frontiers in Sustainability

TYPE Original Research
PUBLISHED 19 June 2026
DOI 10.3389/frsus.2026.1882602

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OPEN ACCESS

EDITED BY
Sady Mazzioni,
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REVIEWED BY
Amirreza Kazemikhasragh,
Complutense University of Madrid, Spain
Daniela Costa,
Catholic University of Portugal, Portugal

*CORRESPONDENCE
Caterina Ledda
caterina.ledda@unict.it

RECEIVED 15 May 2026
REVISED 26 May 2026
ACCEPTED 29 May 2026
PUBLISHED 19 June 2026

CITATION
Catalfo P, Virgillito D and Ledda C (2026) Work-related stress as a material ESG issue: a single-company case study on psychosocial risk, organizational health and business impact.
Front. Sustain. 7:1882602.
doi: 10.3389/frsus.2026.1882602

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Work-related stress as a material ESG issue: a single-company case study on psychosocial risk, organizational health and business impact

Pierluigi Catalfo[1], Daniele Virgillito[2] and Caterina Ledda[2]*

[1]Department of Economics and Business, University of Catania, Catania, Italy, [2]Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy

Introduction: Work-related stress and psychosocial risks are increasingly relevant to occupational health, organizational sustainability and ESG governance, but their integration into sustainability reporting remains limited.
Methods: We conducted a single-company case study of "Company X," a medium-sized Italian manufacturing and technical services organization (782 workers, four sites), using seven documentary and indicator sources. A structured codebook, dual coding, reconciliation and triangulation were applied to link psychosocial determinants, occupational health processes, workforce indicators and ESG disclosure.
Results: Psychosocial risk was documented in occupational health and safety materials but only indirectly represented in ESG reporting. Company X showed process-level disclosure (risk assessment, participation and action planning) and partial outcome disclosure (absenteeism, turnover, training, near misses and engagement), but weak integration with presenteeism, cost estimation and board-level ESG governance.
Conclusion: The Stress-ESG Business Impact Framework operationalizes psychosocial risk as a material workforce issue by connecting determinants, prevention actions, aggregate outcomes and governance mechanisms. It can support ESG dashboards, materiality assessment and progressive disclosure without individual-level surveillance.

KEYWORDS
business impact, corporate governance, ESG, human capital, occupational health, organizational health, psychosocial risks, stress-ESG business impact framework

1 Introduction

Work-related stress is a major occupational and organizational issue (Karasek, 1979; Siegrist, 1996; Demerouti et al., 2001). It arises when the demands of work exceed the resources, autonomy, support or coping capacity available to workers. Psychosocial risks may originate from workload, work pace, working time, lack of role clarity, insufficient support, poor leadership, organizational injustice, conflict, job insecurity, digital overload and poorly managed change (Karasek, 1979; Siegrist, 1996; Karasek and Theorell, 1990; Leka and Cox, 2008; Bakker and Demerouti, 2007). These risks may affect mental and physical health, work ability, engagement, absenteeism, presenteeism, turnover and organizational performance (Demerouti et al.,

2001; Hassard et al., 2018; Niedhammer et al., 2021; World Health Organization, 2022).

Traditionally, work-related stress has been addressed within occupational health and safety systems as a risk to be assessed and managed (Leka and Cox, 2008; International Organization for Standardization, 2021). This approach remains essential because psychosocial risks can have significant consequences for workers' health and well-being (Niedhammer et al., 2021; World Health Organization, 2022). However, the increasing importance of ESG governance and sustainability reporting requires a broader interpretation (European Commission, 2023; European Agency for Safety and Health at Work, 2014; European Commission, 2022; European Financial Reporting Advisory Group, 2023). Work-related stress is not only a health and safety issue. It is also a social sustainability issue because it reflects the quality of work organization, leadership, participation, human capital management and corporate accountability (European Financial Reporting Advisory Group, 2023).

In the Italian context, work-related stress assessment is embedded in the general duty to evaluate all occupational risks and has been operationalized through national guidance that combines preliminary organizational indicators with, where needed, more in-depth worker-perception assessment. This regulatory background makes Italy a useful setting for examining how a prevention requirement can be translated into ESG-oriented social accountability without reducing the issue to a purely compliance-based exercise (INAIL, 2017; Italian Republic, 2008).

The social dimension of ESG includes workers' health, safety, well-being, working conditions, equal treatment, human capital development and respect for work-related rights (European Commission, 2023; European Commission, 2022; European Financial Reporting Advisory Group, 2023). Within this perspective, psychosocial risk management can be interpreted as a material indicator of how an organization prevents negative impacts on its workforce and protects sustainable value creation (European Commission, 2023; European Commission, 2022; European Financial Reporting Advisory Group, 2023). A company that fails to identify and manage stress-related risks may experience adverse outcomes not only in terms of worker health, but also in terms of productivity, continuity, reputation and organizational resilience (Hassard et al., 2018; Niedhammer et al., 2021; European Agency for Safety and Health at Work, 2014).

Despite this relevance, work-related stress is often weakly represented in ESG disclosure (European Commission, 2023; European Commission, 2022; European Financial Reporting Advisory Group, 2023). Sustainability reports may refer to employee well-being, welfare initiatives or occupational health and safety policies, but they do not always explain whether psychosocial risks have been assessed, what organizational determinants were identified, what preventive measures were implemented, or how outcomes are monitored. This creates a gap between occupational health and safety practice and sustainability reporting.

This article addresses this gap through a single-company case study. The aim is not to present company findings, but to demonstrate a reproducible approach for integrating psychosocial risk assessment, organizational indicators and ESG disclosure. The present case intentionally incorporates missing variables, partial reporting, uneven data quality and weak causal attribution, because these features are commonly encountered in real organizational settings.

