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Exploring line managers' perspectives on using data in managing sickness absence: a qualitative study

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Abstract

Purpose The purpose of this study is to explore line managers' perspectives on data as tool in the management of sickness absence in public sector workplaces in Denmark.

Methods The study is a qualitative study based on 19 semi-structured interviews with line managers from four public sector workplaces characterized by high levels of sickness absence or poor work environment. The interviews were analysed inductively using thematic analysis.

Results The findings show that line managers primarily use data to identify employees at risk of sickness absence. The experiences highlighted related to how and when data are perceived as a valuable tool by the line managers, and that nuances in the data, accessibility of the data and how data are presented are important factors to ensure appropriate follow-up on sickness absence.

Conclusions The findings suggest that for line managers to use data to manage sickness absence appropriately, the data must be easily accessible, simple for line managers to understand and provide line managers with a sufficient overview of sickness absence in their work units. It is also important to consider other factors affecting sickness absence, such as the work environment, when aiming to reduce sickness absence.

Keywords Sickness absence, Absenteeism, Data, Line manager, Workplace

Background

In 2022, sickness absence in Denmark corresponded to 11.0 days per full-time worker per year, which was an increase of 1.7 days compared with that in 2021 [1], and sickness absence was greater in the public sector than in the private sector [2]. Compared with other Nordic countries, sickness absence in Denmark is generally lower than that in Norway and Sweden [3].

Sickness absence from work constitutes a public health challenge as it has negative effects on the individual, the workplace and society at large [4]. Sickness absence among employees in the public sector can affect the quality of welfare services, as employees may have to work faster to cover the tasks of sick-listed colleagues or it is necessary to spend resources on temporary staff, which can pressure the budget. The public economy is also affected by sickness absence due to expenses to salary or sickness benefits during illness. Therefore, reducing sickness absence is important for the health and wellbeing of the employees as well as the quality of services and financial costs [5].

In the Danish context, sick-listed employees can receive sickness benefits for up to 52 weeks and both the practical and financial responsibility of sickness absence

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lies mainly with the municipal job centres [6], leaving workplaces with limited responsibility regarding sickness absence [7]. However, previous research highlights workplaces as important arenas in the management of sickness absence [4, 8]. Preece [9] argues that collecting and tracing data on sickness absence from work is a good starting point in managing sickness absence, as the data can be used to develop interventions and identify trends in sickness absence. Collecting data for occupational safety and health (OSH) purposes is common practice in most workplaces. The EU Occupational Safety and Health Directive 89/391/EEC states that employers must evaluate all the risks to the safety and health of employees to prevent and protect them from occupational accidents and diseases (2021). Digital OSH monitoring systems “to collect and analyse data in order to identify and assess risks, prevent and/or minimize harm, and promote occupational safety and health” [10] have become more widespread. This can be linked to the emerging concept of data-driven management, which is defined as “decision-making backed up by a (perceived) objective representation of the situation provided by the (available) data”. [11]. While this data-driven focus may contribute to safer and healthier working lives for employees, concerns regarding employee surveillance, invasion of privacy and unintended consequences (e.g. poorer mental health, lower workplace wellbeing) have been raised [10]. These concerns indicate that it is important to consider how the collected data are used appropriately in practice to avoid unintended or harmful consequences for employees.

However, knowledge of how data are used in managing sickness absence is limited. When searching for literature, we found studies examining how data can be used to predict future sickness absence, for example, by identifying employees at risk of sickness absence by looking at the employee’s history of absence [12]. Whitaker [13] emphasized the importance of using data to identify patterns in sickness absence and relating these patterns to changing working conditions or other organizational events often linked to increased sickness absence, such as downsizing. Another example is to define data-based ‘trigger points’ in the organizational policies for sickness absence. An example of this could be to intervene after three sickness absence spells within 6 months [14].

Preece [9] and Whitaker [13] both highlighted the role of the line manager in managing attendance at work, and Roelen and Groothoff [15] called for the need for studies investigating the manager’s role in managing sickness absence. Line manager attitudes towards employees on sick leave or experiences with return-to-work have been widely examined [16–18]. However, to our knowledge, no studies have examined line managers’ practices or experiences of using data to manage sickness absence. In this

paper, we aim to fill this research gap by creating knowledge about line managers’ use of data in practice through the following research question: How are line managers using data, and how do they experience using it as a tool in the management of sickness absence?

