



The influence of motivations to share knowledge in preventing knowledge sabotage occurrences: An empirically tested motivational model

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ABSTRACT

The purpose of this research is to assess the impact of intrinsic and extrinsic motivations to share knowledge on knowledge sabotage, in order to shape a motivational model designed to reduce sabotage incidents in practice. It contributes to knowledge management literature broadening our understanding of knowledge sabotage, which has been highlighted as the most extreme counterproductive knowledge behaviour due to its deliberate nature of harming others for personal gain. In fact, even though knowledge sabotage has been widely identified in organizations, we still know too little about such a potentially dangerous phenomenon. In our empirical investigation, data collection took place through online questionnaires addressed to 329 employees and managers of heterogeneous companies from Europe. Data has been analysed employing a structural equation modelling (SEM) technique, whose results confirmed the relevance of this phenomenon and identified a negative relationship between intrinsic motivations to share knowledge and the phenomenon of knowledge sabotage. In the end, our conclusions can be useful to expand researchers' and practitioners' awareness of the most extreme counterproductive workplace behaviour that threatens the process of intra-organizational knowledge sharing.

1. Introduction

Knowledge has been a matter of discussion and interest of humanity for several years, the origins of which can be traced back to the rise of philosophical thought in Ancient Greece. Over time, the application of knowledge has expanded to increasingly heterogeneous research contexts, including management (Bhatti et al., 2022; Jabeen et al., 2022a). The relevance of knowledge in economic organizations has been progressively recognized in the academic and practical fields, up to the identification of theories that highlight it as a fundamental resource (Eisenhardt and Santos, 2002; Grant, 1996). Indeed, economic entities have learned how to leverage on the knowledge of people and organizations to establish a competitive advantage, which is sustainable over the years (Kogut and Zander, 1992; Nonaka and Takeuchi, 1995; Starbuck, 1992). This has given rise to the discipline of knowledge management (KM), which consists of a number of key processes underlying the effective management of this primary intangible resource and the development of intellectual capital (Alavi and Leidner, 2001; Bhatt,

2000; Garcia-Perez et al., 2020). Among them, intra-organizational knowledge sharing allows making individual information or know-how available to others and/or the organization (Ipe, 2003; Wang and Noe, 2010; Yang and Wu, 2008). It is a fundamental process, which is based on employees' inclination to share acquired or created knowledge, aimed at building new knowledge from aggregation or its applications in strategic activities (Bhatt, 2000; Nonaka and Takeuchi, 1995; Wang et al., 2018). However, in spite of the significance of knowledge sharing in economic organizations, KM literature testifies how certain counterproductive workplace behaviours, such as knowledge sabotage (KSAB), can seriously hinder this KM process (Afshar-Jalili et al., 2020; Ambrose et al., 2002; Perotti et al., 2021; Serenko, 2019).

KSAB occurs through the intentional act of sharing incorrect critical knowledge, or concealing it, to the detriment of colleagues and/or superiors in the workplace (Perotti et al., 2021; Serenko, 2019). It has been recognized as an extreme counterproductive workplace behaviour regarding knowledge because of the perpetrator's malicious intentions, as well as its consequences on people and organizations. Indeed, it

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contributes to the formation of a corrupt working environment that hinders the knowledge-sharing process as well as the mutual sharing of resources (Crino, 1994; Serenko, 2020; Serenko and Choo, 2020). KSAB occurrences represent a real threat, as a study conducted on 300 individuals showed that almost half of the respondents were victims of this counterproductive workplace behaviour (Serenko, 2019). However, in spite of its significance and the negative impact of this phenomenon on people and economic organizations, KSAB has only been identified quite recently and still remains a rather unexplored contagious behaviour (Perotti et al., 2021; Serenko and Abubakar, 2022; Serenko and Choo, 2020). To the best of our knowledge, there are not yet any studies that suggest practices to avoid or limit this negative practice in organizations. In particular, no empirical research has ever questioned the causal relationship between the motivation to share knowledge and occurrences of KSAB. We still ignore the role played by a motivational model based on knowledge sharing with regard to the issue of sabotage in the workplace. Accordingly, this study focuses on this research question: *can we prevent knowledge sabotage occurrences by acting on people's motivation to share knowledge?*

Based on this literature gap, the purpose of this research is to outline the traits of a motivational model qualified to prevent KSAB incidents, by acting on people's propensity to share information with colleagues or superiors. Thus, we collected employees' and managers' past experiences in their workplace through a questionnaire to shed light on this extremely counterproductive behaviour. Our work makes some important contributions. First, it enriches the KM literature, broadening our understanding of KSAB as knowledge sharing counterproductive behaviour (Serenko, 2019; Serenko, 2020). A new and more reliable measurement scale has been developed during this study (Mitchell et al., 2009; Zikmund and Babin, 2016). Second, we confirm the wide presence of this phenomenon in for-profit organizations, by investigating sabotage attempts in the workplace (Gruys and Sackett, 2003; Spector et al., 2006). Third, we suggest some of the factors that contribute to alleviating KSAB, by introducing useful means to reduce incidents of sabotage and promote the circulation of knowledge (Afshar-Jalili et al., 2020; Foss et al., 2009; Serenko and Abubakar, 2022). From a functional perspective, our study offers practitioners new insights into a harmful counterproductive behaviour, as well as an empirically tested motivational model to prevent KSAB occurrence in practice.

The remainder of this article is organized as follows. Section two offers a comprehensive overview of the literature, presenting the concept of KSAB and the motivation to share, through to the declaration of the hypotheses. Then, the third section carefully explains the methodology adopted in our study, while our results are reported in the following one. Section five contains a thorough discussion of the results, culminating in the theoretical contributions and practical implications of our research. Finally, in the last part of the manuscript, we close the circle of our research with some concluding remarks, limitations and proposals for future studies.

2. From theoretical background to new questioning

2.1. Conceptualizing knowledge sharing and counterproductive workplace behaviours

According to the knowledge-based theory of the firm, knowledge is an essential resource that can encourage the establishment of a competitive advantage and lead companies to succeed, if properly managed (Barney et al., 2001; Eisenhardt and Santos, 2002; Grant, 1996; Grant and Phene, 2021). To address the correct handling of this intangible asset, KM has been recognized as a fundamental discipline intended for setting up its acquisition, transfer, and application in organizations through a KM system (Alavi and Leidner, 2001; Baima et al., 2020; Mårtensson, 2000). Thus, KM is framed as a set of specific processes that encompass tailored managerial and operational strategies aimed at optimizing knowledge-related activities (Bhatt, 2000; Perotti

et al., 2021; Wang et al., 2018). The literature has amply confirmed that managing knowledge in an appropriate manner allows for improved economic, financial and innovative performance (Bhatti et al., 2020; Santoro and Usai, 2018; Vrontis et al., 2022).

