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Technical Report · July 2024

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Is it cost-effective to prevent workplace sexual harassment?

Analysis of the Konecta Peru 2023 case

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Lima, August 2024

Content

Summary

Implementing measures to prevent and address workplace sexual harassment (WSH) has become an increasingly common practice in the contemporary business landscape. To provide evidence on the cost-effectiveness of prevention, this research compares the effectiveness of preventive actions of Konecta Peru, a leading company in WSH prevention, with a control group of non-equivalent companies adjusted by linear modeling.

The sample included 608 female workers from Konecta, Peru, selected probabilistically from a total population of 12,191 workers, with a 3.5% margin of error. Of these, 386 workers were from Lima (63.5%) and 222 from the north of the country (36.5%). For the control group, 1,086 female workers from equivalent companies were included, of which 683 were from Lima (62.9%) and 403 from the north of the country (37.1%). A structured survey based on constructs was used, with high levels of reliability and validity. The costing calculations follow the international methodology of Duvvury, Vara-Horna, and Chadha (2022). The cost-effectiveness of prevention is calculated through ROI on a cost-opportunity basis.

The results reveal that Konecta Peru achieved a 21.2% reduction in the prevalence of HSL and an 11.6% decrease in projected costs in lost days. In absolute terms, this represents for Konecta a decrease of 967 days of lost labor productivity, equivalent to the annual productivity of 3.4 full-time female workers or an aggregate value of PEN 103,285 soles per year. In terms of savings (cost-opportunity), this means a recovery of PEN 27,815.4 soles. In addition, it is estimated that between PEN 22,887 and 28,419 soles will be saved annually regarding personnel turnover by preventing between 13.5 and 16.8 women from leaving the company due to harassment.

The ROI calculation shows positive results (between 12.33% and 24.58%) for an investment of 45,137 soles in 2023. This means that, for each sol invested, between 1.12 and 1.24 soles are recovered, thus confirming the profitability of the investment and the positive impact of the company's policies.

To favor the sustainability of prevention, it is recommended that companies adopt policies against WSH that include continuous monitoring mechanisms and the establishment of baselines. This will allow for measuring their impact and provide rigorous evidence of their effectiveness and cost-effectiveness.

Key words. Costs, workplace sexual harassment, productivity, companies, prevention, profitability.

I. Introduction

1.1. Problem

Globally, countries are implementing specific policies and legislation to address sexual harassment in the workplace (WSH). Peru follows this trend, creating legal frameworks that oblige companies to take preventive measures. In this context, many Peruvian companies are adopting various activities to prevent and address WSH, either out of legal obligation or self-interest. However, companies are looking for evidence not only on these actions' effectiveness but also on their potential profitability.

WSH prevention is an ethical imperative and a critical factor for organizations' performance and sustainability. Evaluating programs' preventive effectiveness is essential to continuously improving them, but it is also crucial to analyze their cost-effectiveness to manage the sustainable disposition of resources. Previous studies (Vara-Horna, 2023, 2024) show that WSH generates significant costs for Peruvian companies, suggesting that effective prevention can considerably reduce these costs.

However, there is a paucity of evidence on the cost-effectiveness of preventive actions. A significant limitation in preventing workplace violence and harassment is the lack of comprehensive and systematic cost-benefit analysis studies (McGregor et al., 2019). These studies are essential to understanding the relationship between investment in preventive measures and their tangible and intangible benefits. The absence of this type of research represents a knowledge gap that could effectively inform policy decisions and corporate strategies to combat these problems. Without solid cost-benefit studies, companies may be reluctant to invest in preventive programs due to uncertainty about the return on investment. In addition, policymakers need more complete data to promote legislation requiring or incentivizing such investments.

In addition to this lack of evidence, there are severe methodological shortcomings. Currently, the optimal conditions do not exist for an accurate measurement of the effectiveness and cost-effectiveness of prevention. One of the main methodological shortcomings is that companies often do not measure the changes and impacts of their prevention actions. Without baselines and control groups, many valuable experiences of sustained prevention work are not adequately assessed. This not only prevents a complete understanding of the financial and social impact of harassment but also makes it difficult to defend the allocation of significant resources to prevention initiatives despite anecdotal and qualitative evidence suggesting positive long-term results.

To overcome these deficiencies, we use an indirect method that allows the creation of an equivalent control group composed of companies that do not explicitly implement prevention actions, or that only comply with the minimum standards

required by law to prevent WSH. These companies are compared with those with effective prevention policies and programs, thus providing initial evidence on the effectiveness and cost-effectiveness of these actions.

In this research, we conducted a comparative case-control study using the experience of Konecta Peru as a case study. For more than six years, Konecta Peru has consistently strengthened its management model to prevent WSH and all types of gender-based violence among its workers (see Annex 1). To evaluate the impact of these preventive measures, we compare their results with those of a control group of non-equivalent companies, adjusting for differences related to demographic and organizational variables. This allows us to determine changes in the prevalence of WSH and to evaluate the reduction of costs associated with labor productivity.