Methods

Research context

The study is part of a larger research project aimed at investigating the implementation of a public initiative initiated by the former Danish government in 2019, aiming to reduce sickness absence in public sector workplaces in Denmark. The initiative is described further elsewhere [19]. Public sector workplaces with high levels of sickness absence or poor work environment were eligible to apply for and receive funding to implement local initiatives to reduce sickness absence. One component of the initiative is the implementation of a systematic use of data on work environment, sickness absence and wellbeing in the organization in the management of sickness absence. Systematic use of data refers to, for example, using it as decision-making basis on where to implement special efforts to reduce sickness absence (e.g. work units with high levels of absence or poor work environment) and to identify employees who have a pattern of sickness absence that needs attention from the line manager [20]. The workplaces that receive funding must therefore work with an enhanced focus on using data as part of their sickness absence management approach.

Recruitment

We included four public sector workplaces in Denmark in the study. The recruitment process took place in the fall of 2020. The initiative targeted municipal, regional and governmental workplaces [20], and to examine the use of data in different settings, we wanted to recruit workplaces from each level. The workplaces were recruited using stratified random sampling [21]. The workplaces recruited are within the following work areas: day care (municipal), residential institutions (municipal), hospitals (regional) and prison and probation services (governmental), with the health and care sector being the most represented. The employees at the recruited workplaces held a wide range of positions, but primarily roles such as healthcare workers, pedagogues and prison officers. From each workplace, we used purposive sampling [22] to select two to eight work units (i.e. kindergartens, hospital units or prisons) to participate in the data collection. Our inclusion criteria for participating were that the work units (1) were part of the local sickness absence initiatives at the workplace and (2) had high incidences of sickness absence or a poor work environment. A

representative from the workplaces' human resources (HR) unit selected the units.

We recruited 20 units and invited the line manager from each unit ($n=20$) to participate in semi-structured interviews. The line managers had to have staff responsibility and be responsible for managing sickness absence in their units. Contact to the line managers was facilitated by the HR representatives who provided us with a list of participants whom we then contacted per email to arrange the interviews. One line manager did not respond to the invitation, resulting in 19 line managers participating in the study.

The first author, who has extensive experience in collecting and analysing qualitative data, interviewed 13 women and 6 men with different seniority levels and from units of different sizes. In this way, we were able to examine the use of data in managing sickness absence from the perspective of both larger and smaller units and line managers with different experiences. Although the line managers came from different areas within the public sector, they shared many of the same challenges in their work. In addition to increasing demands on line managers in the public sector [18], the participating line managers represented work areas that all face challenges in recruiting and retaining staff. Moreover, their employees could experience time pressure and high emotional demands due to the relationships they have with citizens in their work, which include children, disabled people, elderly people and criminals.

Data collection

The semi-structured interviews took place between March 2021 and April 2022. Owing to the coronavirus disease 2019 (COVID-19) pandemic, most of the interviews were carried out online ($n=13$) or by telephone ($n=3$), while the rest took place at the line managers' institutions ($n=3$).

As described, the study is part of a larger implementation study, which is reflected in the data collection where the implementation theory normalization process theory (NPT) constitutes the theoretical framework. NPT can help identify factors that either promote or hinder the implementation, integration and embedding of new practices. One concept from the theory is collective action, which pertains to how a new practice is operationalized in practice and which facilitating and inhibiting factors may influence operationalization. Additionally, NPT operates with the concept of reflexive monitoring, which concerns how individuals assess the value and effect of a new practice [23, 24]. Although this study does not focus on implementation, these concepts are relevant for examining the factors that may affect the systematic use of data in managing sickness absence. Collective action

helps us explore how line managers use data to manage sickness absence in practice and reveal potential factors that promote or inhibit the use of data. Reflexive monitoring is used to explore how line managers assess using data in managing sickness absence, as well as its value and relevance.

In this study, the use of NPT was limited to informing the data collection, where the NPT concepts inspired the questions in the interview guide. Specifically, we focussed on three themes during the interviews: (1) what organizational data the line managers have available (essential background information to understand the use of data), (2) how the line managers use the available data in managing sickness absence (collective action) and (3) their experiences with using the available data (both collective action and reflexive monitoring). Examples of questions were: "Do you use data actively in your management of sickness absence?"; "Have you implemented any initiatives in your institution on the basis of data?"; "What are your thoughts about using data in managing sickness absence?"; and "What works well, what works less well?".