Among KM practices, knowledge sharing has been accepted as one of the most compelling to leverage as it fosters knowledge creation, transfer, and aggregation in companies (Bhatti et al., 2021; Nonaka and Takeuchi, 1995; Yang and Wu, 2008). Notably, intra-organizational knowledge sharing is represented by the act of making personal knowledge (e.g. know-how, information, data, documents) available to other members of the same company, so as to support decision-making, problem-solving, ideas' generation and innovation, or carry out procedures (Cummings, 2004; Ipe, 2003; Wang and Noe, 2010). It is well known to be a key process in organizations, although employees are at times faced with the dilemma of whether (or not) to share know-how and information with colleagues or superiors (Arain et al., 2021; Cabrera and Cabrera, 2002; Pereira and Mohiya, 2021; Serenko, 2019). In this regard, past research has unearthed some of the so-called counterproductive workplace behaviours that are voluntary acts aimed at hindering the normal course of business and harming an organization or its stakeholders for malicious or personal purposes (Gruys and Sackett, 2003; Spector and Fox, 2005). Looking at those that preclude the process of knowledge sharing, the most hazardous is also the most recently discovered counterproductive behaviour: i.e. knowledge sabotage (Crino, 1994; Perotti et al., 2021; Serenko, 2020).

2.2. Knowledge sabotage: framing the phenomenon

Drawing from previous studies, KSAB is configured as a knowledge-related counterproductive workplace behaviour, which involves the perpetration of sabotage attempts aimed at hampering the activities of colleagues and companies (Serenko, 2020). Although its identification as counterproductive behaviour that hinders the genuine circulation of knowledge goes back a few years, it is a phenomenon that has long occurred in companies, whose roots can be found in workplace sabotage and workplace deviance (Perotti et al., 2021; Serenko, 2019). In the past, some research has associated sabotage with a dimension of counterproductive behaviour (Martinko et al., 2002; Spector et al., 2006), while other authors have placed it in the knowledge field by identifying situations where respondents did not share critical information, or lied to colleagues and/or superiors about owning it (Crino, 1994; Di Battista, 1996; Giacalone and Knouse, 1990; Gruys and Sackett, 2003). These occurrences can be delineated as workplace sabotage, whereby a person (i.e. the saboteur) acts against other members of the organization (i.e. target) in pursuit of a personal purpose or with the aim of harming them (Ambrose et al., 2002; Analoui, 1995; Crino, 1994; Fox and Spector, 2005). Moreover, the negative practice of sabotage falls within the broader construct of workplace deviance, which, in a more generic way, encompasses voluntary behaviours in conflict with the organizational norms and is intended to harm the well-being of an organization and its members (Bennett et al., 2018; Robinson and Bennett, 1995). Therefore, from these forerunner constructs we can identify KSAB as an intentional practice especially addressed to inhibit the circulation of knowledge through the perpetration of incorrect and non-compliant acts in the workplace.

The literature depicts KSAB as the willful attempt to sabotage a colleague or superior through the sharing of incorrect knowledge, or the concealing of key information from them, for ego-driven purposes (Gruys and Sackett, 2003; Perotti et al., 2021; Serenko, 2019). Based on previous empirical studies, this extreme counterproductive knowledge behaviour takes place in unambiguous circumstances (Serenko, 2019; Serenko, 2020). The saboteur, who is aware of owning meaningful information for the target, deliberately denies its circulation by preventing knowledge application in work-related tasks. From this assumption it is possible to outline some recurring elements – i.e. intentionality, need awareness, knowledge possession, knowledge relevance, knowledge

importance awareness, knowledge potential application – that contribute, on the one hand, to recognizing KSAB incidents and, on the other, to distinguish it from the other counterproductive knowledge behaviours (e.g. knowledge hiding and hoarding, knowledge-sharing ignorance, disengagement from knowledge sharing, counter-knowledge sharing) (Afshar-Jalili et al., 2020; Pereira and Mohiya, 2021; Serenko and Bontis, 2016; Spector and Fox, 2005). Thus, KSAB stands out from other counterproductive workplace behaviours related to knowledge, because not only does it meet all the aforementioned criteria, but because it carries with it the detrimental intentions that move the subject. Indeed, in addition to the intentionality of this behaviour, the perpetrator commits sabotage pursuing professional advantages or career advancement at the expense of others, as a response to prior conflicts, or because of a negative attitude towards colleagues (Analoui, 1995; Crino, 1994; Serenko, 2020). Sometimes even a previous sabotage incident can provoke an equal response, by contributing to the proliferation of a counterproductive practice and the subsequent hindering of knowledge sharing (Serenko and Abubakar, 2022).

Typically, KSAB occurrences may be provoked by the request for some key information from the target, or unprovoked, when the saboteur deliberately acts by sharing incorrect knowledge or concealing information that could be effectively used by the victim. Wherever the saboteur provides wrong knowledge to the target their behaviour is considered active, while it is defined as passive when the same conceals knowledge from the victim (Perotti et al., 2021; Serenko, 2019). Either way, saboteurs alter the legitimate process of sharing employable information, know-how, and data, to achieve their malicious and egoistic purposes. Serenko's previous investigations (2019; 2020) have shown that generally those who have been targeted are other employees and managers, while saboteurs' intention is seldom aimed at damaging their own organization. Nevertheless, this counterproductive practice always ends up undermining the work environment and the intra-organizational knowledge-sharing process (Bennett et al., 2018; Gruys and Sackett, 2003; Pereira and Mohiya, 2021). Besides being a widespread phenomenon, which typically affects one out of two employees, its consequences prove to be unpleasant. Those who have been targeted usually experience worst job performance and work efficiency reduction, due to the fact that they are forced to carry out activities and perform on the basis of altered data or incomplete information (Luqman et al., 2022; Serenko and Choo, 2020). A situation of lack of knowledge caused by sabotage can also result in failures, with huge psychological and emotional implications for targets, to the point of jeopardizing their career or being wrongly dismissed. Overall, such negative attitudes can potentially prejudice employees' working experience and job satisfaction, resulting in the accentuation of the turnover intention of both target and saboteur (Serenko and Abubakar, 2022; Syed et al., 2021). On the other hand, the direct or indirect consequences of KSAB on organizations involve loss of efficiency in business processes, misjudgement or dismissal of worthwhile human resources, through to compromising output quality and losing customers due to demonstrated inefficiencies. In the most drastic case, intra-organizational KSAB incidents can even result in damaging stakeholders such as customers or company's partners (Serenko, 2020; Spector and Fox, 2005). In the long term, this phenomenon leaves behind a compromised environment, where suspicious people stop trusting colleagues and sharing knowledge, thus undermining the KM process.