The article integrates three disciplinary perspectives. Occupational medicine provides the basis for identifying psychosocial risks, health outcomes and preventive measures. Business administration contributes to the interpretation of ESG governance, reporting, value creation and business impact. Organization studies explain how work design, leadership, culture, participation and managerial processes generate or mitigate stress. The integration of these perspectives supports the development of a Stress-ESG Business Impact Framework.

1.1 Conceptual contribution and framework logic

The conceptual contribution of this article is to translate work-related stress from a "risk to be assessed" into a governable ESG issue that can be connected to materiality, workforce impacts, business continuity and accountable disclosure. The Stress-ESG Business Impact Framework differs from generic OHS or well-being models because it explicitly connects five levels: psychosocial determinants, prevention and participation processes, aggregate health and well-being outcomes, organizational performance indicators, and ESG governance mechanisms. Its novelty lies not in proposing a deterministic causal chain, but in providing an integration architecture for organizations whose information is dispersed across occupational health, HR, compliance and sustainability functions.

The framework is grounded in three complementary assumptions. First, psychosocial risks are generated by work organization and therefore require primary prevention, not only individual support. Second, ESG disclosure should describe both positive initiatives and the governance of potential negative impacts on the workforce. Third, business-impact indicators should be interpreted through cautious triangulation rather than through direct attribution, particularly when data are aggregate, incomplete or collected for different administrative purposes (see Figure 1).

1.2 Research questions

> *RQ1*: How can work-related stress, psychosocial risks and employee well-being be represented in a single-company ESG case study?
>
> *RQ2*: How can psychosocial risk management be connected to occupational health and safety governance, worker participation and prevention processes?
>
> *RQ3*: Which business-impact indicators can realistically be linked to work-related stress and psychosocial risks in an ESG-oriented framework?
>
> *RQ4*: How can occupational medicine, business administration and organization studies be integrated into a Stress-ESG Business Impact Framework that remains usable when company data are incomplete?

2 Materials and methods

2.1 Study design

This study is a single-company case-study design. The case-study approach is appropriate for investigating complex organizational

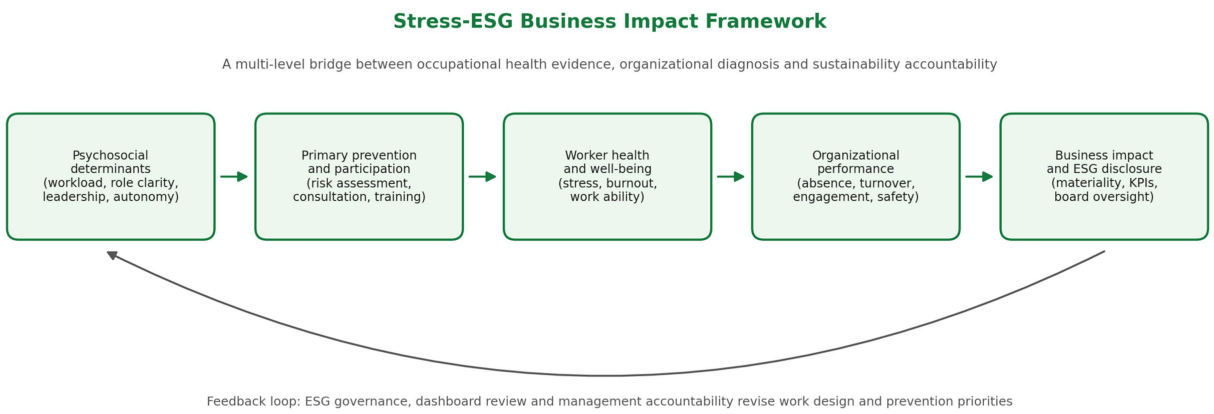


FIGURE 1
Stress-ESG Business Impact Framework: conceptual model linking psychosocial determinants, prevention processes, worker outcomes, organizational performance and ESG governance.

phenomena in context, particularly when the boundaries between the phenomenon and its organizational setting are not clearly separable. Work-related stress is shaped by organizational structure, managerial practices, work processes, culture and governance; therefore, it requires contextual analysis.

The study combines documentary analysis and organizational indicator analysis. The documentary component examines how work-related stress, psychosocial risks, employee well-being and ESG-related governance could be represented in company documents. The indicator component examines how aggregate organizational data may be linked, or fail to be linked, to psychosocial risk and business impact.

An organization, anonymized as "Company X," was selected as an information-rich illustrative case because it combined three features that are central to the research questions: a documented OHS process for work-related stress assessment, a sustainability-reporting function using ESG language, and routine HR/OHS indicators that were available in aggregate form but not fully integrated. The case was not selected as statistically representative of Italian companies; rather, it was selected for analytical relevance to the phenomenon under study, namely the organizational gap between psychosocial risk management and ESG disclosure.

2.1.1 Case selection and unit of analysis

The unit of analysis was the company-level governance and reporting system, not individual workers. Selection followed an information-rich logic typical of case-study research: the company had sufficient documentary evidence to reconstruct prevention processes, but also displayed realistic incompleteness, uneven participation and functional fragmentation. These features allowed the case to be used to develop and test the framework under non-ideal conditions.

- Sector: manufacturing and technical services.
- Country: Italy.
- Number of employees: 782 in 2024.
- Number of operational sites: four.
- Reporting period: 2022–2024 for trend indicators and 2024 for documentary analysis.
- Psychosocial risk assessment: aggregate assessment conducted in 2024.
- Data structure: aggregate data only; no individual-level or personal health data.

2.2 Data sources

Seven sources were included in the case dataset. They represented the complete set of company-level evidence made available for this analysis and were selected because they covered the minimum information domains required to connect psychosocial risk, occupational health governance, HR indicators and ESG disclosure. For each source, the responsible function, development process and inclusion rationale were documented to improve transparency and reproducibility (Table 1).