All interviews took 45–60 min. The interviews were recorded with a Dictaphone and transcribed verbatim in NVivo. The quotes used to support the findings in this study have been translated from Danish to English and edited for clarity.

Data analysis

The interviews were analysed inductively using thematic analysis (TA) to identify patterns across datasets [25]. In the coding process, transcripts were read several times to generate initial codes on the basis of immediate patterns in the data. The first author who had in-depth insight into the data from carrying out the interviews created the codes. The co-authors provided constructive criticism and helped sharpen the codes even further. The codes were tested on two interviews before being revised into final codes. The final codes were compared with each other and grouped under themes that capture the similarities of the codes. We then refined the themes by discussing the themes in the author group to assess whether there were enough data to support the themes, whether the themes should be renamed and whether new themes should be created. Finally, we identified subthemes under each theme.

Reflexivity

Since this is a qualitative study, including reflections on reflexivity is important, as our backgrounds and experiences have influenced the way we interpret the results [26]. The study was conducted by researchers from the National Research Centre for the Working Environment (NRCWE) in Denmark. At NRCWE, we research a wide

range of topics related to occupational health and safety, and our research aims to contribute to a healthy and safe working lives for all employees in Denmark. As a government research institution, we aim to be neutral and independent of social partners (employer and employee organizations). Given the research community we are part of, our interpretations of the data will pay special attention to the work environment and employee wellbeing and how the findings can contribute to a healthy and safe work environment.

Ethical considerations

In accordance with the Danish Act on Research Ethics Review of Health Research Projects (Consolidation

Act no. 1338 of 1 September 2020), studies that do not involve human biological material are exempt from requiring approval within the ethics committee system. However, we ensured that all the participants provided informed consent to participate prior to the interviews, and all the transcripts were pseudoanonymized to ensure confidentiality.

Results

The thematic analysis resulted in five overarching themes (illustrated in Fig. 1): (1) line managers’ use of data, (2) data must be easily accessible, (3) how data are presented matters, (4) the value of data as a tool to manage sickness

