is a lot at work that means that you cannot just let go of everything. So, it is a combination. And then perhaps it becomes extra stressful. (IP3)*

According to one participant, health is negatively affected by the straining work situation and may easily become a negative spiral as the long work hours also lead to a lack of time for recuperation, such as exercise and social activities.

*But precisely for these heart-pounding activities, I have not had real motivation and energy, and felt that I have had time. (IP3)*

Nonetheless, most of the participants do not perceive the workload as a manager as particularly heavier than previous roles as non-manager. One reason for this view appears to be that even though their workload may be heavy during a period of time,

it is often followed by a calmer period when they have the chance to work at a slower pace or even take some time off.

The fact that periods of extraordinary workload are followed by more relaxed periods is considered vital by most of the participants in their perception of the managerial role as sustainable and attractive over time. A few of the managers that are relatively new in their roles state that they would consider leaving their managerial position if the presently pressing situation turns out to be permanent rather than temporary.

*There should be challenges, but still, if the workload is like this, so that you do not have to deliver 120% every single day, but that there are these periods when you may deliver 80% and you still feel that “I can do my job”. So, in some way, there need to be variations in the load. (IP 10)*

## Work-life spillover

A proportion of the participants state that they experience work strain due to experiencing an imbalance between time at work and other life activities such as time with their family. According to these individuals, time does not always suffice to do all of the work tasks during regular working hours, and they therefore feel more or less obliged to work overtime or to take work home with them to do after work hours.

Another cause for experiencing imbalance is the sense that in their work role they need to be available at all times. One manager explains how this perceived expectation of being constantly available, even after regular work hours, has resulted in ill health.

*It is precisely that sometimes you are expected to be available all, all, all the time, and that we may not always have been so good at not calling and emailing each other outside office hours. It was a period when we felt like “no, this is not possible”. (IP6)*

Several of the participants state that they often have to interrupt their vacation in order to take care of administrative personnel matters. This affects the possibility for recovery and consequently their health. The main reason for this is claimed to be a lack of administrative support functions or available stand-ins during vacations. Several of the managers are of the opinion that the need to interrupt your vacation for these matters decreases the attractiveness of the managerial position.

*When they say you should not take the job home, then it really should be always. You should not need to... [...] It's a cultural issue. It is a habit “well, you are the boss, you shall go in and certify times even though you are on holiday”. (IP7)*

Another way in which the young managers can experience an imbalance between work and other parts of life is when thoughts of managerial responsibilities and challenges in the work role continue rolling in the back of their minds even during time off. The inability to leave troubles related to work at the workplace is seen as a potential source to ill health and relational problems when it also affects their family life.

*For example, that you have to take a break while you are playing with your daughter because you realize that you have to send an email, or something like that. At the same time as you are mentally, maybe not completely 100% there either, but you are constantly thinking "is there something I have forgotten? What am I going to do tomorrow?" and worrying about things. (IP3)*

### Physical workplace challenges

Another organizational condition affected by the specific contextual aspects of the work environment in the mining industry, is the design and physical characteristics of the workplace. Even though there are no major complaints about the physical work environment, a few of the managers explain that the design of the premises has affected their work satisfaction negatively. The challenge in this domain mainly concerns difficulties in getting access to a sequestered office space where they can have sensitive conversations.

*I think it is quite nice really, because I enjoy open office landscapes and I enjoy my office. But it has clearly become different since I became manager. It then became a completely different thing to sit in an open office landscape because you take a completely different type of conversation. So in that sense, if you talk about the physical work environment, it is a bit of a challenge. (IP6)*

However, additional obstacles in the physical design, such as spending the whole day underground with no availability of daylight, is also mentioned in the interviews. Spending entire days underground is experienced as tiresome, even considering that this work placement is often compensated by shorter work hours. One manager, whose posting is normally underground, also expressed a certain strain of not have access to a work desk above ground.

*I have an office down at [X] where I sit and work. So I go underground every day. Some days I only have meetings, so maybe I can stay above ground. But I have no real place to sit. And now*



*during the pandemic, I have had opportunities to work from home, but as I understand it, it is a benefit that will disappear when the pandemic is over. (IP3)*

Some of the managers claim that one aspect of the job in a mining company that had attracted them was its mobility. The role as a manager in the mining industry normally involves a lot of walking around and physical movements. During the pandemic, however, most of the managers have been working more from home and mainly met coworkers through digital media. The work has involved less movement and long hours in front of a computer. For some managers the increase in physical inactivity in combination with more tightly scheduled meetings has led to a decrease in job satisfaction and increased stress levels.

*Otherwise, it can be a very mobile job. I can easily walk 10,000–12,000 steps at work, so that... But it has become less with a lot of meetings through Teams, and one books meetings very close together. [...] Personally, I am passionate about exercise and health so it is clear that it is a plus if you can be active at work as well. (IP10)*

Other managers rather view the lack of mobility as something that comes with the leadership role per se, i.e., that hours at the desk dealing with administration is a downside to the leadership role that you need to accept as a manager as opposed to other roles in the company.

## Insecurity and inadequacy

Another theme that emerged from the data material included challenges that relate to dealing with and growing into the leadership role. This is about considerations regarding their own identity, feelings of adequacy as a competent leader and perceived difficulties in coping with interpersonal issues.

The results reveal that several of the young managers have experienced hesitation towards taking on and continuing in the managerial role due to insufficient knowledge or leadership skills for tackling certain situations or tasks. They often experience an uncertainty in their role and spend considerable time on wondering about whether they have acted correctly in a challenging situation or how they are perceived by others in their leadership role. Examples of areas in which they question their own skills include communication of goal and objectives, motivating subordinates, having confidence enough to make uncomfortable decisions, make demands, and sticking to certain principles.

*Where I'm insecure and maybe a little unsure is how I shall get people to do what I want. To get it across. It is difficult. [...] to communicate, to motivate. That is the hardest part, I think. To be understood regarding how I want it; clearly. It is a bit of a challenge. I'm a little insecure with that. (IP7)*

Some of the managers claim that a lack of training and competence development within the leadership role has led to a sense of sometimes being on “thin ice” when encountering difficult leadership tasks or situations. This feeling of not having enough training or experience for the assignment is experienced as stressful. For example, one of the managers talks about taking on a challenging group with preexisting resistance behaviors and making them cooperate and feel motivated, which has been a source of hesitation and insecurity.

Another area stated to be burdensome in the case of insufficient competence is the work environment responsibility. This might lead to unhealthy worries that something important has been accidentally neglected and forgotten. It is also a common perception among the participants that there is not sufficient time in the managerial role for tasks such as continuous risk assessments and audits.

*It is this constant work environment work that sits on one's shoulders. The work environment responsibility, which you feel is very... a lot. And it feels like you miss things. Even though you may not do it, it's like that all the time, “damn, shit, what if I've forgotten something”. And like that it is a small stress factor actually.*

Interpersonal issues among the subordinates, such as communication issues and conflicts, is also perceived by some of the managers as stressful because of a sense of uncertainty of how to deal with the situation. Examples of such challenges are conflict resolution between individuals, and demanding conversations with personnel who suffer from mental illness, do not perform as expected, have problems in their private life affecting their ability to work, or to give someone notice of termination.