2.3 Coding framework

A structured coding framework was applied to the sources. Codes were assigned at document level and then synthesized at company level. The framework included six analytical dimensions: psychosocial risk exposure, occupational health and well-being, organizational determinants, business-impact indicators, governance and prevention mechanisms, and ESG disclosure quality (see Table 2).

2.3.1 Coding procedure, agreement and validation

Coding was performed in four steps. First, all sources were read in full and segmented by document section, table or indicator block. Second, two authors independently applied the codebook to each source at document level and recorded whether each code was absent, generic, partially present or explicit. Third, disagreements were discussed in a reconciliation meeting and resolved by returning to the documentary evidence. Fourth, the reconciled matrix was reviewed against the research questions to ensure that the final framework was grounded in the observed gaps rather than imposed *a priori*. Because the purpose was framework development rather than statistical content analysis, agreement was used as a validation procedure rather than as an inferential reliability estimate. Completeness was assessed through a source-by-dimension matrix. Saturation was considered reached when additional documents did not add new analytical dimensions beyond the six included in the codebook, although several

TABLE 1 Documents and data sources.

Source ID	Source and institutional owner	Development process	Content	Inclusion rationale and completeness
D1	Sustainability Report 2024/ Sustainability and corporate affairs function	Annual external disclosure prepared for ESG reporting and stakeholder communication	ESG strategy, workforce, health and safety, training, engagement, governance	Included to assess whether psychosocial risk is translated into external ESG language; moderate completeness
D2	Occupational Health and Safety Policy/OHS function	Internal policy approved through the safety-management system	OHS responsibilities, prevention principles, worker participation	Included to evaluate formal prevention governance; moderate completeness
D3	Work-Related Stress Assessment Summary/OHS function with occupational health support	Aggregate risk-assessment output for organizational areas	Psychosocial determinants, area-level risk classification, participation rates	Main source for psychosocial risk determinants; high completeness for prevention evidence
D4	Human Resources Dashboard 2022–2024/HR function	Routine annual workforce and absence monitoring	Absenteeism, turnover, workforce structure, training	Included to assess business-impact proxies; moderate completeness because links to stress were not explicit
D5	Employee Engagement Survey Summary 2024/HR and organizational development function	Voluntary employee survey with variable response rates across areas	Participation, engagement, workload, leadership, role clarity	Included to triangulate risk determinants with perceptions; moderate completeness
D6	Well-Being Action Plan 2024–2025/HR, OHS and management	Action plan following survey and risk-assessment findings	Psychological support, manager training, workload review	Included to evaluate prevention response and implementation gaps; moderate completeness
D7	Risk and Compliance Committee Minutes/Risk, compliance and management	Periodic governance minutes and risk register discussion	Risk register, ESG and OHS discussion	Included to test board-level or committee-level ESG integration; low completeness for psychosocial risk

indicators remained incomplete or unavailable. This distinction between conceptual saturation and indicator completeness was retained in the results to avoid overstating the strength of the evidence.

2.4 Disclosure maturity score

A disclosure maturity score was assigned to the case according to the following scale: Level 0, no disclosure; Level 1, generic well-being disclosure; Level 2, process disclosure; Level 3, outcome disclosure; and Level 4, integrated ESG disclosure. For the present case, a conservative rule was applied: the presence of HR indicators alone was not sufficient to assign Level 3 unless the indicators were explicitly linked to psychosocial risk, well-being outcomes or prevention targets.

2.5 Data analysis

The analysis was conducted in five phases: documentary mapping, structured coding, indicator trend mapping, cross-source triangulation and framework development. Qualitative evidence was used to identify determinants, governance mechanisms and disclosure gaps, while quantitative indicators were used as aggregate proxies for organizational outcomes. Integration occurred through joint displays that compared documentary evidence, HR/OHS indicators and ESG disclosure quality. No inferential statistics were performed because the case is a single-company analysis. Quantitative values are descriptive and illustrative; causal links between psychosocial risk and business impact were not inferred directly but interpreted cautiously through convergence, divergence and gaps across sources.

2.6 Ethical considerations

The company was anonymized and is referred to throughout the manuscript as "Company X." No individual-level employee data, personal health information or identifiable occupational-health records were used. The analysis was based exclusively on aggregate organizational information and documentary evidence. Formal ethical approval was not required; nevertheless, the framework was designed to prevent individual profiling, stigmatization of groups and surveillance-based use of psychosocial indicators.

3 Results

3.1 Case characteristics

Company X is a medium-sized Italian manufacturing and technical services company with 782 employees in 2024. As shown in Table 3, the workforce was organized across four operational macro-areas and included both industrial and service-related profiles. The table was reorganized by variable group to clarify the characteristics of the sample and to distinguish occupational area, contract type, gender and age distribution.

TABLE 2 Condensed codebook for single-company analysis.

Dimension	Code	Variable	Operational definition
Psychosocial risk	PSY_1	Explicit work-related stress	The document explicitly refers to work-related stress or occupational stress.
Psychosocial risk	PSY_2	Psychosocial risks	The document mentions psychosocial risk, mental workload, psychological risk, conflict, harassment, violence or work pressure.
Occupational health	OH_1	Mental health	The document addresses mental health or psychological well-being.
Occupational health	OH_2	Well-being initiatives	The document describes welfare, counselling, psychological support, stress management or employee assistance initiatives.
Organizational determinants	ORG_1	Workload/work pace	The document connects stress or well-being to workload, work pace, staffing or deadlines.
Organizational determinants	ORG_2	Leadership/role clarity	The document links well-being or stress to leadership, role ambiguity, role conflict or communication.
Business impact	BUS_1	Absenteeism	The document reports absenteeism or sickness absence.
Business impact	BUS_2	Presenteeism	The document mentions presenteeism or reduced performance while at work.
Business impact	BUS_3	Turnover/retention	The document reports turnover, retention or talent loss.
Business impact	BUS_4	Productivity/cost	The document connects well-being or stress to productivity, economic cost or performance.
Governance	GOV_1	Policy/procedure	The document describes policies or procedures on stress, psychosocial risks, mental health or well-being.
Governance	GOV_2	Participation/training	The document mentions worker participation, surveys, committees, manager training or awareness activities.
ESG disclosure	ESG_1	Generic disclosure	The document mentions well-being only in general terms.
ESG disclosure	ESG_2	Process disclosure	The document describes risk assessment, governance or preventive processes.
ESG disclosure	ESG_3	Outcome disclosure	The document includes measurable indicators or outcomes.
ESG disclosure	ESG_4	Integrated ESG disclosure	Psychosocial risk is connected to ESG materiality, human capital, business impact or board governance.