As such, KSAB can be depicted as the most extreme counterproductive knowledge behaviour due to its underlying malicious purpose, which leads the saboteur to intentionally commit workplace sabotage for a personal gain, as well as for the pernicious consequences on people and organizations. There are still many dark areas around this phenomenon, however. While initial investigations (i.e. Serenko, 2019; Serenko, 2020; Serenko and Abubakar, 2022; Serenko and Choo, 2020) have painted this interesting picture of KSAB, researchers and practitioners still ignore several facets of this intricate human behaviour. In order to feed the flame that sheds light on this shady subject, the

conceptual contribution of Perotti et al. (2021) emphasized the phenomenon and posed several questions about its nature. The authors set this counterproductive knowledge behaviour against knowledge sharing, offering various potential antecedents (i.e. a predisposition to share knowledge, team member cohesiveness, extrinsic and intrinsic motivation to share knowledge, clan culture, organizational structure centralization and decentralization, management support, and knowledge management system effectiveness) through the lens of the agency theory (Eisenhardt, 1989) and the social exchange theory (Emerson, 1976). Drawing on this conceptual model, it is our intention to corroborate the role of motivation to share knowledge in KSAB occurrences. In particular, we have chosen to investigate this branch since the potential provision of a motivation model capable of preventing the occurrence of this extreme counterproductive knowledge behaviour would provide an important clue for academics in interpreting KSAB with respect to the knowledge-sharing process, as well as representing a unique tool adaptable to a wide range of economic realities (Foss et al., 2009; Nguyen et al., 2019; Sun et al., 2021).

2.3. Motivations to share knowledge in the workplace

When it comes to introducing motivational practices, they are typically depicted as the conditioning of an individual towards a specific end. It is possible to recognize two motivational approaches, which are essentially based on the cause of the behavioural influence: i.e. an intrinsic satisfaction or an external factor (Osterloh and Frey, 2000; Ryan and Deci, 2000). When someone is moved by intrinsic motivations, it means the person is guided by the inherent satisfaction of performing an action or accomplishing a task. On the other hand, the construct of extrinsic motivation pertains to anyone who adopts a predefined behaviour due to the interest in a separate outcome, such as rewards or benefits in return (Ryan and Deci, 2020). With regard to the motivation of people to share critical information and know-how while working, previous studies uncovered that both intrinsic and extrinsic motivations are related to knowledge-sharing attitudes under different conditions (Feng et al., 2022; Lin, 2007; Murayama, 2022; Nguyen et al., 2019; Sun et al., 2021). More precisely, intrinsic motivation has been shown to be an interesting means to encourage people to initiate or intensify the flow of information to other members (Foss et al., 2009; Lin, 2007; Loor-Zambrano et al., 2022; Nguyen et al., 2019). As a result of the satisfaction of the three basic psychological needs – i.e. autonomy, competence, and relatedness – suggested by the self-determination theory, we can infer that people's motivation to share knowledge lies in a state of awareness and involvement in the workplace, the encouragement of colleagues, and the autonomy to make choices (Murayama, 2022; Ryan and Deci, 2020). Drawing from this interpretation, a pair of constructs of the internal sphere of motivation are commonly outlined: i.e. self-efficacy and self-enjoyment. Knowledge self-efficacy is related to the empowerment of employees as they tend to approach sharing behaviour because of their condition of freedom, independence, and autonomy in activities (Kankanhalli et al., 2005; Lai and Chen, 2014; Lin, 2007). On the other hand, the perceived enjoyment in helping others is a behaviour attributable to the desire to support others without expecting anything in return. Both proved to be correlated to the intention to share knowledge in workplace, since self-efficacy and self-enjoyment originates from a personal condition that can push someone to perform an action (Krebs, 1975; Nguyen et al., 2019; Wasko and Faraj, 2005). By contrast, employees' extrinsic motivation to share knowledge is based on behaviours that arise from a cost-benefit analysis (Osterloh and Frey, 2000). In other words, people are expected to share information and know-how with colleagues when individual perceived benefits outweigh costs deriving from the knowledge exchange (Foss et al., 2009; Kelly and Thibaut, 1978). As seen for the intrinsic motivations, two main perceived benefits have also been identified with regard to extrinsic motivations: i.e. organizational rewards and reciprocal benefits (Osterloh and Frey, 2000). On the one hand, organizational rewards are based

on a pay-per-performance system, which is supposed to increase individual benefits derived from knowledge-sharing behaviours. Incentives can include monetary rewards, such as bonuses and salary increases, or non-monetary rewards, such as promotion and job security (Lin, 2007; Osterloh and Frey, 2000). On the other hand, benefits are expressed through the expectation of beneficial behaviours in return for a desired conduct. Reciprocity behaviours arise from the benefit of some individuals who contribute to a social exchange system (Jabeen et al., 2021). Thus, reciprocal knowledge exchange relationships may foster employees sharing behaviours in organizations and increase knowledge flow (Chang and Chuang, 2011; Nguyen et al., 2019; Wasko and Faraj, 2005). Due to their different origin and applicability to intrinsic motivation, past studies highlighted that extrinsic motivation have an inconsistent effect on knowledge sharing. From previous empirical investigations, it has been recognized a positive (Kankanhalli et al., 2005; Sun et al., 2021), irrelevant (Foss et al., 2009; Lin, 2007), and even negative (Bock et al., 2005) impact of extrinsic motivation on knowledge sharing. However, from a meta-analysis elaborated by Nguyen et al. (2019), “the overall impact across the studies is positive” so, to the best of our knowledge, we can assume extrinsic motivations have a positive impact on knowledge sharing intentions.

2.4. Hypotheses development: a motivational model against sabotage

As the roots of KSAB stem from the concepts of workplace sabotage and workplace deviance, we can support how it is characterized as intentional attitudes contrary to the legitimate conduct of activities in the workplace (Analoui, 1995; Bennett et al., 2018; Robinson and Bennett, 1995; Serenko, 2020). Moreover, in KM theory it has been highlighted as a counterproductive workplace behaviour strictly related to intra-organizational knowledge sharing (Perotti et al., 2021; Serenko, 2019), whose nature is based on voluntary behaviour aimed at preventing sharing for a personal, selfish, or malicious purpose (Crino, 1994; Serenko and Choo, 2020; Spector and Fox, 2005). An incident of sabotage may arise from the pursuit of personal gratification, as well as from a dispute with a colleague or supervisor. From this perspective, KSAB appears as an attitude that takes shape where there is a misalignment of interests between the saboteur and the target, where the perpetrator's perception leads him/her to recognize a greater personal advantage by not sharing knowledge (Eisenhardt, 1989; Emerson, 1976; Perotti et al., 2021; Serenko, 2019). Since previous studies prove it is possible to stimulate knowledge circulation and sharing by leveraging on properly developed motivational strategies that affect people's behaviour (Lin, 2007; Nguyen et al., 2019; Osterloh and Frey, 2000), we believe a properly arranged motivational model can effectively reduce sabotage attempts in the workplace acting in two ways. First, through the theoretical lens of the agency theory, leveraging on people's motivations may contribute to aligning employee objectives (Eisenhardt, 1989). Secondly, building on the social exchange theory, appropriate motivational stimuli can potentially emphasize the personal benefits of sharing resources, so as to overcome adverse motivations and orientate employees' behaviour (Emerson, 1976). Thus, in this study we advance how intrinsic and extrinsic motivations towards the sharing of knowledge may contribute to reducing the occurrences of counterproductive behaviours, such as KSAB (Ferraris and Perotti, 2020; Lin, 2007; Nguyen et al., 2019; Perotti et al., 2021). A conceptually new motivational model based on the negative relation between KSAB and employees' motivation to share is therefore developed in the following.