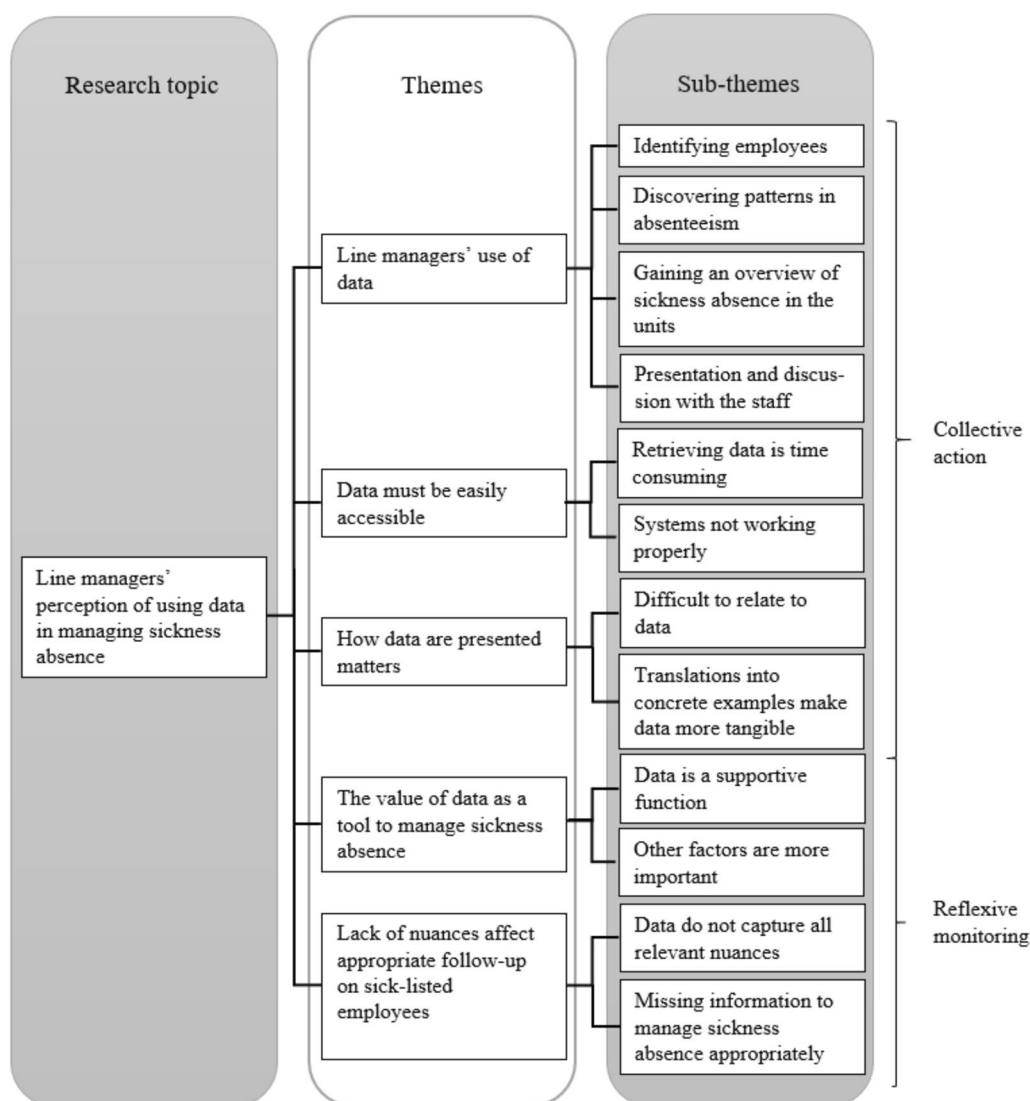


Fig. 1 Coding tree illustrating the analysis and how the generated themes and subthemes relate to the NPT concepts collective action and reflexive monitoring

absence and (5) lack of nuances affects appropriate follow-up on sick-listed employees.

The first three themes relate to the NPT mechanism collective action as they uncover the use of data in practice and the enabling or hindering factors for the use of data. The latter two relate to reflexive monitoring as they uncover the line managers' assessment of the data they have available and its practical use. The themes form the structure of the results section.

Line managers' use of data

The line managers have different types of data available in their work, but in the practical management of sickness absence, they relied solely on sickness absence data, that is, individual sickness absence statistics. For this reason, the findings presented here are based on the line managers' use of sickness absence data only (hereinafter referred to as "data").

The analysis showed that the line managers primarily use data to identify employees at risk of sickness absence. According to the line managers, data provide an overview of how often (in periods) and how much (in workdays) an employee is absent from work, which acts as a decision-making basis for which actions need to be taken to prevent future sickness absence. All four workplaces in this study have organizational policies on sickness absence stating what the line manager must do when an employee reaches a certain amount of absenteeism. The policies usually dictate that the employee must be invited to a sickness absence review meeting with their line manager, with the purpose of establishing whether there are any work-related factors that cause sickness absence. The line managers may also use the data as basis for the meeting, for example by showing the data to the employee:

The thing about using data in the conversation. It becomes much more concrete, and the employees can see in black and white that they actually have sick leave every month (Line manager, hospital).

Visualizing absenteeism may act as a way of initiating a dialogue with employees about their absenteeism. As the quote indicates, data can also serve as a revelation and help employees realize the extent of absenteeism because it becomes visible to them.

The line managers also mention using data to discover patterns in an employee's sickness absence, for example, to identify employees who are often absent on Mondays or Fridays. Here, the line managers also use data to visualize absenteeism, for example by writing it by hand in a calendar:

Sometimes it seems that employees give themselves breathing spaces by taking certain days off and when

you see that pattern in a calendar, for example, then it's what you call a deviant pattern. And sickness absence doesn't come in patterns (Line manager, residential institution).

Some line managers also use data to get an overview of sickness absence in their work unit and how it develops, as well as to identify patterns and trends in sickness absence. The line managers also present and discuss data at staff meetings to create an understanding of how sickness absence affects their work:

When I tell my staff that the sickness absence in our work unit corresponds to being two people short every day, then they suddenly realize that that's probably why we've been so busy. That's probably why it has been so intense to be at work (Line manager, hospital).