*If, for example, when a conflict has arisen between two of the staff. It can be a little hard sometimes because you think that it is at such a kindergarten level that you are almost ashamed of how these people... how can people argue about certain things. But you have to deal with it too. And it has of course gone well but it has felt... It has been hard. (IP4)*

One opinion revealed in the interviews is that the interpersonal challenges in the leadership role are particularly evident because of the low age of the managers in relation

to the age of their subordinates. There is a common fear of not being taken seriously and to not being given the mandate and trust as a leader by the group.

*And it is clear that it feels like a challenge. Partly that you should... With an average age of 55 and you are yourself [in your 30s.] It is clear that it is a challenge to be believed and that... What reason do they have to listen to me who is really a snotty kid in relation to them? I could be their kid. (IP9)*

## Facilitating factors for health and sustainability

### Guidelines and policies

The company in which this study was conducted has developed a written leadership policy which managers in the organization are expected to adhere to. Knowledge and awareness of the policy and its content varies greatly among the participants. Nonetheless, those who know of the policy state that it provides guidance and support in the leadership role. This is expressed as particularly valuable for a young and new manager.

*It focuses right on what you should think about in the first place when you become a manager. It is to build relationships with your co-workers. That is pretty basic when you start. I think it is relevant. Yes, it helped. (IP7)*

As the above quote exemplifies, one practical function for the leadership policy is its role signaling what kind of leadership is considered appropriate and expected by the company's top management. According to some of the managers the explicit description of the kind of leadership that is desirable provides good guidance for making priorities and decisions.

*It really gives a direction in how you shall be as a leader. For example, earlier on [the company] has been very, very top-down. [...] And now we're trying to turn that culture into a decentralized one. And this has been a challenge linked to older co-workers in my organization thinking that a decision from me is not enough. Then I have always been able to lean against this management philosophy and say that "We do not need to send this higher up, instead we will decide on these things right here." (IP6)*

Another manager claims that the leadership policy also serves a function of clarifying that as a manager you do not need to have complete technical competence as it emphasizes leadership behaviors such as communicating, following up goals, and providing feedback and support. However, some express a desire that the awareness of the policy would be more widespread; even among non-managers. For the content to have an even more supporting function for managers. Even so, other managers claim that the leadership policy does not provide any guidance at all in the leadership role. Either because they are not familiar enough with its content or because they perceive it to be too abstract and consequently of little practical usefulness.

Several of the participants also mention that company policies regarding health and physical activity is important for sustainability of their health and well-being: even during stressful times. Therefore, to be able to pursue physical activities during work hours, preferably in or adjacent to the company facilities, is perceived as a facilitating factor for staying resilient in the managerial role.

*I have two or three workouts a week, where I get up and train and do a real fitness or strength workout. And I have seen it myself, that for me it seems to increase performance, in that I improve my own health and in this way I can deliver and handle stress better. (IP9)*

## Formal and interpersonal support

Several of the participants state that when they are offered support in challenging tasks, even though the task in question may formally fall within the manager's responsibilities, this contributes to a lower stress level. For example, receiving fast responses to questions or help with certain personnel processes (such as rehabilitation matters) from a HRM function is highly valued by the young managers. There is nevertheless a recurring perception that the HRM function would fill an even more supporting and stress-relieving function by offering increased support in more "soft" leadership challenges: such as working with team climate, taking difficult conversations with subordinates, and other interpersonal issues.

Some of the managers have access to a specific expert function in the areas of quality, environment, and work environment assessments (KMA) or work environment strategists. Even though this support is appreciated and perceived as facilitating, several of the participants are critical of that the support functions of both KMA and HRM provide more of a generic guidance within these areas, referring to sources of information, providing "theoretic" advice, and reminders of managers' obligations rather than providing hands-on support in how to act. For example, obtaining more active support in how to practically manage, drive and plan work environment activities and projects such as assessments, evaluations, and developmental activities is experienced as greatly facilitating.

*It could be concrete. I mean, if I ask a question, "What should be done with..." [...] I get no answers. There will only be a few references to AFSs [work environment regulations]. But if I had been interested in sitting and reading through 72 AFSs then I would have done that. Then I would never have contacted KMA. Instead, I wanted to ask someone who is an expert. And I think that is support when someone can give an answer. "Okay, this is what to do." [...] They just send you to something else. There is no support in that. (IP9)*

The perceived lack of practical support is explained by the managers as being partly due to a scarcity of time and resources in the support functions to provide this kind of help (given that one expert function is often assigned to support a large number of managers), and partly because of strategic decision made by top management that all the practical work should be carried out by managers while expert functions should have a more strategic and advisory role.

In contrast to this perceived advisory support, the same manager compares with the external occupational health services associated with the company, where the manager had received more practical support when dealing with a difficult and sensitive personnel issue rather than merely abstract advice or referrals.

*I think that support works, because there I get straight concrete answers, what I need, no reference to "you can go and educate yourself as a doctor", because I do not need that [laughs]. (IP9)*

According to the same reasoning, the availability of support in operative administrative matters is also experienced by the participants as greatly facilitating and contributing to a sense of reduced stress in the managerial role. The possibility to delegate administrative tasks such as purchases, invoices, and practical personnel matters to an administrative function is considered to be an important factor enabling the managers to focus their time on tasks that are more central to their leadership. For managers lacking this kind of administrative support, the managerial role is often perceived as more burdensome and less attractive.

*Purely administrative, get some help. Because you get buried by sitting and keeping track of each and all of the personnel. And I only have 13 employees. Imagine those who have 40! Oh my God! But in any case, [laughs], I think a little like this, yes, but something that helps you to keep a little order and understanding of the administration. Training, driving license, you name it! (IP2)*

Apart from the formal support functions offered by the organization, the presence of support from other professionals within the organization also seem to be a strong facilitating factor in promoting the health and sustainability of the young managers. In particular, the support from and being backed-up by their immediate supervisor is vital for the managers when confront leadership challenges. This support is stated to involve both a perceived openness towards posing questions when uncertain about how to deal with a managerial issue and to feel that the supervisor has trust in their abilities as manager. However, the extent to which the managers experience the support of their supervisor as facilitating appears to be partly affected by how well you get along, but also by the availability of the supervisor.

*With my immediate boss, talking a little about things, how you can solve and so on. [...] I have him quite... yes, well I call and discuss with him quite a lot and I feel that I have support from him. (IP1)*

Most of the managers also find a great stress relief in the support of colleagues in similar hierarchical position. This appears to be the case particularly if the managerial colleagues are more senior and experienced than the young manager. The sensation of having senior colleagues available to turn to for advice in a more informal way often provides the young managers with increased confidence in their leadership.

*It depends a bit on what it concerns, but you can discuss a lot with your colleagues, if they have some advice and tips and have been in similar situations or such. So it is of course them I would talk to first, in the first place. (IP10)*

Which colleague the young managers prefer to contact for support in leadership issues appears to be related to feelings of trust and personal chemistry rather than the formal position or function the colleague has in the organization. In consequence, it is not uncommon that the colleague the young manager prefers to contact for help and support may be stationed in another part of the organization. However, to exchange thoughts and ideas with colleagues from other parts of the company can also have its advantages:

*Because it can also be someone outside your own operations, who works within another part of the company, that may see things differently and have other solutions. Now it happens that I talk to my predecessor "what have you done early, and how did you do before?" Instead of thinking "How could you do that differently? What are you doing in your place?" (IP3)*

However, given the context of the mining industry, due to long distances between facilities in combination with different work shifts, finding desired collegial support in another part of the plant may negatively affect the availability of these interpersonal exchanges.