By abstracting the intrinsic motivation of the individual, we believe that strengthening employees' confidence in their capacity to supply useful knowledge to the organization, in the condition of autonomy and independence (i.e. self-efficacy) (Lin, 2007; Nguyen et al., 2019), not only leads to an intensification of knowledge flow but even prevents the occurrence of sabotage incidents. Likewise, encouraging altruism so that colleagues are pleased to help and support each other without necessarily expecting anything in return (i.e. self-enjoyment) (Foss et al.,

2009; Kankanhalli et al., 2005), can potentially reduce the negative feeling that leads people to practice KSAB (Liu et al., 2011; Perotti et al., 2021; Zhang and Min, 2021). Accordingly, we can infer that there is an inverse relationship between the forms of intrinsic motivation and KSAB, whereby motivated employees are less likely to commit sabotage occurrences involving knowledge. Therefore, we developed the following hypotheses.

H1. Intrinsic motivations to share knowledge are negatively related to knowledge sabotage attitudes.

H1.1. Knowledge self-efficacy is negatively related to knowledge sabotage attitudes.

H1.2. Knowledge self-enjoyment is negatively related to knowledge sabotage attitudes.

Drawing on past empirical research (Liu et al., 2011; Nguyen et al., 2019; Perotti et al., 2021; Serenko, 2020), we can reasonably advance the negative relation between extrinsic motivation to share knowledge and KSAB occurrence. Although it remains a debated topic (Foss et al., 2009; Nguyen et al., 2019; Zhang and Min, 2021), rewards intended to stimulate the sharing of knowledge in organizations seem to be an effective incentive to deter saboteurs from concealing key information, or deliberately sharing incorrect knowledge, from colleagues (Kankanhalli et al., 2005; Lin, 2007; Nguyen et al., 2019; Sun et al., 2021). Similarly, a reciprocal knowledge exchange relationship not only encourages knowledge-sharing behaviours, it can also make individuals less inclined to commit sabotage incidents, promoting a system of mutual exchange of information (Emerson, 1976; Liu et al., 2011; Nguyen et al., 2019; Wasko and Faraj, 2005). Thus, both extrinsic motivations to share knowledge (i.e. organizational rewards and reciprocal benefits) may contribute to increasing the benefits of sharing in employees' cost-benefit analysis (Khoreva and Wechtler, 2020; Osterloh and Frey, 2000). Accordingly, we posit the following hypotheses.

H2. Extrinsic motivations to share knowledge are negatively related to knowledge sabotage attitudes.

H2.1. Organizational rewards are negatively related to knowledge sabotage attitudes.

H2.2. Reciprocal benefits are negatively related to knowledge sabotage attitudes.

Taking into account previous studies on people's motivation to share knowledge in the workplace (Bock et al., 2005; Foss et al., 2009; Lin, 2007; Nguyen et al., 2019; Zhang and Min, 2021), we can expect the relationship between KSAB and intrinsic motivations to be more significant than that with extrinsic ones. The KM literature testifying how intrinsic motivations proved to be generally more impactful on conditioning individuals' attitude towards knowledge sharing because they rise from an inherent desire, which results in more effective and enduring behaviour (Foss et al., 2009; Nguyen et al., 2019; Sun et al., 2021). In contrast, conducts supported by a promise of a reward, as well as a threat of punishment, encourage employees to share strictly what required without triggering a real virtuous mechanism of sharing within the organization. By analogy, we can imagine that the different capacity for persuasion can also be found in preventing KSAB incidents. As this counterproductive behaviour is rooted in workplace sabotage and deviance circumstances, sabotage occurrences take the form of voluntary behaviour arising from a feeling of dissatisfaction or retaliation against a colleague or the organization (Analoui, 1995; Bennett et al., 2018; Robinson and Bennett, 1995; Serenko, 2020). Therefore, forms of intrinsic motivation are expected to have a stronger influence in preventing this extreme counterproductive behaviour, due to their more grounded nature in human cognition. Accordingly, we propose the following hypothesis.

H3. Intrinsic motivation to share knowledge (i.e. self-efficacy and

enjoyment in helping others) has a stronger effect in preventing knowledge sabotage attitudes than extrinsic motivation to share knowledge (i.e. tangible reward and reciprocity).

Finally, in line with the previous hypotheses, we believe that the joint effect of intrinsic and extrinsic motivations to share knowledge may be even more relevant in preventing sabotage occurrences. Indeed, even though extrinsic motivations have been shown to be less reliable than intrinsic ones in fostering knowledge flow, it has been disclosed that they can coexist and concur to foster knowledge flow in organizations (Kankanhalli et al., 2005; Lai and Chen, 2014; Nguyen et al., 2019; Zhang and Min, 2021). The extrinsic motivations to share knowledge have been shown to be a valuable element alongside the intrinsic ones (Sun et al., 2021). In this vein, a comprehensive motivation model should prove more effective in preventing sabotage occurrences than the self-standing adoption of intrinsic or extrinsic motivations. The following hypothesis is thus formulated.

H4. The joint effect of intrinsic motivation (self-efficacy and enjoyment in helping others) and extrinsic motivation (tangible reward and reciprocity) to share knowledge is stronger than single effects in preventing knowledge sabotage attitudes.

Fig. 1 represents the negative relationships among the variables identified in hypotheses.

3. Research design

3.1. Data collection and participants' profile

With the intention of addressing the advanced research questions and testing our conceptual model, we conducted an empirical investigation into managers and employees' experiences in heterogeneous for-profit organizations in Europe. This allowed us to gather information from specific situations in the workplace and corroborate our hypotheses, through the understanding of people's behaviours and beliefs. In particular, both managers and subordinates have been chosen as the sample since, in accordance with previous studies, they represent common perpetrators and targets of sabotage occurrences (Serenko,

2020). We deliberately interviewed people from various for-profit organizations to investigate and confirm the presence of this counterproductive behaviour in different contexts, regardless of industry or geographical location (Serenko and Abubakar, 2022). Table 1 presents the characteristics of the respondents.