The examples above show how the line managers use data to make sickness absence and its impact on the work more visible to employees.

Data must be easily accessible

In terms of using data as a tool in the management of sickness absence, the line managers highlight the importance of having easily accessible data, meaning that they do not have to spend much time retrieving the data. However, the line managers note several examples of experiences with inaccessible data. One example is when it is time consuming to retrieve data, for example, when they must use several systems to retrieve all relevant information. A line manager shares an experience of having to look up each employee individually to gain an overview of sickness absence in the unit:

I have to look up each employee in the management system, and when I have 55 employees, you can imagine how long it takes to look them up one by one in the system. I think that is cumbersome (Line manager, hospital).

Difficult accessibility due to the systems seems to be a recurring challenge, as several line managers express frustration about the systems not working properly, for example:

I'm not even kidding. I think there was a whole year where the system didn't work. So we kind of just went with our gut feeling, you know? (Line manager, residential institution).

According to the line managers, when the systems are not working properly, the line managers must keep their own attendance records or make decisions on the basis of their gut feelings. It is possible to argue that this can

result in misleading and invalid data that do not provide an accurate overview of sickness absence in the workplace. Consequently, line managers expressed worry about the risk of groping in the dark and failing to take care of employees at risk of sickness absence in time.

In addition, the need for easily accessible data reflects the workload involved in sickness absence management. Several line managers mention that managing sickness absence is a time-consuming task often overshadowed by other managerial tasks and busyness in general. First, because the line managers spend time obtaining and familiarizing themselves with the data, and second, because it takes time to follow up on sick-listed employees, doing sickness absence review meetings and calling in substitutes or rearranging work schedules to make ends meet. Easily accessible data may relieve the line managers from at least some of the workload involved in managing sickness absence.

How data are presented matters

Some line managers find it difficult to relate to data because it is not clear for them what the data mean. A recurring example is that it is difficult to tell what a “percentage of sick leave” means and whether the number is high or low (i.e. high versus low incidence of sickness absence). A line manager elaborates:

A percentage of sick leave, I would not be able to use that for anything at all or present it to my staff because: what is 6%? (Line manager, hospital).

The line managers then mention that when data are presented in a way that makes it easier to understand, it may also be easier to use data in managing sickness absence. Some line managers mention that it helps both themselves and their employees when data are translated into more concrete everyday examples, such as that the current sickness absence rate means that the unit is short-staffed every day.

The employees can relate to it [the translations] because it has a direct connection to the daily operation. If managers have to be able to deliver data to the employees, then it must be in a form that appeals to something they know and something they can relate to (Line manager, hospital).

Therefore, the translation of data to relatable examples makes it more tangible, which, according to the line managers, has a greater impact on employees.

The value of data as a tool to manage sickness absence

The analysis showed that there were varying opinions among the line managers regarding the value of data as a management tool in handling sickness absence.

However, most of the line managers generally perceive data as a valuable tool in managing sickness absence. Data are valuable because they have a supportive function as they help the line managers keep an overview of sickness absence in their units and provide a factual basis on which to rely:

I think it looks bad if I say: “I feel like you are often absent from work.” It’s nicer to be able to lean on something factual (Line manager, prison and probation services).

In addition, some line managers point out how specific data tools support them in their work, for example, receiving automatic reminders when an employee has been absent for, for example, three periods within 6 months and must be invited for a sickness absence review meeting, as stated in the organizational policies:

Now you get an automatic reminder when an employee has had three sick periods. Such small details are much more supportive as a manager (Line manager, hospital).

While data may be a good tool to gain an overview of sickness absence, some line managers perceive data as less important because other factors are more important to consider. For example, one line manager says that focussing too much on numbers and statistics is an outdated approach, and that if the goal is to reduce or prevent sickness absence, it is more relevant to focus on factors in the workplace affecting or causing sickness absence:

I think the approach is boring and old-fashioned. Many things affect sickness absence. I would like to focus on management and competence development of us as managers. All these things, I would much rather put a greater focus on (Line manager, prison and probation services).

Other line managers emphasize the greater importance of knowing and simply talking to the employees, which make the need for data smaller. According to the line managers, data do not tell them anything they did not know already from knowing their employees well or from their conversations with them:

The more experience you get and the more you get to know both yourself and your employees, the less there is a need for the support of data (Line manager, prison and probation services).