3.2 Representation of work-related stress and psychosocial risks across sources

The analysis showed a fragmented disclosure pattern (Table 4). Work-related stress was explicitly mentioned in occupational health and safety documents, particularly in the work-related stress assessment summary, but not in the sustainability report. This divergence suggests that the same organizational issue was translated differently across functions: it appeared as a prevention requirement in OHS documentation, as an engagement or welfare topic in HR documents, and as a generic well-being narrative in ESG disclosure.

The company had prevention processes in place, but the language and indicators used by the ESG function, HR function and occupational health and safety function were only partially aligned. Table 4 therefore functions as a triangulation matrix rather than a simple coding summary: it shows where evidence converges, where terminology differs and where measurement gaps remain.

TABLE 3 Workforce profile of Company X, 2024.

Variable	Category	*n*	%
Total workforce	Employees at year end	782	100.0
Occupational area	Production and logistics	471	60.2
Occupational area	Field technical services and maintenance	156	19.9
Occupational area	Engineering and quality functions	78	10.0
Occupational area	Administration, HR, finance and sales	77	9.8
Type of contract	Permanent contracts	691	88.4
Type of contract	Fixed-term or agency contracts	91	11.6
Gender	Women	252	32.2
Gender	Men	530	67.8
Age group	<35 years	176	22.5
Age group	35–54 years	481	61.5
Age group	> = 55 years	125	16.0

3.3 Psychosocial risk assessment results

The work-related stress assessment classified psychosocial risk by organizational area using a qualitative low, medium and medium-high scale (Table 5). Participation varied by area, which limits comparability and may introduce selection bias if workers with higher workload or lower trust were less likely to participate. The total participation rate of 54% should therefore be interpreted as sufficient for an aggregate organizational signal, but not as a complete representation of all workforce experiences.

TABLE 4 Cross-source coding of psychosocial risk and ESG disclosure.

Code	Variable	Sustainability report	OHS documents	HR/Survey sources	Company-level interpretation
PSY_1	Explicit work-related stress	Absent	Present	Not explicit	Present internally, absent externally
PSY_2	Psychosocial risks	Generic	Present	Partially present	Present but not consistently labelled
OH_1	Mental health	Generic	Limited	Partially present	Mentioned mainly through well-being initiatives
OH_2	Well-being initiatives	Present	Limited	Present	Visible in ESG disclosure
ORG_1	Workload/work pace	Absent	Present	Present	Identified as internal risk factor
ORG_2	Leadership/role clarity	Generic	Present	Present	Recognized through survey and action plan
BUS_1	Absenteeism	Present	Limited	Present	Reported but not attributed to stress
BUS_2	Presenteeism	Absent	Absent	Absent	Major measurement gap
BUS_3	Turnover/retention	Present	Absent	Present	Reported as HR issue, not psychosocial outcome
BUS_4	Productivity/cost	Generic	Absent	Absent	No quantified cost model
GOV_1	Policy/procedure	Generic	Present	Present	Process exists but is fragmented
GOV_2	Participation/training	Present	Present	Present	Survey and training reported
ESG_4	Integrated ESG disclosure	Absent	Absent	Absent	No full ESG materiality integration

TABLE 5 Psychosocial risk assessment by organizational area, 2024.

Organizational area	Employees	Participation in assessment	Overall risk level	Main determinants identified
Production and logistics	471	53%	Medium-high	Work pace, overtime peaks, shift constraints, limited autonomy, supervisor variability
Field technical services and maintenance	156	49%	Medium-high	Customer pressure, travel time, emergency calls, deadlines, work-life interference
Engineering and quality functions	78	64%	Medium	Deadline pressure, role overload, coordination with production, documentation burden
Administration, HR, finance and sales	77	58%	Medium-low	Digital overload, interruptions, unclear prioritization, peak administrative deadlines
Total company	782	54%	Medium	Workload, change management, leadership consistency, role clarity

The pattern in Table 5 also helps explain why psychosocial risk was not easily translated into ESG disclosure. The most critical determinants, such as work pace, travel pressure, customer demands and supervisor variability, are organizational and managerial in nature. They do not correspond to a single medical outcome or a single financial indicator, which makes them more difficult to report through conventional ESG metrics.

3.4 Three-year trend of organizational indicators

Table 6 summarizes the three-year trend of organizational indicators. The trend suggests increasing absenteeism and turnover between 2022 and 2024, while occupational injuries decreased slightly and near-miss reporting increased. The increase in near misses was interpreted as possibly reflecting improved reporting culture rather than worsening safety performance. Psychosocial and leadership training was introduced only in 2023 and remained limited in coverage in 2024. Presenteeism and stress-related economic costs were not routinely measured; for the purposes of the case, exploratory proxy estimates were produced using aggregate and non-identifiable data.