In this study, data were collected through a self-administrated online

Table 1
Characteristics of the sample.

Category	Item	Frequency	Percentage
Gender	Male	186	58.5 %
	Female	128	40.3 %
	Other	4	1.3 %
Age	19–25 years	100	31.4 %
	26–30 years	68	21.4 %
	31–40 years	93	29.3 %
	41 years and older	57	17.9 %
Role in the company	Employee	251	78.9 %
	Subordinate	67	21.1 %
Company size	Micro	51	16 %
	Small	91	28.6 %
	Medium	65	20.4 %
	Large	111	34.9 %
Country	Austria	2	0.6 %
	Belgium	3	0.9 %
	Czech Republic	7	2.1 %
	Denmark	1	0.3 %
	Estonia	8	2.5 %
	Finland	3	0.9 %
	France	5	1.5 %
	Germany	7	2.6 %
	Greece	30	9.4 %
	Ireland	5	1.6 %
	Italy	23	7.2 %
	Netherlands	4	1.2 %
	Norway	2	0.6 %
	Poland	61	20.02 %
	Portugal	80	25.2 %
	Slovenia	2	0.6 %
	Spain	21	6.6 %
	United Kingdom	54	16.5 %

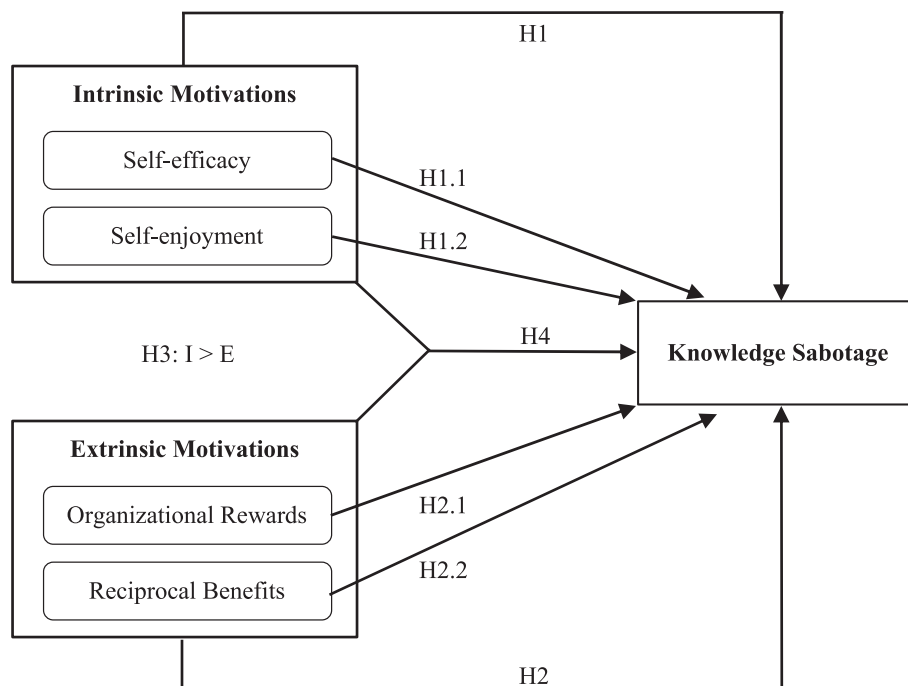


Fig. 1. The conceptual model.
Source: authors' elaboration.

survey, which has been delivered by means of the online platform ProLific. This platform is known to be a widely employed and certified tool for participant recruitment in academic and market research (e.g. Bhutto et al., 2021; Jabeen et al., 2022b; Tandon et al., 2021). While designing the survey, the authors took certain precautions to ensure the quality and rigour of the empirical investigation. Indeed, potential data collection issues have been reduced by carefully revising variables' measurement and avoiding respondents' inattention or bias. The questionnaire, which consists of 27 accurately constructed questions (Appendix), was developed by adapting prevalidated items from previous research to ensure more reliability to the study (Fink, 2002a; Fink, 2002b; Groves et al., 2011; Martin, 2006). Based on the extant literature on the subjects, we considered the articles by Kankanhalli et al. (2005) and Lin (2007) as a reference for the detection of participants' motivations to share knowledge (both intrinsic and extrinsic), while KSAB was observed drawing on the previous survey by Serenko and Choo (2020) and Serenko and Abubakar (2022). Each variable in our model has been measured using multi-item structure, so as to improve the reliability and validity of the survey, and items have been assessed through a five-point Likert Scale ranging from 1 (i.e. strongly disagree) to 5 (i.e. strongly agree) (Groves et al., 2011; Peter, 1979; Sánchez et al., 2020; Zikmund and Babin, 2016). After a pilot study, where the survey and measurement scales were tested on 82 employees of Italian companies, we decided to make some further refinements to the questionnaire. Due to the nature of the topic we are dealing with (i.e. knowledge sabotage), some items were rephrased in the third person. Thus, KSAB occurrences have been investigated employing the third-person technique on a generic member of the company, then weighing the behavioural affinity with the participants themselves with an additional item (Fisher, 1993; Mitchell et al., 2009; Zikmund and Babin, 2016). This projecting behaviour approach allows the avoidance of social desirability biases and issues caused by dealing with questions that are too intrusive or personal, in which the respondents may tend not to reveal they adopted a negative behaviour (e.g. Handa and Ahuja, 2022; Korgaonkar et al., 2020). Since the survey deals with some sensitive topics, participants have been duly informed that their answers will be treated anonymously and confidentially, and are intended for scientific research purposes only. Furthermore, we decided to include attention filters and reversely coded items to ensure reliable answers from participants. Thereafter, face and content validity of the measurement scales have been assured by rounds of experts' reviews in building and finalizing the questionnaire (Fink, 2002b; Groves et al., 2011; Zikmund and Babin, 2016).

3.2. Data analysis method

The data collected through the online survey have been organized and processed using the IBM SPSS Statistics v.28 software. This program was useful for deriving descriptive statistics and correlation among variables, as well as measuring the normal distribution of the data, the absence of multicollinearity, and the detection of common method bias. Then, for assessing the validity and reliability of our measurement model and for testing our hypotheses we used SPSS AMOS v.28. Consistently with previous studies (e.g. Feng et al., 2022; Lin, 2007; Serenko and Abubakar, 2022; Tandon et al., 2021), we employed a structural equation modelling (SEM) technique to assess the multiple statistical relationships simultaneously through visualization and model validation. In particular, the chosen methodological approach is a covariance based structural equation modelling (CB-SEM) as it has been recognized the most appropriate for theory testing and confirmation in deductive studies (Dash and Paul, 2021; Hair et al., 2017; Hair et al., 2019).