*As in other workplaces, when you may sit in offices next to each other and such, then it is a more natural contact, and the support may be more evident. I still feel quite alone in this role, even though I know I can call. (IP8)*

Several of the managers have been offered the opportunity to join an internal managerial network with regularly organized meetings. Opinions of this arrangement are divided amongst the participants. Whether the network meetings are perceived as facilitating by the managers appears to be dependent on the extent to which the content corresponds to the specific needs of the manager and the relevance to their own leadership challenges.

*I do not ask about such basic things that are obvious. I do not need help there, but then there are more complex things and more special things that I may need some advice and help with and there has not been any support with that. (IP9)*

In line with this need for more individualized support, the possibility of an arranged mentorship is considered desirable by most of the managers. The mentorship provides these young individuals with a neutral ground where they can air considerations and difficulties in their leadership role with a senior manager who is not a formal superior in the organization. Several of the participants appreciate the possibility to discuss personal leadership strategies which they do not always feel comfortable discussing with their immediate supervisor. Such as dealing with priorities and the balance between work and family time.

*I got a mentor in the first managerial role, and it was very good. [...] I've been trying to get that from my boss now. But it is still good to have someone who is not my, directly above me. That I can talk... in another way I think. (IP7)*

Some even go as far as to arrange or request a mentor of a more existentialist nature, such as a therapist. This kind of mentor is perceived as facilitating their leadership role in terms of dealing with demanding personnel situations, such as subordinates with mental illness and/or suicidal behavior. But it also provides room for deeper self-reflections and personalized feedback of how you can develop as an individual and as a leader.

*I think that if you were to make it mandatory, maybe one meeting a month or one meeting every quarter. Just see a therapist. [...] Most often, those that have the greatest resistance to talking to a therapist are those who have the greatest reason to do so. (IP3)*

The result indicates that several of the young managers have looked for support in their leadership role outside the organization. To choose your own mentor among your private contacts may have advantages in terms of a more conscious matching of the kind of support needed by the young manager. Nevertheless, most of the participants desire that the mentorship was formally arranged by the company so that the relationship could be strictly professional. Knowing your mentor personally is perceived to be an obstacle to raising certain questions. One manager also claims that another important aspect of the arrangement is that the meetings should be formalized and regular rather than relying on the initiative on the mentee.

*That you get a supervisor with a little more planning for a little longer, so it is not just "well, contact me when it suits you and I will answer your questions." It would be nice if it was more planned so that it feels calmer. (IP7)*

## Training, growth, and development

Several of the interviewed managers mention the importance of receiving proper introduction and training in the leadership role. The availability of company designed leadership programs which include leadership training but also covers information regarding e.g., administrative routines, work law or the practical meaning of other managerial responsibilities at the company is considered a great facilitating factor.

Most of the interviewed managers state the importance of formalized leadership training because they experience the absence of this kind of support. When not being provided with the right kind of training and information the managers experience a knowledge gap that creates insecurity and even a fear of having missed something important or to not having dealt with a situation in the right way. Some express how the value of leadership training is especially important for young managers given their often limited managerial experience.

*I feel that I could have been better equipped. Partly also a little to get into... how should you coach your staff? What are the keys you can take? What types of leadership are there, what, how... actually, this with types of leadership is something that is... I do not know, there is someone... What is there? (IP2)*



The great value that the managers place on receiving leadership training often leads to discontent when it is not provided in a structured or timely manner. Several of the managers explained that the length of time that passed from when they moved into the managerial position until they received leadership training was as long as two years, and that this made them feel the need to “invent” a leadership style and find information on their own. Some also feel that the organization should have a more systematic and strategic plan for the training and competence development of the managers, such as clearer communication regarding what training sessions a new manager will be offered and when this training will be held.

*It might have been good if it had been more proactive, so that I felt that there is a plan for me as a manager, in the same way as there is a performance development plan for employees. (IP6)*

There are also participants who request more individually adopted leadership training; apart from the general leadership program within the company. A common view is that assessing the needs for competence development of each manager would constitute a more useful support in their leadership role.

*But perhaps a little more analysis of “how you are as an individual and what you need to work on, and what are your weaknesses?” [...] No, but, a little more individual focused training that is not only generalizing as some leadership training is. (IP2)*

Some of the perceived strain associated with lack of training is related to technological challenges in the managerial role. In the cases where the need for training in necessary IT systems has not been met the knowledge gap may affect the flow of daily operations but can also lead to frustration and stress among the personnel. According to some of the managers the main need for IT training might not only be in terms of courses in IT-systems. It could also be an IT support person that is available for individualized questions on the competence level of the managers. However, the interviews reveal that as a young manager you can often be expected to have a high level of IT-skills. This may lead to some of the managers feeling embarrassed to ask for this kind of individualized support.

*It would have been easier if I had sat next to someone because then someone could have shown me the whole thing... “how was it, what button was it?” Because you can’t be bothered to call to say “which button should I press?” Or make a Teams call and start sharing screen to... It just feels completely crazy... (IP8)*

Another important factor promoting the health and sustainability of the young managers appears to be a sense of continuous personal and professional development. According to the participants this is not primarily an issue of formal competence development, but rather a sense of being intellectually stimulated and to be given opportunities for personal growth. Some even claim that the challenges and possibility to push development is what makes the managerial role appealing in the first place. As one manager puts it:

*To enter a managerial stage without any developmental challenges, that is not that stimulating for me. (IP9)*

Even if times of flow, when things are easy and unproblematic in their leadership role, may give them energy and contribute to health, some also expressed how challenges that demand extra considerations, learning, and the development of new skills, may sometimes lead to even more job satisfaction and motivation in the managerial role. As an example, one manager expresses a desire to be given larger responsibilities and lead larger areas of operation in order to be more stimulated and challenged in the role.

*It is a motivator for me too, when there is a challenge involved as well. That there is a hill to climb or a goal to reach. It also motivates me. (IP2)*

Some of the participants also claim that the opportunity to contribute to the development of the organization and its operations makes the managerial role rewarding and motivating. The results even indicate that several of the managers find job satisfaction in knowing that their efforts lead to changes and improvement on a greater level, to the extent that these experiences outweigh any strains and downsides that they experience with the managerial role.

In addition, a few of the participants also mention the rewarding aspects in seeing their subordinates grow and develop. To sense that your managerial efforts (e.g., coaching conversations) might have contributed to somebody else's learning or decision to go for the next career step, seems to strengthen some of the managers' self-confidence as leaders and to provide them with a sense of satisfaction.

## Mandate, influence, and flexibility

To be given an actual mandate to make your own decisions, to carry out changes, and for their ideas and opinions to be taken seriously by superiors, are considered a vital prerequisites for a sustainable and healthy leadership by the interviewed managers. The sense of not being trusted by management with room for maneuver when it comes to leading the team according to your own conviction may result in a feeling of having your hands tied in the interactions with their subordinates. This in turn may lead to a

fear of losing the respect of their subordinates as they appear to be merely marionets without any real mandate or influence. Nonetheless, most participants claim to have sufficient mandate and that their direct superior shows good trust in their competence by taking mainly a coaching and goal-oriented role towards the young manager. This kind of mandate seems to contribute to increased motivation and job satisfaction among the young managers.