3.5 Governance and prevention mechanisms

Company X reported several governance and prevention mechanisms, but their level of integration was uneven (Table 7). The strongest elements were the existence of a formal OHS policy, a work-related stress assessment, worker consultation through surveys and meetings, and an initial action plan. The weakest elements were board-level oversight, explicit ESG materiality integration,

systematic outcome monitoring and economic evaluation. This gap indicates that the issue had entered operational prevention routines but had not yet become a strategic social-risk governance topic.

3.6 Business-impact linkage

The business-impact linkage was weaker than the availability of general indicators might suggest (Table 8). Absenteeism, sickness absence, turnover and engagement were monitored, but they were not systematically interpreted as potential outcomes of psychosocial risk. Productivity was discussed only in general management language and was not supported by validated productivity-loss indicators. Therefore, the case suggests partial evidence availability and an emerging, but still immature, business-impact model.

3.7 Disclosure maturity score

Using the predefined scoring rules, Company X was classified as Level 2, with some Level 3 elements (Table 9). Level 2 indicates that the company discloses and documents processes such as risk assessment, participation and action planning. Level 3 would require clearer outcome disclosure, namely measurable indicators explicitly linked to psychosocial risk, well-being outcomes or prevention targets. The company exceeded generic disclosure but did not reach integrated ESG disclosure because psychosocial risk was not included in materiality analysis, board-level oversight or formal business-impact quantification.

3.8 Stress-ESG business impact framework applied to company X

The case findings were organized into the Stress-ESG Business Impact Framework (Table 10). The framework highlights the progression from organizational determinants to ESG governance and identifies gaps that could support future improvement. The main gap is not the absence of data, but the absence of integration among data sources.

3.9 Operationalization of the framework

Table 11 translates the framework into an implementation sequence that can be used by organizations wishing to integrate psychosocial risk into ESG dashboards. The sequence is deliberately progressive: it begins with mapping and governance, moves to aggregate indicators and triangulation, and only then introduces cautious business-impact estimates.

This operational sequence is intended to prevent two opposite risks: reducing psychosocial risk to a generic well-being narrative, or

TABLE 6 Aggregate organizational indicators, 2022–2024.

Indicator	2022	2023	2024	Interpretation
Employees at year end	748	765	782	Moderate growth
Absenteeism rate	4.9%	5.6%	6.1%	Increasing; not formally attributed to stress
Mean sickness absence	7.2 days/FTE	8.1 days/FTE	8.9 days/FTE	Higher in production and field services
Overall turnover rate	7.8%	10.6%	11.4%	Increasing, especially technical profiles
Voluntary turnover rate	5.1%	7.3%	8.0%	Possible retention concern
Engagement score	Not measured	66/100	63/100	Slight decrease; comparison limited to 2 years
Engagement survey response rate	Not measured	61%	54%	Declining participation and possible response bias
OHS training hours	5,840	6,120	6,480	Stable compliance-oriented training
Psychosocial/leadership training hours	0	180	420	Introduced recently; limited reach
Managers trained on psychosocial risk	0%	18%	34%	Improving but still partial coverage
Participation in well-being initiatives	Not tracked	96	138	Low-to-moderate uptake; denominator not always clear
Psychological support users	Not available	17	28	Service introduced in 2023; aggregate data only
Near misses reported	34	46	61	Likely better reporting culture
Occupational injuries	22	20	18	Slight decrease
Conflict/harassment reports	5	7	8	Low numbers; likely under-reporting
Presenteeism indicator	1.1% of annual working time	1.4% of annual working time	1.7% of annual working time	Conservative proxy estimate based on organizational indicators; increasing trend, but no causal attribution to psychosocial risk
Estimated stress-related cost	EUR 470,00	EUR 626,00	EUR 797,00	Exploratory estimate based on presenteeism-equivalent lost working days, a cautious proportion of sickness absence potentially associated with psychosocial strain, and average daily labour cost; values are illustrative and not causal estimates.

TABLE 7 Governance and prevention mechanisms identified in the case.

Mechanism	Status in 2024	Limitation
OHS policy including psychosocial risk	Present	Policy language broad and not linked to ESG targets
Work-related stress assessment	Present	Participation 54%; limited follow-up indicators
Worker consultation	Present	Survey participation uneven across occupational groups
Manager training	Partially present	Only 34% of managers trained by end of 2024
Psychological support service	Present	Aggregate uptake tracked, outcomes not evaluated
Workload review	Planned	Pilot only in two departments
Monitoring indicators	Partially present	HR indicators not integrated with stress assessment
Targets/action plan	Partially present	Targets mainly process-based, not outcome-based
Board-level ESG oversight	Absent	Psychosocial risk not discussed as a material ESG risk
Integration into materiality analysis	Absent	Well-being included, stress not identified as standalone material topic

over-quantifying it through unsupported causal claims. It also clarifies how the proposed framework can be used when evidence is incomplete.

4 Discussion

This single-company case study illustrates a pattern of partial integration between work-related stress, occupational health and safety management, human resources indicators and ESG disclosure. Unlike an idealized case, Company X does not show full coherence among all data sources. Work-related stress is visible in occupational health and safety documentation, but it is translated into the sustainability report mainly through generic language on well-being, engagement and health and safety.

Research consistently demonstrates strong links between work-related stress, psychosocial risks, and negative organizational outcomes. Psychosocial stressors including high psychological demands, low decision latitude, low social support, and effort-reward imbalance significantly predict mental health disorders and stress-related conditions (Stansfeld and Candy, 2006; Nieuwenhuijsen et al., 2010). Meta-analytic evidence shows workers exposed to these stressors have substantially higher risks of sickness absence due to mental disorders, with pooled risk ratios ranging from 1.23 to 1.76 (Duchaine et al., 2020). These workplace stressors impose substantial costs on organizations through absenteeism, presenteeism, reduced productivity, and high staff turnover (Hassard et al., 2018; Biron et al., 2012). Cross-sectional studies confirm that employees with more health risk factors, particularly stress, report greater productivity loss (Boles et al., 2004). The evidence indicates that addressing psychosocial risks represents a competitive advantage, as the costs of ignoring workplace stress exceed intervention investments (Hassard et al., 2018; Biron et al., 2012).