4. Empirical results

4.1. Normality, common method variance, and multicollinearity

Prior to carrying out the confirmatory factor analysis (CFA), the authors performed some diagnostics to assess the goodness of the data. Starting from the 329 valid answers we obtained from the online self-administrated survey, the first step involved the removal of 11 outliers to improve internal reliability (318 responses remained). Indeed, we discarded some answers either because of a manifested extreme responses bias, or where the respondents were outside the target population of the study. This procedure was conducted in accordance with the notions found in the literature, observing the recommended threshold values (Ghosh and Vogt, 2012; Hawkins, 1980). Second, normality of data was assessed. According to Hair et al. (2019) and George and Mallery (2018) we can rely on an acceptable distribution of data, as both skewness and kurtosis values are within the recommended thresholds of $-2/+2$. With the intention of avoiding measurement errors, all items were loaded in a common factor to test any influence of standard method bias. Following the procedure supported by the literature, we applied Harman's single factor and the sum of squared percentage of variance turned out to be lower than 50 %. This result suggests that this study has no measurement issues related to common method variance (Harman, 1976; Podsakoff et al., 2003). Finally, the linear relation among independent variables was checked to avoid overfitting problems and complications with the reliability of the model parameters' estimates. Thus, data were checked for multicollinearity effect by assessing the variance inflation factors (VIFs), whose values are less than 2, with a tolerance greater than 0.10 (Alin, 2010; Tandon et al., 2021). Once the composition and structure of the data had been ascertained, it was legitimate to proceed with the CFA.

4.2. Measurement validation: validity and reliability

The validity and reliability of the measurement model were addressed through the CFA, as the employed variables are based on a construct established and accepted in theory (Hair et al., 2019; Kline, 2015). Indeed, our measurements models rely on items previously implemented in comparable empirical studies (Kankanhalli et al., 2005; Lin, 2007; Serenko and Choo, 2020). First, the CFA showed a satisfying model fit (PCMIN/DF = 2.952; CFI = 0.929; TLI = 0.919; RMSEA = 0.078). Whereas information measurement validity is the ability of an instrument to capture what it is intended to bring out, the construct convergent validity and discriminant validity were assessed considering factor loadings, the average variance extracted (AVE), factors' correlations values and their descriptive statistics. Alongside this, we questioned the trustworthiness of our measurement means, namely its reliability, through the observation of the composite reliability (CR) value. The results (Table 2) prove how the scale items load satisfactorily onto each construct, since individual items of each scale have a measurement model factor loading higher than 0.6. The AVE and CR values also comply with the threshold commonly recommended in the literature, which are 0.5 and 0.7, respectively (Hair et al., 2019; Kline, 2015; Zikmund and Babin, 2016).

Then, Table 3 shows the degree to which a measure diverges from another one whose underlying construct is conceptually unrelated to it. We can state how all constructs and the related variables meet discriminant validity standards, as the square roots of AVE (in bold in Table 3) proved to be higher than the latent construct's correlation coefficients for any observed factor. All the correlation outputs are significant at the level 0.01 (2-tailed). Overall, the CFA confirms the adequacy of the measuring instrument and the trustworthiness of the information collected, so that we can proceed with structural modelling to test the hypotheses put forward earlier.

Table 2
Factor analysis for convergent validity and reliability.

Construct	Item	Standardized factor loading	Average variance extracted (AVE)	Composite reliability (CR)
Knowledge sabotage	KSAB1	0.889	0.818	0.973
	KSAB2	0.884		
	KSAB3	0.918		
	KSAB4	0.885		
	KSAB5	0.915		
	KSAB6	0.906		
	KSAB7	0.938		
Knowledge self-efficacy	KSAB8	0.898	0.557	0.833
	KSEF1	0.792		
	KSEF2	0.817		
	KSEF3	0.757		
Knowledge self-enjoyment	KSEF4	0.601	0.715	0.909
	KSEN1	0.852		
	KSEN2	0.898		
	KSEN3	0.808		
Organizational reward	KSEN4	0.821	0.586	0.849
	OR1	0.840		
	OR2	0.764		
	OR3	0.747		
Reciprocal benefits	OR4	0.705	0.562	0.836
	RB1	0.788		
	RB2	0.801		
	RB3	0.656		
	RB4	0.744		

4.3. Hypotheses testing and structural model

After having ensured the condition of validity and reliability of our measurement model, we proceeded with the data analysis to identify any causal relationships between the identified variables. Before taking the above step, an important finding comes from the descriptive analysis of knowledge-related sabotage incidents' frequency observed in the workplace. Approximately half of the respondents stated that they had been sabotaged by a colleague through knowledge, while about only one out of four admitted to having committed such acts of sabotage in the last year. This supports our concerns about the tendency not to admit to negative behaviour towards colleagues, with respondents more likely to testify that they were victims rather than perpetrators.

Then, the hypotheses were tested using SEM (Table 4). Considering the first hypothesis, we inspected the negative relation between intrinsic motivations to share knowledge and KSAB attitudes. In general, we obtained significant results that testify the predictor effect of intrinsic motivations to share knowledge against KSAB incidents (H1). In particular, we observed that both self-efficacy (H1.1) and self-enjoyment (H1.2) are negatively related to these kinds of incidents – that is, a high level of this motivational component in people reduces attempts to sabotage through knowledge. Therefore, our H1 (both H1.1 and H1.2) has been supported by empirical analysis. On the other hand, the investigation on extrinsic motivations to share knowledge has not been as satisfactory. We could not find a significant causal relationship between organizational rewards for sharing practices (H2.1), nor with respect to mutual benefits (H2.2). Overall, we can affirm that extrinsic

Table 3
Mean, standard deviation and correlations for discriminant validity.

Constr.	Mean	Std. deviation	KSAB	KSEF	KSEN	OR	RB
KSAB	2.424	0.667	0.904				
KSEF	3.495	0.891	−0.496**	0.746			
KSEN	3.925	0.842	0.682**	−0.559**	0.845		
OR	2.922	0.891	−0.277**	0.311**	−0.367**	0.765	
RB	3.631	0.801	−0.448**	0.605**	−0.569**	0.453**	0.749

The bold diagonal values represent respective square roots of average variance extracted (AVE), and ** means that correlations are significant at the 0.01 level (2-tailed).

motivations do not constitute a valid influencing element for sabotage incidents (H2). A solid percentage variance explained ($R^2 = 0.203$) of the dependent variable was found in the analysis. This leads us to deal with the third hypothesis (H3), whereby we can effectively state that intrinsic motivation to share knowledge (i.e. self-efficacy and enjoyment in helping others) are preferable in preventing KSAB attempts, due to their significant negative relationship, while extrinsic motivation to share knowledge (i.e. expected reward and reciprocity) does not report a significant relationship with KSAB. Finally, we can reject the hypothesis of a motivation model based on a joint effect of intrinsic and extrinsic motivations, since the latter does not have a strict negative causal relationship like the former (H4). As a matter of fact, we identified a negative causal relationship between the joint effect of the two independent variables and the dependent variable, albeit with lower significance and representativeness in predicting sabotage behaviour than a motivational model based solely on intrinsic motivations. Overall, the negative causal relationships we managed to identify between intrinsic motivations to share and knowledge sabotage are the most promising to leverage when shaping a motivational model to inhibit sabotage events committed by employees in the workplace.