*You get good support too. That it is like... it is a coaching environment, not a coercive one. [...] That yes, I have good coaching and I have a good dialogue with the person that is my boss, and the production in general. What are the goals we are working towards, and where are we going? (IP2)*

Closely related to the issue of mandate is the importance of being respected and appreciated for their professional competence even though they may not be the most experienced at the workplace. According to several of the participants, an open climate where the managers feel accepted and free to speak freely without fear of making mistakes or appearing as ignorant is stated to contribute greatly to the managers experience of their work situation and well-being in their managerial role.

*It is a very open culture in that way. I definitely feel that I get listened to in many different forums. I do not feel like "okay, they do not listen to me because I am a young boss", instead I still feel that people really take my opinions and such seriously. So that... mm, I thrive in it. (IP6)*

Several of the participants claim that flexible working conditions is a significant factor when it comes to the possibility of maintaining a balanced and healthy life as a manager. For example, even though the pandemic has involved some challenges for the managers, most express a view that the increased flexibility in working hours and distance work is a change that has led to an improved work situation for the young individuals. In this case, this increased flexibility has been particularly health promoting for those who have families and would otherwise have experienced significant stress to achieve a balance between family and work.

*A good thing that has come from this corona story, that is just that you have started working from home. And you see that it works too. It is not something I would like to do all the time, but if you need to from time to time, maybe if the preschool is closed or you need to pick up earlier or whatever it may be, that I do have the opportunity to come to work later, go earlier with these flex-times. Or I have*

*the opportunity to work from home as well. So that I think is good.  
(IP5)*

According to some of the participants the flexibility of working hours is also an issues of company climate. By this they refer to the importance of acceptance of flexible working conditions at the workplace, and not only that it is allowed according to regulations. When the managers' feel that it is considered appropriate to work from home when needed they feel more confident in doing so without being questioned. It is both a matter of trust in the sense of responsibility of personnel to fulfill their work obligation, regardless of working at company facilities or from home, and a question of respecting one another's need for spare time and recovery from work.

*But at the same time, I also feel that I really need to switch off, so I can inform everyone that "yes, now I have autumn leave with my family", but that they can call if it is absolutely urgent. And most of the time this is respected. Anyway, we are very good at [the company], to highly value your own and other's free time. (IP6)*

# Discussion and conclusions

To sum up the results, most interviewed managers state that they are in good health generally and are enjoying being managers in the organization. On an overall level, the work environment and working conditions are experienced as good. The work is seen as rewarding, varied, and stimulating. Nevertheless, the results indicate several aspects or conditions in their work role that are straining and a potential threat to their health on a long-term basis. Straining and facilitating factors are found primarily at an organizational level and appear to be similar to issues identified in general leadership research (regardless of age and work context). However, others appear to be particularly important for young managers in this kind of heavy industry.

Previous research provides considerable evidence for the importance of an adequate level of work demands for the performance and well-being of an individual (Griffin and Clarke, 2011). Whether demands are perceived as beneficial to work motivation, health, learning, and job satisfaction or constitutes a source for unhealthy stress is dependent on the extent to which the individual has available resources to meet these demands (Karasek and Theorell, 1990).

The amount of strain an imbalance is placing on the individual is also affected by the size of the stressor (e.g., time pressure or workload) and the frequency by which it is experienced (e.g., interruptions or conflicts) (Sonnentag and Frese, 2003). However, the kind of demands that are experienced as straining and the extent to which they result in negative stress are assumed to also be dependent on the professional role, work context, and the prevailing working conditions at a specific workplace. Therefore, the result of this study contributes to broaden the understanding of demands that could be seen as specific for the category of young managers in the setting of a mining industry.

In the following, the results are elaborated and discussed in relation to the JDCS-model (Karasek and Theorell, 1990) as a theoretical framework. The subthemes adhering to straining factors in the leadership role can be seen in the light of job demands according to the JDCS-model. The subthemes adhering to facilitating themes could largely fit into either one of the categories job control and social support (Table 2).

**Table 2.** An overview of the dimensions of the JDCS-model and the resulting sub-themes from the present study categorized into these dimensions.

<b>Dimension JDCS-model</b>	<b>Study themes</b>
Job demands	<ul style="list-style-type: none"> <li>• Ambiguous assignment</li> <li>• Deficient routines and staffing challenges</li> <li>• Heavy workload</li> <li>• Work-life spillover</li> <li>• Physical workplace challenges</li> <li>• Insecurity and inadequacy</li> </ul>
Job control/resources	<ul style="list-style-type: none"> <li>• Guidelines and policies</li> <li>• Formal support</li> <li>• Training, growth, and development</li> <li>• Mandate, influence, and flexibility</li> </ul>
Workplace social support	<ul style="list-style-type: none"> <li>• Interpersonal support</li> </ul>

## Potentially straining demands

### Role, task, and competence

One aspect appearing as particularly demanding for young (and often new) managers is experiencing ambiguity and unclarity of their role, task, priorities, and mandate. When lacking sufficient resources or means to feel in control, in terms of organizational structures, written routines, and guidelines that clarifies these matters, it might lead to an insecurity that can be stressful for the young managers. The results indicate that doubting their own performance and questioning whether their actions as a leader are appropriate or enough is a common source of stress.

Even though the lack of clarity in a work role is known from previous research to be a general stressor (e.g., Frögéli et al., 2019), the results indicate that this aspect may be especially distinct for young managers. One reason for this appears to be a fear of being questioned because of their young age. This makes them particularly eager to appear as competent; in order to be taken seriously and to sustain mandate and respect from

subordinates. According to previous research, a lack of control or understanding of a situation might engender stress by frustrating the intrinsic need to feel competent (Deci and Ryan, 2015; Sonnentag and Frese, 2003).

The lack of work life experience, compared to more senior colleagues, may also be a reason why many young managers find it challenging to prioritize between different tasks. Their relative inexperience in leadership can make it difficult for them to distinguish important tasks from less urgent tasks. This may potentially be experienced as more stressful for young and new managers compared to more experienced managers.

The result also indicates that the responsibility for subordinates and their work environment constitutes a particular strain to the young managers, as they often lack much of the relational skills learned through long interpersonal experience. Emotionally demanding aspects of leadership, such as dealing with subordinate mental health problems or conflicts, appears to be experienced as specifically challenging for some. According to Hill (2004), many young professionals are well aware of the task-related skills and knowledge required for the managerial position but tend to lack an understanding of the relational and cultural challenges that accompany the role; such as dealing with attitudes, motivation, and the values of subordinates. This underlines the need for organizations to acknowledge the importance of being clear to young professionals about what a managerial role involves in terms of tasks, required skills, and what will be expected.

## Workload and demand imbalance

There is ample evidence in research for the importance of work-life balance for a healthy and sustainable career (Nordenmark et al., 2020). Exactly what constitutes a healthy balance varies between individuals, but it is well established that sufficient time off for recuperation, through e.g., social activities, exercise, lectures, and time with family are requisites for being able to perform optimally and for long-term sustainability in the work role (Sirgy and Lee, 2018).

As the results indicate, difficulties of achieving a work-life balance can have different grounds for the young managers. It might be due to a quantitatively (number of assignments and responsibilities) or qualitatively (broad and undefined responsibilities) heavy workload that leads to overtime work, but also explicit or implicit expectations placed on the managers to be constantly available. Lack of administrative support and routines for vacation planning and emotionally straining personnel matters may also result in a spill-over effect of work (practically or mentally) on spare time.