The first relevant finding concerns the distinction between well-being disclosure and psychosocial risk disclosure. Company X reports employee well-being initiatives, engagement survey results and psychological support services. However, it does not clearly describe psychosocial risk as a material ESG issue. This distinction is important because well-being narratives may emphasize positive initiatives, whereas psychosocial risk disclosure requires the organization to identify sources of harm, preventive responsibilities and monitoring mechanisms.

The second finding concerns data fragmentation. Absenteeism, turnover, engagement and training indicators exist, but they are collected by different organizational functions and are not integrated into a common interpretive framework. Many companies have data, but the data are not designed to answer whether psychosocial risk is generating health, organizational or business impact.

The third finding concerns business impact. The company monitors absenteeism and turnover but does not measure presenteeism or stress-related economic cost. This weakens the possibility of quantifying business impact. However, the absence of cost estimates should not be interpreted only as a methodological deficiency. It may also reflect appropriate caution, because simplistic cost attribution could overstate causal links and individualize complex organizational problems.

The fourth finding concerns governance maturity. Company X has process-level mechanisms, including risk assessment, consultation, training and an action plan. Nevertheless, psychosocial risk is not included in ESG materiality analysis or board-level social-risk oversight. This supports a conservative maturity classification at Level 2, with partial Level 3 features. The company is not merely symbolic, but it is not yet strategically integrated.

From an occupational medicine perspective, the case supports the role of occupational health professionals in translating risk assessment findings into aggregate indicators and prevention priorities. This translation should preserve confidentiality and avoid individual-level profiling. From a business administration perspective, the case shows that psychosocial risks should be considered in human capital, risk management and ESG governance. From an organization studies perspective, the case confirms that stress is rooted in work design, leadership practices, staffing, communication and role clarity.

Research on estimating the economic costs of work-related stress and psychosocial risks has employed several methodological approaches. The predominant method is the cost-of-illness (COI) approach, which estimates societal-level economic burden from a top-down perspective (Hassard et al., 2018; Sultan-Taïeb et al., 2021). Studies have utilized the human capital approach combined with population attributable fraction (PAF) measures to calculate productivity losses due to stress-related absences (Russo et al., 2021). Cost components typically include direct healthcare costs (outpatient visits, hospitalizations, medications) and indirect costs from absenteeism, presenteeism, disability leave, early retirement, and premature death (Hassard et al., 2018; Sultan-Taïeb et al., 2021; Virgillito et al., 2026).

TABLE 8 Business-impact indicators and their connection to psychosocial risk.

Indicator	Available	Connected to psychosocial risk?	Disclosure quality	Main gap
Absenteeism	Yes	Weakly	Quantitative HR indicator	No diagnostic link with psychosocial risk assessment areas
Sickness absence days	Yes	Weakly	Quantitative HR indicator	No analysis by psychosocial determinant
Turnover/retention	Yes	Partially	Quantitative HR indicator	Not connected to workload, leadership or role-clarity findings
Engagement	Yes	Partially	Survey indicator	Limited trend and declining response rate
Productivity/performance	Partially	No	Generic narrative	No validated productivity-loss measure
Employer attractiveness	Partially	Weakly	Narrative ESG disclosure	No link to psychosocial prevention outcomes
Conflict/harassment reports	Yes	Partially	Aggregate count	Possible under-reporting; no severity classification
Presenteeism	Estimated	Partially	Conservative proxy estimate	Not routinely measured.
Economic cost	Estimated	Weakly	Exploratory cost proxy	No formal cost-estimation model; estimate based on presenteeism-equivalent lost days, potentially stress-related sickness absence and average daily labour cost

TABLE 9 Disclosure maturity assessment.

Level	Definition	Assessment for Company X
Level 0	No disclosure	Not applicable
Level 1	Generic well-being disclosure	Exceeded: well-being and OHS are disclosed
Level 2	Process disclosure	Achieved: risk assessment, participation and action planning are documented
Level 3	Outcome disclosure	Partially achieved: some indicators exist but are not clearly linked to psychosocial risk outcomes
Level 4	Integrated ESG disclosure	Not achieved: no materiality integration, board oversight or cost model

Research shows productivity-related losses constitute 70–90% of total costs, while healthcare expenses represent only 10–30% (Hassard et al., 2018; Shaholli et al., 2023). Cost estimates vary substantially across studies, ranging from US$221.13 million to $187 billion, due to different definitions of work-related stress and varying methodological approaches (Hassard et al., 2018).

Presenteeism, defined as attending work while ill or experiencing reduced productivity due to health issues, is commonly measured using various self-report questionnaires in occupational health research. Key measurement tools include the Job Stress-Related Presenteeism Scale (JSRPS), Work Limitations Questionnaire, Health and Work Questionnaire, and Work Ability Index (Mathieu and Gilbreath, 2022; Brown et al., 2014). These instruments typically assess work performance, physical tolerance, psychological well-being, and social functioning with recall periods ranging from 1 week to 1 year (Brown et al., 2014). Research consistently demonstrates strong associations between presenteeism and work-related stress factors. Workplace stress, including high job demands, low job control, effort-reward imbalance, and low social support, significantly predicts presenteeism (Callen et al., 2013; Klein, 2013; Janssens et al., 2015). Psychosocial risk factors such as workplace harassment, bullying, work-home conflict, and overcommitment show particularly robust relationships with presenteeism, often stronger than associations with absenteeism (Mathieu and Gilbreath, 2022; Klein, 2013; Janssens et al., 2015). Changes in psychological health risks demonstrate corresponding changes in productivity loss over time (Burton et al., 2006).