In terms of control variables, demographic characteristics of the sample, interviewee's roles, and company's details influence have been assessed on the dependent variable (i.e. knowledge sabotage). As a result, age, gender, role in the company (i.e. manager or subordinate), size of the company, and country did not exert any significant influence on KSAB.

5. Discussion

The aim of this study is to expand researchers' and practitioners' understanding of the most extreme and treacherous counterproductive workplace behaviours that threaten the regular process of intra-organizational knowledge sharing. In other words, our intention is to depict some factors that can concretely reduce KSAB occurrences. From our empirical analysis, we can confirm the diffusion and relevance of the phenomenon of KSAB advanced in previous studies (e.g. Serenko, 2019; Serenko, 2020; Serenko and Choo, 2020), as about half of the respondents said they had experienced acts of sabotage in the workplace by colleagues during the last year. In addition to these former studies, we could observe how the situation changes when talking about

Table 4
Results of hypotheses testing.

Hypothesis	Path	Estimate (β)	Significance (p)	Result
H1.1	KSEF → KSAB	−0.274	***	Supported
H1.2	KSEN → KSAB	−0.189	***	Supported
H2.1	OR → KSAB	−0.054	ns	Not supported
H2.2	RB → KSAB	−0.064	ns	Not supported
H3	INT → KSAB > EXT → KSAB	−0.463/ −0.100	***/ns	Supported
H4	INT_EXT → KSAB	−0.145	**	Not supported

individual sabotage or co-worker sabotage and how, in the second case, there is a tendency to admit the occurrence of the negative phenomenon more easily in the workplace. Indeed, from our investigations, about one out of four respondents admitted to having committed acts associated with KSAB against colleagues, while half of the same number of interviewees claimed to have suffered KSAB in the last year. This is certainly an interesting consideration to take into account when preparing future studies, in order to ensure reliable data collection that avoids the tendency not to admit to one's own negative behaviour.

From our analysis we are now able to find empirical answers to the hypotheses put forward earlier, which were only partly confirmed by the empirical investigation. Taking as a reference our first hypothesis, we observed that intrinsic motivations to share knowledge can effectively predict KSAB occurrences. In this regard, high levels of self-efficacy and people enjoyment in helping others, considered both jointly and individually, imply low levels of sabotage through knowledge. This negative relationship between intrinsic motivations and KSAB is supported by the KM literature on knowledge sharing, since intrinsic motivation has been identified as an effective means to improve knowledge circulation in organizations (Foss et al., 2009; Lin, 2007; Nguyen et al., 2019). Thus, intrinsically motivated employees and managers are less inclined to commit sabotage towards colleagues if they have a sense of knowledge efficacy and/or perceive self-enjoyment from sharing information (Kankanhalli et al., 2005; Krebs, 1975; Nguyen et al., 2019; Wasko and Faraj, 2005). In other words, empowering individuals with a condition of autonomy and trust, as well as an awareness of their capabilities and their role in the intra-organizational resource-sharing process, contributes to reducing their tendency to sabotage (Martinko et al., 2002; Perotti et al., 2021; Serenko, 2020). In addition, the role played by people's enjoyment in helping others by providing them key resources, also known as self-efficacy, is another element which can prevent future sabotage events. Leveraging on employees' altruism and desire to help contributes to the intrinsic motivation of individuals and hinders the internal motive that leads a person to sabotage colleagues (Lai and Chen, 2014; Lin, 2007; Foss et al., 2009; Perotti et al., 2021; Serenko, 2019).

With regard to extrinsic motivation to share knowledge in workplace, we did not manage to find any significant causal relationship with KSAB. Although previous studies on extrinsic motivations towards knowledge sharing do not entirely agree (e.g. Bock et al., 2005; Foss et al., 2009; Lin, 2007), thanks to the analysis by Nguyen et al. (2019) and Sun et al. (2021) we were able to assume that sabotage would demonstrate the opposite behaviour, but this hypothesis was disproved. Our empirical investigations did not report a significant causal link between the two variables, either when examining organizational rewards or reciprocal benefits. Our result is confirmed by studies that show an insignificant relationship between extrinsic motivation and the sharing of knowledge (i.e. Foss et al., 2009; Lin, 2007). In this regard, neither the setting up of rewards to stimulate resource sharing and thus increase the perceived benefits of sharing, nor the expectation of a reciprocal gesture for the benefit of a colleague, can prevent KSAB behaviour. Therefore, the third hypothesis is supported by our data, since a motivation derived from an intrinsic condition of the person has proven to be more meaningful in preventing behaviour such as KSAB. Given the internal nature of acts of sabotage, we can conclude that acting on an individual's intrinsic motivation is certainly more relevant in preventing this negative attitude (Crino, 1994; Lin, 2007; Robinson and Bennett, 1995; Serenko, 2019; Serenko and Choo, 2020).

Accordingly, the joint effect of intrinsic and extrinsic motivations proved to be not as effective as just intrinsic motivation in preventing sabotage incidents related with knowledge. This conclusion can be coupled with studies claiming that intrinsic motivations are certainly better and more effective in promoting the circulation of information in the organization (Foss et al., 2009; Lin, 2007; Nguyen et al., 2019). In addition, we can again agree that, given the nature of sabotage behaviour, a motivation of an external nature is not sufficient to bend the perpetrators' instincts and their selfish feelings or resentment towards

certain colleagues or the organization (Ambrose et al., 2002; Perotti et al., 2021; Serenko, 2019; Serenko, 2020).

With regard to the point of view advanced by Perotti et al. (2021), although KSAB and knowledge sharing appear to be two opposing constructs, they do not mirror each other and tend to occur in distinct forms that need to be approached separately and alongside each other to paint a clear picture of the phenomenon of sabotage (Connelly et al., 2012; Serenko and Bontis, 2016). In this research we pointed out that these two phenomena react in the same way as the role of the intrinsic motivations, that is by reducing KSAB occurrences and fostering knowledge sharing. On the other hand, according to Nguyen et al. (2019) and Sun et al. (2021) even though extrinsic motivations are supposed to positively impact the sharing of knowledge, they are not significantly related with KSAB. Therefore, supported by our empirical findings we can agree with previous authors (Perotti et al., 2021; Serenko, 2019) and state that KSAB is characterized to be a non-specular behaviour to knowledge sharing and it must be further studied in future studies to contribute to defining its nature and remedy these situations.