Many of the burdensome tasks are related to administrative routines and controls. The strains on managers due to extensive administrative tasks that should be performed primarily by administrative staff, has also been noted in a previous study of Swedish managers in the public sector (Cregård & Corin, 2019). The results also reveal a certain frustration among the young managers when a high administrative workload in combination with difficulties in prioritizing between tasks, due to inexperience and

a lack of clarity and support in the managerial role, often result in more long-term strategic managerial tasks and interpersonal leadership matters being pushed ahead and sometimes never being attended to.

Considering the evidence for the importance of developmental/transformational (e.g., Syrek et al., 2013; Ekvall and Arvonen, 1991) and relational (Graen and Uhl-Bien, 1995) aspects of leadership, these results are worth noting. To not be able to conduct a relational leadership is likely particularly relevant for young managers, as another study in the same company concluded that it is significantly more common for young managers to aim for a relational leadership, compared to their senior managerial colleagues who tend to have a greater focus on structural aspects in their leadership (Vinberg et al., 2023). In addition, considering the previously mentioned insecurity in terms of lacking experience in complex interpersonal issues, not having enough time and resources to deal with personnel relational issues might be especially straining for young managers.

A heavy workload is understood to result in work-life imbalance and an unhealthy strain. But only if the workload continues over an extended period of time and there is no calmer period in sight. Previous research has shown that long term work overload is a significant risk factor; not only to the health of the young managers (Sirgy and Lee, 2018), but also to the intention to leave the managerial role (Li et al., 2022). In line with previous studies, the present study also found evidence for the risk of a negative spiral when a heavy workload results in overtime work, leading to a lack of time for exercise and other relaxing activities, which in turn tends to lead to a deterioration in health (Molino et al., 2015).

It can be assumed that work-life balance and sufficient time for recovery from work is particularly important for young professionals, given that they are often in a life-phase where they start up a family and have to divide their time and attention between work and family responsibilities. This is supported by a study showing that aspects of distress were more common among young managers, especially if they perceived difficulties in effectively balancing work and home responsibilities (West et al., 2013). The same study also found an increased stress level among female managers, which is in line with the results of a meta-analytic study demonstrating that mothers have higher work-family conflict than fathers (Shockley et al., 2017). This can be explained by women often taking a greater responsibility for family and household tasks, meaning that they take on a second shift of unpaid parenting and domestic labor after a workday (Paoletti et al., 2022). From a gender perspective, it is hence important to consider that overtime work and a heavy workload at work can be especially detrimental to young female managers with young children.



## Resources facilitating sustainability

To possess sufficient and adequate resources to deal with challenges and strains in one's everyday work is important for maintaining a sense of control over the situation. To be in control of one's environment is, in turn, an important buffer against work stress (Eatough and Spector, 2014). However, just as demands may be experienced differently depending on the context and work role of an individual or work group, the resources contributing to a sense of control and manageability of the situation may vary in the same way (Van Yperen and Snijders, 2000).

## Training

Given the apparent severity of strain in not perceiving clarity in the work role, tasks, and priorities of the young managers, it can be assumed that sufficient training and information in these domains would constitute an important resource for dealing with this stress. This is supported by the results that indicate that several of the managers who had not received training feel insecure in their role and lack a confirmation of whether the leadership actions and behaviors that they exercise are on the right track.

An introductory leadership program should convey practical and local information related to values, expectations, and obligations in the leadership role in the organization as well as more general behavioral and attitudinal issues that they should be aware of as a leader (Lacerenza et al., 2017). Knowledge and skill attained from a good leadership training program has proven to provide individuals with increased confidence and sense of control in their role as a manager (Söderhjelm et al., 2017).

However, research has highlighted the importance of having a structured plan for training people in different positions and functions that include what kind of training is relevant (content) and when to receive this training (timing) (Van Velsor and Musselwhite, 1986). Research also shows that training needs to be perceived as relevant, on the right competence level, and applicable to the work situation of the receiver (Kragt and Guenter, 2018). This is in line with the results in the present article, indicating that the young managers appreciate thoroughly planned leadership programs that are not delayed by too much time and are adopted to the training needs of each individual manager.

## Company policies and organizational arrangements

The study results indicate that a company leadership policy can constitute an important support in the leadership role, by providing clarity and guidance in terms of expectations, obligations, and priorities in the role. This might be particularly relevant for young managers, because of no or limited previous experience as leaders.

Another characteristic of young managers as a group, compared to more senior managers, is that they are generally in a life phase involving a demanding family situation, i.e., starting a family or having responsibility of small children. Apart from a leadership policy, company values and culture regarding work-life balance also appear to be vital for the health and sustainability of the young managers. Consequently, explicitly communicated encouragement by the top management to keep a good work balance allowing time for exercise, recovery, and time with close ones ought to be beneficial in promoting a sustainable work situation for young managers (Downes and Koekemoer, 2011).

In addition, to counteract negative impact from stressful aspects of the leadership assignment that tend to spill over and affect their possibility to recover during spare time, it can be concluded from the results that organizational arrangements for managers, including vacation policies, are a necessity in order for the young managers to disconnect from worries and managerial responsibilities during their time off. Another way of reducing stress from heavy workload and spill-over effects is to ensure a certain redundancy in vital competences. This could be achieved by increasing the transfer of knowledge within the group or arranging so that employees with similar competencies can cover for each other during holidays and other kinds of leaves.

## Formal support functions

The study indicates that the possibility of achieving a sustainable work situation for the managers is facilitated by the availability of formal organizational support functions. In particular, the results indicate that the managers often receive insufficient support when it comes to challenges in their leadership, such as role ambiguity, identity, and approach as a leader, promoting motivation in the team, interpersonal relationships, and dealing with difficult conversations. This is an area of support that may be underestimated by organizations when it comes specifically to young and new managers who may be in more need of guidance, feedback, and confirmation in their role.

However, the results also indicate that when formal support functions are given a more strategic role in the organization it engenders frustration and strain for the young managers. One example of this is the support provided to deal with the managerial work environment responsibility. These tasks are considered burdensome as they require a certain level of knowledge regarding work environment legislation, as well as methods for assessments, development of action plans, and evaluation. This finding indicates that organizations need to reconsider the increasing focus on strategic roles and instead provide their managers with more practical operative, hands-on, support where possible.

## Mandate, influence, and flexibility

According to the JDCS-model, autonomy and influence over important decisions and work activities are considered as central resources contributing to well-being and job satisfaction (Karasek and Theorell, 1990). More recent research has provided evidence that the ability to intervene and change work processes act to buffer against stressful cognitions that could arise from not having sufficient resources to complete tasks (Bakker et al., 2005).

In line with this, the results here indicate that mandate and decision-power, at least concerning their own team, appears to be strong facilitating factors for the health and sustainability of the young managers. This is particularly clear in those cases when mandate is not given and the young individuals experience fear of losing trustworthiness as leaders in the face of their subordinates and colleagues. To be given mandate is also viewed as a token of appreciation and confirmation of having earned the respect of the top management, providing the young managers with increased confidence to share their thoughts and ideas more openly. There is considerable evidence of an open communication climate having positive effects on learning and innovation (Edmondson, 1999) as well as on well-being and job-satisfaction (Frazier et al., 2017).

One way in which the young managers can experience having influence over their own work is by flexible working conditions. As this enables them to combine the responsibilities of a managerial role with other parts of their life this can be interpreted as facilitating their health and well-being. A common theme in the results is the high value that the managers place in having a balanced life where work tasks and worries do not spill over negatively on other parts of life. This is in line with previous research indicating a diminishing willingness among younger generations to accept working conditions that prevent them from being a participating and available parent or spouse (Torres, 2014). A conclusion from this is that employers that cannot provide this kind of balance will most likely find it increasingly difficult to attract desirable leadership talents from these generations.