Therefore, the line managers highlight that while data can create a basis for the line managers’ approach to sickness absence, it should not stand alone but should be supplemented with, for example, the line managers’ own

experiences, knowledge of employees and good management skills.

Lack of nuances affect appropriate follow-up on sick-listed employees

In continuation of the argument that data should not stand alone, there seems to be widespread agreement among the line managers that data do not always provide a full overview of sickness absence. The line managers tend to perceive data as unvarnished, as data do not cover all nuances of sickness absence. As an example, some of the workplaces use colour schemes to divide employees into groups reflecting their risk of becoming sick listed from work on the basis of data about previous absenteeism. Red employees are at great risk of absenteeism or are already on sick leave, yellow employees may be at risk of absenteeism and green employees have no noteworthy risk of absenteeism. Attention is then usually given to red or yellow employees, as they contribute to the high levels of sickness absence. A line manager from a workplace that uses these colour schemes says:

I don't need to know if my employees are yellow or red. It doesn't change anything, because they may not have had sick leave for half a year, and yet they are red, and then you think, why should I pay attention to someone who hasn't been sick for half a year? (Line manager, prison and probation services).

As stated earlier, all the workplaces recruited for this study have organizational policies with defined trigger points dictating when a line manager must pay special attention to an employee with excessive absenteeism. However, data-based trigger points do not always make sense for the line managers because there are other important factors (not captured by data) to consider when identifying employees at risk of sickness absence, such as that the employee has been exposed to violent incidents at work or other burdensome factors that may result in sickness absence. In continuation of the above quote, a line manager emphasizes the risk of green employees suddenly turning red or yellow due to sudden incidents either at work or in private that lead to absenteeism. According to the line managers, it can be risky to focus exclusively on employees who are already absent, as long-term healthy employees may be at an equally high risk of sickness absence.

In line with this, some line managers wish for more information to be included in the data, such as the cause of the absence. In Denmark, the manager is not allowed to ask about the reason for being absent, but the line managers would like to know whether the absence is related to mental or somatic health problems, as it affects how the absence should be managed. A common example

is that there is a difference between whether an employee is on sick leave for physical or mental reasons:

There is a big difference between being absent because you had an operation or because you have stress. In my world, these are two very different courses of illness. And I cannot see that from our attendance records (Line manager, prison and probation services).

Therefore, it can be challenging for the line managers to ensure proper management of sickness absence if decisions must be based solely on statistics and numbers.

Discussion

The role of line managers in managing sickness absence has been examined in several studies, for example, manager attitudes towards sick-listed employees [16, 18, 27]. In this study, we add to this research by exploring line managers' practices and experiences with using data as a tool in the management of sickness absence. We found that data are most often used to identify employees at risk of sickness absence rather than data focusing on the working environment. Although the sickness absence initiative included use of data on individual sickness absence and organizational level data on the working environment, the analysis shows that managers rarely talked about or used data on working environment.

If we consider the findings with a critical lens, it may seem that the primary focus of using data (individual sickness absence behaviour and patterns) is to "fix" the individual employee instead of improving the work environment to prevent work-related sickness absence in general. This is consistent with a Swedish study by Norvall Gustavsson et al. [18] who examined manager attitudes towards employees with repeated short-term sickness absence, where they found that the managers participating in their study tended to turn the blame on the individual employee, that is, sickness absence occurring due to personal reasons, instead of workplace factors or a combination of these.

Focussing on the individual employee rather than considering factors in the workplace was also observed in our analysis. The line managers tended to address employees' absenteeism either by presenting the data to them or by explaining how absenteeism affects their work and their colleagues, such as resulting in short-staffing and requiring colleagues to cover shifts or tasks. Line managers informing the employees about the significant impact that their absenteeism has on the work and the colleagues were also noted in another study [17]. This approach may indicate an implicit blaming culture where the line manager tries to make the employees change their sickness absence behaviour by placing guilt onto them. We should

emphasize here that the data do not support that this is a deliberate intention of the managers. On the contrary, the managers generally expressed great concern for their employees, and often had great insight and understanding of the underlying reasons for the individual employee's sick leave, which also shines through in some of the quotes that we have chosen to include. Nevertheless, the focus on using data to make the consequences of sickness absence visible to the employees may (probably inadvertently) make the employee feel accountable for the sickness absence. The concept of guilt is discussed in a paper by Baumeister, Reis and Delespaul [28] in which they argue that guilt can be used to force a change in behaviour in that feelings of guilt can encourage individuals to reflect on and change their behaviour. In this case, feeling guilty about one's absenteeism and how it affects the workplace may make the employees change their absence behaviour. There is also the possibility that the employees feel guilty about not being able to live up to commitments to their line manager and their colleagues or being able to deliver quality services to clients, as observed in previous studies [17, 29].