5.1. Theoretical and managerial implications

Our research contributes to the KM literature in several ways. First, it supplements the literature on knowledge-sharing counterproductive workplace behaviours, outlining a more detailed profile of the phenomenon of KSAB (Afshar-Jalili et al., 2020; Fox and Spector, 2005). We confirm previous empirical findings (i.e. Serenko, 2019; Serenko, 2020; Serenko and Choo, 2020) about the significance and spread of KSAB in organizations, offering the first empirical study that inspects the phenomenon of KSAB by considering employees and managers of different organizations in Europe. Then, we manage to outline a new measurement means for KSAB thanks to the application of the third-person technique (Fisher, 1993; Mitchell et al., 2009; Zikmund and Babin, 2016). Compared to the pilot study, which has been conducted with direct-to-person items, we managed to avoid desirability bias and obtain more satisfactory results. We are confident that this new rating scale will also be useful in future studies on this extreme counterproductive behaviour (Gruys and Sackett, 2003; Serenko and Abubakar, 2022; Spector and Fox, 2005). Third, this study analyses the causal effect of intrinsic and extrinsic motivation to share knowledge and KSAB by advancing a new empirically tested motivational model that suggests leveraging on intrinsic motivations to limit sabotage occurrences (Perotti et al., 2021).

As for its managerial implications, our study offers a comprehensive source of information to expand practitioners' awareness of KSAB in economic realities. Moreover, the result of our investigations will contribute to obtaining a practical tool that indicates to managers how to adequately motivate people to avoid such pervasive counterproductive workplace behaviour. Drawing on the results of the present study, we suggest developing people's intrinsic motivation to share knowledge to prevent KSAB from hindering intra-organizational knowledge sharing. Employees' self-efficacy and self-enjoyment towards the sharing of knowledge can be thus leveraged to reduce knowledge-related sabotage occurrences among colleagues and supervisors, so as to promote a sound sharing environment.

6. Conclusions and future line of research

In conclusion, we depicted an empirically validated motivational model based on intrinsic motivations to share knowledge (i.e. self-efficacy and enjoyment in helping others) as a valuable practice tool to deal with KSAB occurrences in organizations. This study empirically proved that intrinsic motivations to share knowledge can prevent KSAB occurrences in for-profit organizations (Perotti et al., 2021; Sun et al., 2021). As such, it represents a new starting point as well as a guide to researchers and practitioners to better understand the dynamics of KSAB and to unveil how to deal with it in practice.

This research has some limitations. First, the people we interviewed work and reside in Europe. This may be a limitation in that our findings are not generalizable to geographically, politically, and culturally diverse contexts. In response, future research could observe this phenomenon by distinguishing between individualistic and collectivistic countries (e.g. Santoro et al., 2019). Then, our study failed to identify a substantial influence of respondents' role in the company on KSAB. Given the different roles and responsibilities of managers and employees, further qualitative studies could deeply investigate sabotage behaviour against knowledge sharing from the perspective of these two actors. Moreover, an in-depth study of the personal characteristics of those prone to sabotage could offer new perspectives from which to observe and understand the phenomenon. In this vein, a microfoundation analysis would also help to understand how individuals' condition is related to sabotage attempts and, in turn, how they can affect macro-level business outcomes (Barney and Felin, 2013). Finally, a further glimpse into the future might concern the phenomenon of KSAB in digitalised working environments (e.g. Fernandez-Vidal et al., 2022), where digital technologies facilitate communication among co-workers but change inter-relational parameters.

Authors statement

The corresponding author is responsible for ensuring that the descriptions are accurate and agreed upon by all authors. The data were collected and processed by the corresponding author. All authors contributed equally to the writing of the article.

Data availability

Data will be made available on request.

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Appendix A. The questionnaire

Knowledge sabotage occurrences in the workplace

In this section, we intend to investigate some events that occurred during the execution of work activities over the past year. Reflect on your experiences and answer whether you agree or disagree with these statements.

In the last year, someone in the company has negatively affected the performance of a colleague, superior or subordinate by deliberately...

KSAB1: supplying him/her with the wrong information, advice, document, or recommendation when he/she asked for help.

KSAB2: withholding critical information, advice, document, or recommendation when he/she asked for help.

KSAB3: supplying him/her with the wrong information, advice, document, or recommendation when I realized that he/she needed it (without an explicit help request).

KSAB4: withholding critical information, advice, document, or recommendation when I realized that he/she needed it (without an explicit help request).

In the last year, someone in the company has negatively affected the professional success of a colleague, superior or subordinate by

deliberately...

KSAB5: supplying him/her with the wrong information, advice, document, or recommendation when he/she asked for help.

KSAB6: withholding critical information, advice, document, or recommendation when he/she asked for help.

KSAB7: supplying him/her with the wrong information, advice, document, or recommendation when I realized that he/she needed it (without an explicit help request).

KSAB8: withholding critical information, advice, document, or recommendation when I realized that he/she needed it (without an explicit help request).

BAFF: I believe the person in question acted in the most appropriate way for the situation he/she was facing.

Motivation towards knowledge sharing

Reflect on your behaviour and attitude in the workplace and answer whether you agree or disagree with these statements.

KSEF1: I am confident in my ability to provide knowledge that others in my organization consider valuable.

KSEF2: I have the expertise required to provide valuable knowledge for my organization.

KSEF3: It does not really make any difference whether I share my knowledge with colleagues. [Reverse-coded]

KSEF4: Most other employees can provide more valuable knowledge than I can. [Reverse-coded]

KSEN1: I enjoy sharing my knowledge with colleagues.

KSEN 2: I enjoy helping colleagues by sharing my knowledge.

KSEN 3: It feels good to help someone by sharing my knowledge.

KSEN 4: Sharing my knowledge with colleagues is pleasurable.

OR1: I will receive a higher salary in return for my knowledge sharing.

OR2: I will receive a higher bonus in return for my knowledge sharing.

OR3: I will receive increased promotion opportunities in return for my knowledge sharing.

OR4: I will receive increased job security in return for my knowledge sharing.

When I share my knowledge with colleagues, ...

RB1: I strengthen ties between existing members of the organization and myself.

RB2: I expand the scope of my association with other organization members.

RB3: I expect to receive knowledge in return when necessary.

RB4: I believe that my future requests for knowledge will be answered.

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