## Social support

The finding that support from others at the workplace is vital for the sustainability and health of the young managers is in line with the dimension of social support in the JDCS-model (Johnson and Hall, 1988). There is also plenty of evidence in research for an association between high levels of support and well-being, while a perceived lack of support in demanding work situations may lead to increased strain (Luchman and González-Morales, 2013; Foy et al., 2019).

The most important relationship for these young managers appears to be with their direct superior, whose support and availability appears to be a key facilitating aspect in handling challenging situations in the leadership role. This is in line with previous research indicating that perceived supervisor support is more important to the work

engagement of managers than organizational support (Shi and Gordon, 2020). The result from the present study provides a deeper understanding of what aspects of this support that is valued by young managers, i.e., the important role of the direct superior in clarifying goals, expectations, and guidance in making priorities in the managerial assignment. Supervisory support in clarifying priorities has also been found in previous research to be important for managerial retention (Cregård and Corin, 2019). Given the result that some of the young managers feel insufficient in areas in which they lack enough experience, such as inter-relational matters and making priorities, it is reasonable to conclude that this kind of supervisory support is facilitating and leads to stress reduction; by having confirmed that they are not overlooking any important task and by avoiding an overwhelming workload.

In line with this, many of the managers also value access to a more experienced mentor or coach. A meta-analysis provides support to this finding by showing that mentoring was associated with favorable behavioral, attitudinal, health-related, relational, motivational and career outcomes (Eby et al., 2008). The effects sizes in this meta-analysis were however small, which may be explained by circumstances effecting the outcomes of the mentorship. For example, the result from the present study indicates that many of the managers express a desire to have a mentor arrangement that is more independent from organizational roles and that the interchange between mentor and mentee is structured and planned rather than on-demand. The results also reveal that the managers often prefer to pick their mentor themselves, or at least to be given the opportunity to express their views regarding the preferred competence of the mentor.

Even informal and open relationships with colleagues on more or less the same hierarchical level is important for these managers. Previous research suggest that peer support may be helpful to managers in terms of providing information and tangible aid (Parris, 2003), and fulfilling needs for esteem, approval, and affiliation (Stinglhamber and Vandenberghe, 2003). However, the result from the present study furthers this knowledge by indicating a more socially facilitating function of these relationships, i.e., by providing an opportunity to exchange thoughts and experiences on an informal level and talk more freely than what they feel is appropriate with their team members or superiors. The availability of managerial networks does not appear to be a very strong facilitator in most cases. Whether a network is experienced as facilitating at all or just a waste of time appears to be a consequence of the level of leadership competence and experience of the other network members. A conclusion from this is that it is more appropriate to let the managers join networks with different themes or level of development rather than just a network with the common theme of being managers at the same company.

## Fulfillment and development – a third buffer in the JPDS-model for young managers?

The results highlight the need for development as a strong motivator for these young managers. It is highly valued to be offered a work situation involving opportunities for continuous professional and personal growth. In some cases, this urge is evident to the extent that they strive for more difficult leadership tasks and a larger team in order to be more challenged, or that they look outside the organization for a more stimulating employment. The strength of this need among young individual is, of course, important for organizations to acknowledge and take seriously in order to not lose valuable leadership talents. This need to acknowledge the strong craving for development among young employees has also been concluded in a previous study including 18 in-depth interviews and surveys to more than 1,200 young professionals regarding their work behaviors and experiences (Hamori et al., 2015).

To not be provided with sufficient opportunities for growth, development, and intellectual stimulation may be viewed as a situation where the resources of the managers exceed the demands. An imbalance in this direction can be just as stressful as when the demands exceed the resources (Weinberg, 2016). To not be provided with sufficient opportunities for growth and development may therefore be considered as a high-strain situation to a young manager.

Based on the results it is reasonable to assume that this aspect of the managerial position may have a facilitating and even a buffering effect against the negative consequences of the challenges experienced in the leadership role by young managers. However, despite the apparent motivating and facilitating qualities in an individual's experience of opportunities for development in a work role: this aspect is not included in the JDCS model.

It is suggested that future research investigates further the possibility of a missing piece to the theoretical concept in the JDCS model; with a possible addition of a fourth dimension emphasizing the importance of taking human needs (such as self-actualization, approval, need for growth and self-coherence) into consideration for an extended understanding of the causes and buffering mechanisms of workplace related health problems. These are concepts thoroughly investigated in motivational research, such as needs theories (Herzberg, 1966; Deci and Ryan, 2015); but which are not given as much consideration in research regarding a work health and stress perspective. In a similar way, the sociotechnical systems theory has to some extent touched on adjacent questions (Stranks, 2007), but have mostly focused on the role of participation, autonomy, mandate in distributing work tasks, and performance feedback on work satisfaction and productivity, rather than a sense of self-development as a buffer for ill-health.

## Method discussion

There are two aspects to consider in the methodological approach of this study. First, this study focused solely on young managers and their experiences within one specific mining company. Some of the straining and facilitating factors identified in the study may be applicable to managerial challenges in general, regardless of age, while certain factors may be more specifically related to the age or generation of the managers. Several statements suggests that there may be differences between younger and older managers. However, given the explorative rather than comparative scope of this study, the views of older managers have not been explored; render any conclusion regarding the differences in the stressors and facilitators perceived by younger as opposed to older managers speculative as they cannot be drawn from the results presented here. Albeit that the results from this study encourage further exploration of these differences as highly relevant for future studies.

Second, and more importantly, the interviews were conducted during the Covid-19 pandemic. It should be mentioned that most of the young managers became managers during the two years of the pandemic. It should be kept in mind that the way the young managers describe their work environment may to some extent reflect the situation the pandemic engendered, rather than the situation of being a young manager in general. One such example is the managers' experience of a lack of leadership training, which might have been at least partly influenced by the special circumstances during the pandemic.

Regarding the finding of fulfillment and development being an underestimated buffer against unhealthy stress for the young managers, it might be the case that the strong emphasis on this facilitating factor is a result of the specificity of this particular group. That is, this strong need for growth and development might be a common characteristic among those young individuals who also seek out the challenges associated with a managerial position. It may be the case that young professionals without any career ambition or interest in a managerial role place less value into constant development as a facilitator for being satisfied and healthy at work. This reasoning would not make the results any less useful, but rather confirms the importance of identifying the specific demands and resources that are needed for achieving a balanced and sustainable work situation for a certain professional group.

Lastly, the relatively limited number of participants and the fact that they were all managerial representatives within the mining industry, might limit the generalizability of the results to young managers in other sectors or even companies. However, the advantage of this approach is the possibility to gain an increased understanding of the challenges and support mechanism for a specific group in relation to a particular context. This way, the validity of the results may be stronger than more general studies when it comes to the applicability to young managers within this particular or similar industrial settings. In fact, given that research regarding the health and sustainability of

this professional group and setting is scarce makes this restriction in scope – and hence generalizability – warranted.

Methodological strengths with the study that should be mentioned are the relative length and depth of the interviews, which has provided the study with an increased understanding of the young managers' perceptions and experiences on a deeper level than is possible by quantitative methodologies or more standardized interviews. Conducting the interviews with several different interviewers and multiple researchers being involved in the analytic process of the material has also provided the study with a possibility to ensure good inter-researcher reliability (Krippendorff, 2019).