The methodological contribution of the article is the development of protocol that can be applied to a real organization. The protocol intentionally includes missing data, limited comparability, uneven survey participation and weak causal attribution. These features improve realism and make the framework more useful for empirical application.

At a broader level, the case shows that psychosocial risk represents a boundary object between occupational health, organizational theory and sustainability accounting. It is sufficiently clinical to require occupational health expertise, sufficiently organizational to require analysis of work design and managerial processes, and sufficiently economic to affect human capital, productivity, continuity and reputation (Schaufeli, 2017; Kivimäki and Kawachi, 2015). This hybrid nature explains why psychosocial risk is often fragmented across corporate functions: health and safety units treat it as a prevention requirement, human resources departments treat it as an engagement or retention issue, and sustainability functions translate it into broad well-being narratives. The proposed framework seeks to overcome this fragmentation by making psychosocial risk a shared governance object rather than a dispersed technical concern.

A further implication concerns the relationship between psychosocial risk management and workplace health promotion. The case suggests that well-being initiatives, psychological support and engagement activities may contribute to a healthier organizational environment, but they should not be interpreted as substitutes for primary prevention. Health promotion becomes credible when it is integrated with the identification and reduction of organizational risk factors, including excessive workload, low autonomy, unclear roles, poor communication and insufficient managerial support (Virgillito et al., 2025; Virgillito and Ledda, 2026a,b; Virgillito and Ledda, 2025). In this

TABLE 10 Application of the Stress-ESG Business Impact Framework to Company X.

Framework level	Evidence from Company X	Gap/Opportunity
Psychosocial determinants	Workload, work pace, shift constraints, travel pressure, leadership variability, role clarity	Strengthen primary prevention through workload planning and role redesign
Health and well-being outcomes	Generic well-being disclosure, psychological support uptake, engagement survey items	Add validated aggregate indicators on burnout, distress or work ability where ethically appropriate
Organizational performance	Absenteeism, sickness absence, turnover, engagement, near misses	Create an integrated psychosocial risk dashboard across HR, OHS and ESG functions
Business impact	Partial links to retention, employer attractiveness and operational continuity	Develop cautious estimates of presenteeism and indirect costs without individual profiling
ESG governance and disclosure	Well-being disclosed in sustainability report; stress documented in OHS materials	Include psychosocial risk in materiality assessment and board-level social-risk governance

TABLE 11 Stepwise operationalization of psychosocial risk within ESG dashboards.

Step	Operational action	Possible evidence/KPIs	Governance safeguard
1. Map determinants	Identify psychosocial determinants by area or job family	Workload, role clarity, autonomy, leadership support, conflict indicators	Use aggregate data; avoid individual profiling
2. Connect prevention processes	Link risk assessment to action plans and worker consultation	Participation rate, actions completed, managers trained, consultation minutes	Document worker involvement and follow-up responsibility
3. Build a joint dashboard	Combine HR, OHS and ESG indicators in a single interpretive view	Absenteeism, turnover, engagement, near misses, training, well-being uptake	Interpret indicators as signals, not diagnostic proof
4. Estimate business impact cautiously	Use validated or transparent proxies for productivity loss and indirect costs	Presenteeism score, sickness absence days, retention costs, operational continuity	State assumptions and uncertainty; avoid causal overclaiming
5. Report materiality and governance	Include psychosocial risk in ESG materiality when relevant to workforce impacts	Board/committee review, risk-register entry, targets, outcome monitoring	Report gaps and limitations alongside progress

sense, workplace health promotion should not be limited to individual lifestyle or resilience-oriented interventions, but should include organizational measures aimed at improving the quality of work, participation, fairness and the psychosocial safety climate.

Research demonstrates a significant relationship between workplace health promotion, psychosocial risk prevention, and organizational performance. Psychosocial risks, including high job demands, poor workplace relationships, lack of control, and workplace stressors like bullying, substantially impact both employee health and organizational outcomes (Biron et al., 2012; Živković and Veljković, 2025). These factors contribute to increased absenteeism, presenteeism, and healthcare utilization costs, making healthy workforces a competitive advantage (Biron et al., 2012; Bronkhorst and Vermeeren, 2016).

Effective psychosocial risk management strategies yield measurable benefits for organizational performance (Guadix et al., 2015). However, systematic reviews reveal limited but emerging evidence that psychosocial work factors and employee health predict production outcomes, with the clearest evidence relating to job strain and musculoskeletal pain (Karlsson et al., 2012). Organizational interventions focusing on mental health promotion, leadership support, and improved communication can reduce psychosocial risks (dos Santos, 2026). The psychosocial pathway, particularly through emotional exhaustion, significantly affects organizational health performance outcomes (Bronkhorst and Vermeeren, 2016).

This perspective is consistent with a broader preventive approach in which the workplace is considered not only a setting where health risks occur, but also a setting where health can be actively protected and promoted. Integrating health promotion into ESG governance may strengthen the social dimension of sustainability by linking worker well-being, organizational design and long-term value creation. However, health promotion should be reported with methodological transparency: organizations should specify the target population, participation rates, types of interventions, monitoring indicators and expected outcomes. Without this level of detail, health promotion risks remaining a generic narrative rather than a measurable component of social sustainability.

Work-related stress and psychosocial risks represent significant material concerns for organizations, with substantial financial and health implications that justify their inclusion in ESG reporting. These risks cost European organizations an estimated €20 billion annually in lost time and health bills, representing 3–4% of GNP (Leka and Cox, 2008). The costs extend beyond direct expenses to include absenteeism, presenteeism, reduced productivity, and high staff turnover, ultimately affecting national economies (Hassard et al., 2018).