While using guilt may be effective in preventing truancy, there is a risk that this approach can have unintended effects. One unintended effect can be presenteeism, that is, employees coming to work despite being sick [30], because they feel guilty about reporting in sick or fear the consequences hereof, for example, the impact on colleagues and clients [17, 29]. However, it is possible to argue that the line managers' use of data and actions hereof are determined by the above-mentioned organizational policies on sickness absence, which the line managers are obliged to follow.

All line managers in this study have digital systems available from which they retrieve data on sickness absence. As argued in the introduction, monitoring systems as a management tool within OSH have been growing rapidly and there seems to be a trend towards increased monitoring of employees [10]. A report by the European Agency for Safety and Health at Work (EU-OSHA) [10] argues that OSH monitoring systems can support employees in having safer, healthier and more productive working lives by monitoring physical and mental wellbeing (e.g. sleep, mental resilience and biological measures such as weight, heart rate and blood pressure). Furthermore, the same report raises the concern that OSH monitoring may have a hidden purpose of employee surveillance and that collecting data, such as those exemplified above, is an invasion of privacy. This corresponds to the findings of another EU-OSHA report examining how digitalization of the workplace contributes to the development of data-driven management. The authors argued that data-driven management may have

unintended consequences, such as employees feeling constantly monitored and measured and experiencing feelings of guilt and anxiety about not being able to meet the commitments placed upon them, which can have a significant effect on their mental health. The authors also argue that employee monitoring is associated with lower workplace wellbeing [11].

Thus, when data are collected exclusively for OSH or employee monitoring purposes, it is essential to be aware of the impact they may have on employees and the work environment in the workplace. The public initiative in this study suggests that decisions about sickness absence management must be largely data-driven, but it seems important to reconsider what kind of data to use and how, and to include other data sources, for example, wellbeing surveys, to ensure appropriate follow-up on sickness absence.

Managing sickness absence is one among several managerial responsibilities of line managers. In the analysis, we highlighted a quote by a line manager who spent much time looking up each employee in the digital system, indicating that sickness absence management can be a time-consuming task. Line managers are organizationally placed between the top management and their subordinates, often finding themselves trying to balance demands from both sides [31]. Likewise, the working conditions for managers in the public sector have changed. Additional work tasks, administrative duties and increased demands of documentation force line managers to prioritize their management tasks [18]. The line managers in this study state that the task of managing sickness absence often drowns in other managerial responsibilities, indicating that sickness absence management is de-prioritized. Then what must be done to support the line managers not only in managing sickness absence, but also doing so in a way that is appropriate for the employees? On the basis of the comments from the line managers, we suggest that sickness absence data should be updated regularly with short intervals, so that data are new and relevant. Data should also be presented in a form that fit the workplace and the purpose. Hence, flexibility is called for. For example, in some cases it is desirable to delve into an individual's sickness absence pattern, in other situations the line manager needs an overview of the sickness absence of the whole unit or to compare with other units. Sometimes a snapshot is needed, at other times a picture of the development in sickness absence over time is called for. Understanding complex data such as sickness absence data can be challenging. Workplaces can address this challenge by giving a proper introduction to new line managers of the system that produces the data. They can also make sure that sickness absence data are regularly presented and discussed

among the line managers in relevant fora, which will help line managers to maintain a good understanding of the data. Finally, the line managers pointed at the lack of nuances in sickness absence data. A possible solution is to increase the flexibility of the system that produces the sickness absence data, so that it, for example, allows for feedback from the line managers, such as comments on the development of sickness absence, initiatives that have been taken, and so on. Moreover, the systems' scope could be expanded, for example, to include links to sickness absence policies and procedures, and referrals to treatment options and offers, including the workplace's agreements with external parties, which can be a support for reducing and managing sickness absence. This can contribute to line managers finding the system more valuable for the management task rather than perceiving sickness absence data as "out of date".