## Conclusions and practical implications

In conclusion, the study has identified several factors as either straining or facilitating and contributing to good health and sustainability of young managers in their leadership role. The aspects of the working conditions of young managers that stand out as particularly straining are; having an unclearly specified and ambiguous role and managerial assignment, lack of structured routines and support guiding them in both everyday tasks and in prioritizing between tasks, a heavy workload leading to insufficient time for recovery and negative spill-over effect on spare time activities and family life, the character of their physical workplace involving difficulties in social and competence exchange with colleagues, and a sense of insecurity and fear of inadequacy due to limited leadership experience.

Factor identified as facilitating can largely be seen as the other side of the coin of the straining factors, i.e., a healthy work situation is facilitated by the absence of these strains or by supportive conditions in the organization that facilitates the handling of these demands. Such supportive measures appear to be; the availability of leadership training based on individual needs, clear structures, guidelines and policies for routines and assignment in the managerial role, continuous coaching by a mentor or direct superior, operative administrative support, mandate and influence over decisions and initiatives, as well as room for flexibility in working arrangements.

These factors can all be understood and validated by the JDACS-model and contribute with additional insights into how this model can be applied to a specific professional group (young managers) and in a certain context (mining and similar heavy industry). The one factor that stood out from complete adaptation to the model was the great emphasis this group places on the need for stimulation and development as a facilitator and condition for sustainability and health in the managerial role. As a consequence, it is important to acknowledge that a high workload and challenging tasks may not be seen as contributors to ill health in young managers per se but may rather lead to a healthy sense of development and stimulation as long as they are provided with the right support and resources that enables them to still feel in control.

This finding may add a new dimension to the model which merits further investigation considering whether this strongly facilitating factor among these young professionals constitutes a fourth dimension to our understanding of the stress-strain paradigm or whether this is a buffering and facilitating factor particularly evident and relevant for this specific professional group. In any case, the result from this study provides an increased understanding of the perceived strains and facilitators for the maintenance of good health among this group of managers.

Acknowledging the specific factors acting as strains and facilitators for different professions or organizational roles may add to the practical applicability of the results in organizations but may also contribute to increased theoretical clarity regarding the consistency of the constructs and dimensions of the JDCS-model (Fila, 2016). In addition, the findings may have practical implications for organizations when it comes to their ability to ensure good, healthy, attractive, and sustainable working conditions for the young generation of managers.

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# References

- Bakker AB, Demerouti E and Euwema M (2005) Job Resources Buffer the Impact of Job Demands on Burnout. *Journal of Occupational Health Psychology* 10: 170-180.
- Bass BM and Bass, R (2008) *The Bass handbook of leadership: Theory, research, and managerial applications*. New York: Free Press.
- Battams S, Roche AM, Fischer JA, et al. (2014) Workplace risk factors for anxiety and depression in male-dominated industries: a systematic review. 2: 983 - 1008.
- Björklund C, Lohela-Karlsson M, Jensen I, et al. (2013) Hierarchies of Health: Health and Work-Related Stress of Managers in Municipalities and County Councils in Sweden. *Journal of occupational and environmental medicine* 55(7): 752-760.
- Bolander P, Holmberg I and Fellbom E (2019) Learning to become manager: The identity work of first-time managers. *Management Learning* 50(3): 282-301.
- Chernyshenko OS, Chan K-Y, Moon-Ho RH, et al. (2017) Entrepreneurial, Professional, and Leadership Career Aspiration Survey: Toward Holistic Career Development of University Students in the 21st Century<sup>1</sup>. *Building Better Students*. New York: Oxford University Press.
- Considine R, Tynan R, James C, et al. (2017) The Contribution of Individual, Social and Work Characteristics to Employee Mental Health in a Coal Mining Industry Population. *Plos One* 12(1): e0168445.
- Cregård A and Corin L (2019) Public sector managers: the decision to leave or remain in a job. *Human Resource Development International* 22(2): 158-176.
- Deci EL and Ryan RM (2015) Self-Determination Theory. In: Wright JD (ed) *International Encyclopedia of the Social & Behavioral Sciences (Second Edition)*. Oxford: Elsevier, pp.486-491.
- Downes C and Koekemoer E (2011) Work-life balance policies: Challenges and benefits associated with implementing flexitime. *SA Journal of Human Resource Management* 9(1): 1-13.
- Eatough EM and Spector PE (2014) The Role of Workplace Control in Positive Health and Wellbeing. *Wellbeing*. C.L. Cooper, pp.1-19.
- Eby LT, Allen TD, Evans SC, et al. (2008) Does Mentoring Matter? A Multidisciplinary Meta-Analysis Comparing Mentored and Non-Mentored Individuals. *Journal of vocational behavior* 72(2): 254-267.

- Edmondson A (1999) Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly* 44(2): 350-383.
- Ekvall G and Arvonen J (1991) Change-centered leadership: An extension of the two-dimensional model. *Scandinavian Journal of Management* 7(1): 17-26.
- Epitropaki O (2018) Self-selection Bias in Leadership: Improving Leadership Research and Practice. In: Riggio RE (ed) *What's Wrong with Leadership? Improving Leadership Research and Practice*. 1st Edition ed. New York: Routledge, pp.89-104.
- Fila M (2016) The Job Demands, Control, Support Model: Where Are We Now? *TKM International Journal for Research in Management* 1.
- Foy T, Dwyer R, Nafarrete R, et al. (2019) Managing job performance, social support and work-life conflict to reduce workplace stress. *International Journal of Productivity and Performance Management* 68.
- Frazier ML, Fainshmidt S, Klinger RL, et al. (2017) Psychological safety: A meta-analytic review and extension. *Personnel Psychology* 70(1): 113-165.
- Frögéli E, Rudman A and Gustavsson P (2019) The relationship between task mastery, role clarity, social acceptance, and stress: An intensive longitudinal study with a sample of newly registered nurses. *International Journal of Nursing Studies* 91: 60-69.
- Giorgi A (1997) The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology*.(28): 235–260.
- Graen GB and Uhl-Bien M (1995) Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership quarterly* 6(2): 219-247.
- Graneheim UH and Lundman B (2004) Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ Today* 24(2): 105-112.
- Griffin MA and Clarke S (2011) Stress and well-being at work. *APA handbook of industrial and organizational psychology, Vol 3: Maintaining, expanding, and contracting the organization*. Washington, DC, US: American Psychological Association, pp.359-397.
- Hamori M, Koyuncu B, Cao J, et al. (2015) What High-Potential Young Managers Want. *Mit Sloan Management Review* 57(1): 61-68.
- Herzberg F (1966) *Work and the nature of man*. Cleveland: World Pub. Co.
- Hill LA (2004) New manager development for the 21st century. 18(3): 121-126.
- Hsieh H-F and Shannon SE (2005) Three Approaches to Qualitative Content Analysis. *Qualitative Health Research* 15(9): 1277-1288.
- Johnson JV and Hall EM (1988) Job strain, workplace social support, and cardiovascular disease: a cross-sectional study of a random sample of the Swedish working population. *American Journal of Public Health* 78(10): 1336-1342.
- Kain JM and Jex SM (2010) Karasek's (1979) job demands-control model: A summary of current issues and recommendations for future research. *Research in Occupational Stress and Well-being* 8: 237–268.