Despite EU legislation requiring risk assessment, implementation remains inadequate across member states, with significant gaps between policy and practice (Iavicoli et al., 2011). However, countries with specific national legislation on psychosocial risks show improved organizational action plans and better psychosocial working conditions (Jain et al., 2022). The scope of psychosocial risks extends beyond traditional work-related stress to include emerging factors

such as job insecurity, work intensification, emotional demands, work-life balance issues, and workplace violence (Chirico, 2017), making comprehensive risk management essential for sustainable business operations.

This interpretation has implications for the credibility of ESG disclosure. Social sustainability cannot be assessed only through the presence of policies, training hours or well-being initiatives; it also depends on whether organizations are able to recognize and govern the work-related determinants of harm. The absence of perfect data should not prevent disclosure, but it should be made transparent. Reporting uncertainty, partial evidence, missing indicators and implementation gaps may be more credible than presenting an artificially coherent picture. In this sense, the value of the framework lies not in producing a definitive score, but in supporting a learning-oriented approach through which companies can progressively align occupational health evidence, organizational diagnosis and ESG accountability.

4.1 Theoretical implications

Theoretically, the study contributes by positioning psychosocial risk as a boundary object connecting occupational medicine, organizational studies and sustainability accounting. This framing helps explain why the issue is often fragmented: OHS units treat it as a risk-assessment requirement, HR units treat it as engagement or retention, and ESG units often translate it into broad well-being disclosure. The proposed framework advances the literature by specifying the constructs and governance mechanisms through which these domains can be integrated. The framework also extends ESG materiality thinking by showing that social topics can be material not only because they are associated with positive human-capital narratives, but also because unmanaged work organization may create negative workforce impacts and business risks. In this sense, psychosocial risk governance becomes a test of whether the social dimension of ESG is able to address determinants of harm, not only initiatives and benefits.

4.2 Integration with ESG reporting cycles and standards

The framework can be aligned with contemporary reporting architectures. Under the CSRD and ESRS, workforce-related impacts, risks and opportunities require attention to governance, materiality, policies, actions, targets and metrics. ESRS S1 addresses an undertaking's own workforce, while GRI 403 requires disclosure on occupational health and safety management systems, hazard identification, risk assessment, worker participation and training. GRI 3 supports the determination and management of material topics, and IFRS S1 emphasizes governance, strategy, risk management, and metrics and targets for sustainability-related risks and opportunities (International Sustainability Standards Board, 2023; Global Reporting Initiative, 2018; Global Reporting Initiative, 2021).

Operationally, psychosocial risk can enter the ESG cycle through five points: double-materiality assessment, risk-register inclusion, board or committee oversight, aggregate workforce dashboarding, and transparent disclosure of both actions and gaps. This does not require disclosure of individual health data. Instead, it requires a disciplined connection between organizational determinants, prevention responsibilities, aggregate outcomes and management accountability.

4.3 Practical implications

- Organizations should distinguish between generic well-being initiatives and psychosocial risk governance.
- Work-related stress assessment should be connected to HR, OHS and ESG dashboards at aggregate level.
- Absenteeism, turnover and engagement should be interpreted cautiously and triangulated with qualitative evidence.
- Presenteeism and indirect cost indicators may be useful, but only if developed ethically and without individual surveillance.
- Psychosocial risk should be considered in ESG materiality assessment when it is relevant to workforce impacts, operational continuity or human capital strategy.
- Board-level oversight should include social risks related to work organization, not only injury indicators or compliance metrics.

4.4 Limitations and future research

This study has limitations. First, it is a single-company case study and cannot support statistical generalization. Second, the analysis relies on aggregate documentary and organizational indicators; no individual-level clinical or survey microdata were used. Third, some business-impact estimates are exploratory proxies and should not be interpreted as causal or audited financial estimates. Fourth, survey participation was incomplete and uneven across areas, which may have introduced selection bias. Fifth, the case reflects the Italian regulatory and organizational context, and transferability to other jurisdictions requires adaptation.

Future research should apply the framework to multiple companies, sectors and countries; test the maturity model against external ESG reporting quality; compare organizations with different levels of worker participation; and validate aggregate indicators of presenteeism, work ability, psychological health and indirect costs. Longitudinal studies would be particularly useful to evaluate whether stronger psychosocial risk governance is associated with improved worker health, organizational performance and sustainability disclosure quality.

5 Conclusion

Work-related stress is a key issue at the intersection of occupational health, organizational functioning and ESG governance. It affects workers' mental and physical health and may also influence absenteeism, turnover, engagement, productivity, reputation and sustainable value creation.

This article proposed a single-company case study and a Stress-ESG Business Impact Framework for integrating psychosocial risk management into social sustainability governance. The revised framework makes explicit the constructs, pathways and operational steps needed to connect psychosocial determinants,

prevention actions, aggregate outcomes, business impact and ESG disclosure.

The central conclusion is that work-related stress should not be treated only as a compliance requirement or as a generic well-being topic. It should be considered a potentially material ESG issue and a strategic indicator of organizational health when it is relevant to workforce impacts, operational continuity and human-capital governance.

Meaningful ESG integration requires materiality analysis, primary prevention, aggregate outcome monitoring, participatory governance and transparent disclosure of both actions and gaps. The framework offers a practical route for organizations to progress from fragmented compliance to accountable, evidence-informed social sustainability reporting.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Author contributions

PC: Validation, Formal analysis, Writing – review & editing, Conceptualization. DV: Methodology, Formal analysis, Supervision, Writing – review & editing. CL: Formal analysis, Writing – original draft, Conceptualization, Validation.

Funding

The author(s) declared that financial support was not received for this work and/or its publication.

Acknowledgments

The authors acknowledge the University of Catania's Master of II level "Strategie di Organizzazione e Gestione Innovativa in Sanità (SOGIS)" for supporting this work through dedicated organizational.

Conflict of interest

The author(s) declared that this work was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The author CL declared that they were an editorial board member of Frontiers, at the time of submission. This had no impact on the peer review process and the final decision.

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