Implications

To our knowledge, this is the first study examining data as a tool to manage sickness absence in practice from the line managers' point of view. Our findings reveal potential pitfalls for using data. The findings are, for example, relevant for top managers or HR consultants who support line managers in managing sickness absence, as they illustrate how data can be presented in ways that are more tangible. The study also revealed a number of dilemmas, such as line managers not being allowed to know the reason for an employee's absenteeism, which can be a challenge in terms of supporting a sick-listed employee in the most appropriate way. This policy is, however, important for ensuring the privacy of employees. Instead, we suggest that workplaces clarify the treatment options that line managers can refer employees to, whether it is psychological counselling, physiotherapy or something else. Furthermore, workplaces could benefit from focussing more on the use of other data sources in addition to sickness absence data, so that the work environment and wellbeing are also addressed, rather than solely focussing on individual absence behaviours and patterns. This approach can help create a more holistic perspective on sickness absence in the workplace. These points can ensure that line managers use data systematically to manage sickness absence and ensure appropriate follow-up on sickness absence.

Strengths and limitations

The main strength of this study is that we interviewed line managers with the direct responsibility of managing sickness absence, which means that we obtained a first-hand perspective on the use of data in managing sickness absence. Furthermore, the line managers were recruited from workplaces from different work areas in the public

sector, which provided us with a nuanced perspective on using data to manage sickness absence. Additionally, the use of theory to inform data collection is a strength, which has been highlighted by others [26, 32]. Using NPT provided us with a theoretical framework to guide the study. Despite being an implementation theory, NPT was helpful in examining potential promoting and inhibiting factors for the systematic use of data.

We also have some methodological considerations. First, regarding transferability, while we managed to examine perspectives from different workplaces, the findings are based on a limited number of workplaces. The line managers' use of data may be determined by the respective workplaces' organizational policies, which means that the use of data may be different in other workplaces. However, even though the workplaces in this study were from different work areas in the public sector, they had similar policies on sickness absence management. This may indicate that public sector workplaces in Denmark generally have fairly uniform procedures for how data are used in sickness absence management and that the results may be transferred to other public sector workplaces. Nevertheless, we must be careful in generalizing it to private sector workplaces or small and medium-size enterprises, which presumably have other approaches to sickness absence management.

Second, during the coding process, coding was performed by the first author alone. This can affect the reliability of the coding since establishing intercoder reliability was not possible [33]. However, within TA, intercoder reliability is, according to the originators, unnecessary as they argue that a researcher's subjectivity should be regarded as a strength of the analysis rather than a limitation [34]. Nonetheless, to enhance credibility, the first author discussed the quotes used and how they could be interpreted with the co-authors, who also read and approved the manuscript.

Finally, this study reflects only the line managers' perspectives on the use of data. For future research, it would be interesting to investigate this topic from the employees' perspective, focussing on, for example, their experiences of having their absenteeism monitored and the consequences of this.

Conclusions

This study explored line managers' perspectives on data as a tool in the management of sickness absence in public sector workplaces in Denmark. Our analysis revealed that sickness absence data, that is, individual sickness absence statistics, are the most common available data for the line managers and that these data are primarily used to identify employees at risk of sickness absence. We also highlighted how line managers

experience using data in managing sickness absence. Here, we presented experiences related to how and when data are perceived as a valuable tool by the line managers and that nuances in the data, accessibility of the data and how data are presented are important factors to ensure appropriate follow-up on sickness absence.

The findings suggest that for line managers to use data systematically in managing sickness absence, the data must (1) be easily accessible, (2) be simple for line managers to understand and (3) provide line managers with a sufficient overview of sickness absence in their unit. It also suggests that it is important to consider including other data sources in addition to sickness absence data and to consider other factors, such as the work environment, when aiming to reduce sickness absence.

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Author contributions

Recruitment for the study was done by J.K. Data collection and analysis was done by L.R. with input from the co-authors. The first draft of the manuscript was done by L.R. and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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Availability of data and materials

The datasets generated and/or analysed during the current study are not publicly available as they are in Danish and not translated but are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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