- Karasek R and Theorell T (1990) *Healthy work : stress, productivity and the reconstruction of working life*. New York (N.Y.) : Basic books.
- Kragt D and Guenter H (2018) Why and when leadership training predicts effectiveness: The role of leader identity and leadership experience. *Leadership & Organization Development Journal* 39.
- Krippendorff K (2019) *Content analysis: an introduction to its methodology*. Thousand Oaks (CA): SAGE Publications..
- Lacerenza CN, Reyes DL, Marlow SL, et al. (2017) Leadership training design, delivery, and implementation: A meta-analysis. *Journal of Applied Psychology* 102(12): 1686-1718.
- Larsson G and Björklund C (2021) Age and leadership: comparisons of age groups in different kinds of work environment. *Management Research Review* 44(5): 661-676.
- Larsson J, Rapp L, Roxenfalk-Jatko K, Vinberg S, Mattson Molnar, M, Johansson J, Jakobsson M, Lööv J (2022) Organisational and social work environment among managers – manager survey, interviews, work activities, and literature review. Report no. 2022:1. Luleå University of Technology.
- Larsson J and Vinberg S (2010) Leadership behaviour in successful organisations: Universal or situation-dependent? *Total Quality Management & Business Excellence* 21(3): 317-334.
- Li X, Chen X and Gao D (2022) Influence of Work-Family Conflict on Turnover Intention of Primary and Secondary School Teachers: Serial Mediating Role of Psychological Contract and Job Satisfaction. *Frontiers in psychiatry* 13: 869344..
- Luchman JN and González-Morales MG (2013) Demands, control, and support: A meta-analytic review of work characteristics interrelationships. *Journal of Occupational Health Psychology* 18(1): 37-52.
- Lundqvist D, Eriksson AF and Ekberg K (2012) Exploring the relationship between managers' leadership and their health. *Work-a Journal of Prevention Assessment & Rehabilitation* 42: 419-427.
- Mohrman SA and Worley CGJOD (2010) The organizational sustainability journey: Introduction to the special issue. *Organizational Dynamics* 39(4): 289-294.
- Molino M, Cortese CG and Ghislieri C (2015) Do recovery experiences moderate the relationship between workload and work-family conflict? *Career Development International* 20: 686-702.
- Nordenmark M, Almén N and Vinberg S (2020) Work/Family Conflict of More Importance than Psychosocial Working Conditions and Family Conditions for Mental Wellbeing. *Societies* 10(3): 67.
- Oppenheim AN (2000) *Questionnaire design, interviewing and attitude measurement, New ed.* New York, NY, US: Pinter Publishers.
- Paoletti J, Derrick JL, Fagundes CP, et al. (2022) The Effects of Strain-Based Work-Parenting Conflict on Dual Income Couples' Energy. *International journal of environmental research and public health* 19(15): 9125.
- Parris MA (2003) Work Teams: Perceptions of a Ready-Made Support System? *Employee Responsibilities and Rights Journal* 15(2): 71-83.

- Rörström K (2005) Unga chefer vill inte styra i gammal stil (Young managers don't want to lead in old fashioned style). *Sydsvenskan*.
- Saifman H and Sherman RO (2019) The Experience of Being a Millennial Nurse Manager. *Journal of Nursing Administration* 49(7-8): 366-371.
- Shi X and Gordon S (2020) Organizational support versus supervisor support: The impact on hospitality managers' psychological contract and work engagement. *International Journal of Hospitality Management* 87: 102374.
- Shockley KM, Shen W, DeNunzio MM, et al. (2017) Disentangling the Relationship Between Gender and Work-Family Conflict: An Integration of Theoretical Perspectives Using Meta-Analytic Methods. *Journal of applied psychology* 102(12): 1601-1635.
- Sinclair A (2011) Being leaders: Identities and identity work in leadership. *The Sage Handbook of Leadership*. 508-517.
- Sirgy MJ and Lee D-J (2018) Work-Life Balance: an Integrative Review. *Applied Research in Quality of Life* 13(1): 229-254.
- Skakon J, Nielsen K, Borg V, et al. (2010) Are leaders' well-being, behaviours and style associated with the affective well-being of their employees? A systematic review of three decades of research. *Work & Stress* 24(2): 107-139.
- Snape E and Redman T (2003) Too old or too young? The impact of perceived age discrimination. *Human Resource Management Journal* 13(1): 78-89.
- Sonnentag S and Frese M (2003) Stress in organizations. *Handbook of psychology: Industrial and organizational psychology, Vol. 12*. Hoboken, NJ, US: John Wiley & Sons Inc, pp.453-491.
- Stinglhamber F and Vandenberghe C (2003) Organizations and supervisors as sources of support and targets of commitment: a longitudinal study. *Journal of Organizational Behavior* 24(3): 251-270.
- Stranks JW (2007) *Human Factors and Behavioural Safety*. Butterworth-Heinemann.
- Syreke CJ, Apostel E and Antoni CH (2013) Stress in highly demanding IT jobs: Transformational leadership moderates the impact of time pressure on exhaustion and work-life balance. *Journal of Occupational Health Psychology* 18(3): 252-261.
- Söderhjelm T, Larsson G, Sandahl C, et al. (2017) The importance of confidence in leadership role: A qualitative study of the process following two Swedish leadership programmes. *Leadership & Organization Development Journal* 39.
- Torres N (2014) Most people don't want to be managers. *Harvard Business Review*. Sept. Issue.
- Uen J-F, Wu T and Huang H-Y (2009) Young managers' interpersonal stress and its relationship to management development practices: An exploratory study. *International journal of training and development* 13: 38-52.
- van Dam K, van Vuuren T and Kemps S (2017) Sustainable employment: the importance of intrinsically valuable work and an age-supportive climate. *The International Journal of Human Resource Management* 28(17): 2449-2472.
- Van Velsor E and Musselwhite WC (1986) The timing of training, learning, and transfer. *Training & Development Journal* 40(8): 58-59.

- Van Yperen NW and Snijders TA (2000) A multilevel analysis of the demand-control model: is stress at work determined by factors at the group level or the individual level? *Journal of Occupational Health Psychology* 5(1): 182-190.
- Vinberg S, Lööv J, Jakobsson M, Mattson Molnar M and Larsson J (2023) Do leadership behaviours, work environments and the health of managers in Sweden and outside Sweden differ? A study of a large international mining company. *Mineral Economics*. DOI: 10.1007/s13563-023-00375-1.
- Wallo A, Lundqvist D (2020). Leadership for health and well-being: A systematic review. Report no. 2020:5. Gävle: SAWEE.
- Weinberg A (2016) Chapter 23 - When the Work Is Not Enough: The Sinister Stress of Boredom. In: Fink G (ed) *Stress: Concepts, Cognition, Emotion, and Behavior*. San Diego: Academic Press, pp.195-201.
- West C, Halvorsen A, Swenson S and McDonald F (2013) Burnout and Distress Among Internal Medicine Program Directors: Results of A National Survey. *Journal of general internal medicine* 28(8): 1056–1063.
- Yin R (1984) *Case study research: Design and methods (1st ed.)*. Beverly Hills, CA: Sage. Beverly Hills, CA: Sage.
- Yukl G (2012) Effective Leadership Behavior: What We Know and What Questions Need More Attention. *Academy of Management Perspectives* 26: 66-85.
- Zaccaro SJ, Rittman AL and Marks MA (2001) Team leadership. *The Leadership quarterly* 12(4): 451-483.