1.2. Objectives

1. Determine the impact of the preventive program in reducing the prevalence of sexual harassment in the workplace (WSH): Evaluate how the measures implemented by Konecta Peru have influenced the reduction of WSH cases among workers, comparing the results with those of a control group of companies that do not apply such measures.

2. Determine whether the preventive program has reduced labor productivity costs caused by WSH: Analyze the relationship between the implementation of the preventive program and the decrease in costs associated with the loss of labor productivity caused by WSH.

3. Determine if the preventive program has reduced personnel turnover costs: Investigate whether the program's application has reduced personnel turnover, evaluating the economic savings derived from reducing the need to hire and train new personnel.

4. Determine the return on investment (ROI) of the WSH preventive program: Calculate the ROI by considering productivity cost savings, reduced staff turnover, and other economic benefits.

1.3. Impact

This research seeks to fill a critical gap in the existing literature on WSH prevention and serve as a practical tool for companies and policymakers seeking to implement and promote safe and equitable work environments. Reducing the prevalence of WSH and associated costs to labor productivity can translate into a safer and more productive work environment, increased employee satisfaction and retention, and improved corporate reputation. In addition, these findings may encourage other companies to adopt similar policies, promoting a positive change in organizational culture and eradicating WSH in the workplace.

The results of this research have the potential to significantly impact the business environment. By demonstrating the effectiveness of WSH prevention policies, companies can justify investment in these measures, not only from an ethical perspective but also from a financial perspective. By providing a detailed cost-benefit analysis, we aim to migrate the motivation for WSH prevention from a philanthropic to a strategic position, ensuring that prevention becomes embedded as a regular business practice and is not solely subject to personal designs. This transition is crucial to ensure the long-term sustainability and effectiveness of preventive initiatives, making WSH prevention an essential component of corporate strategy.

II. Theoretical Framework

2.1. WSH, definition, costs and remaining challenges

Workplace sexual harassment (WSH) is a specific and subtle form of gender-based violence that manifests itself in the work environment through unwanted sexual conduct or comments of a sexual or sexist nature that are offensive, intimidating or humiliating to the person on the receiving end (Vara-Horna et al., 2024). This type of harassment includes a wide range of behaviors, from sexual advances, unwanted propositions, and demeaning sexist comments related to gender to unsolicited physical advances.

Fitzgerald's model defines WSH with three main dimensions: sexual coercion, gender harassment and unwanted sexual attention (Fitzgerald et al., 1995): 1. **Sexual coercion** involves situations in which job benefits are conditioned on the acceptance of sexual behaviors, where refusal to accept such advances can lead to negative consequences for the victim in terms of her professional development, such as loss of promotions, dismissal or assignment to unwanted tasks. 2. **Unwanted sexual attention** includes any form of non-consensual physical contact, from inappropriate touching to more aggressive attempts at physical contact. This type of harassment is remarkably intrusive and can have severe psychological and emotional effects on victims. **Gender-based harassment** refers to behaviors that reinforce gender stereotypes and traditional roles, including sexist comments, offensive jokes, or any behavior that devalues a person based on their gender. This type of harassment does not always involve a direct sexual motivation but creates a hostile and demeaning work environment for the victims. Taken together, these dimensions underscore the multifaceted nature of WSH and the need to address how it can manifest itself to create a safe and respectful work environment.

WSH is a global problem with widespread prevalence among countries and regions (ILO, 2022). In Latin America, and specifically in Peru, 1 in 3 private sector workers have been sexually harassed in the last twelve months, increasing to 2 in 4 in companies in the southern regions of the country (Vara-Horna et al., 2024).

Workplace sexual harassment (WSH) represents a serious concern for companies, not only because of the ethical and legal implications but also because of its impact on productivity and costs. In addition to the pernicious impact on women's well-being (Willness et al., 2007), WSH represents a significant cost to business productivity. These costs include litigation, severance pay, losses due to worker abandonment, and decreased productivity (Cici et al., 2021). Globally, studies have estimated significant economic losses due to WSH, such as in Cambodia, where US$89 million is lost annually (CARE International, 2017), and in Australia, with losses of $2.6 billion (Deloitte Access Economics, 2019). In Peru, WSH can decrease labor productivity by up to 43.1% and increase counterproductive behaviors by 39.6% (Vara-Horna et al., 2023). Recent studies have also assessed

the impact of sexual harassment in the workplace on reputation through the business value of the firm (Au et al., 2023; Borelli-Kjaer et al., 2021) or investments (Bouzzine & Lueg, 2022).

The recent research "Between discourse and facts: Unveiling the invisible costs of workplace sexual harassment in Peru" (Vara-Horna et al., 2024) reveals a direct relationship between WSH and its impact on productivity and work well-being, especially in the South, where higher indirect repercussions such as tardiness and absenteeism are reported. The results also suggest a correlation between WSH and attrition intention and increased counterproductive behaviors. Absenteeism increases on average by 40.6%, mainly affecting the Northern Region with 46.2%; tardiness increases by an overall average of 96.7%, reaching up to 135.4% in the Southern Region; critical work incidents rise by 153.0% on average, being more prevalent in the Northern Region with 178.1%. In addition, presenteeism has an average additional cost of 78.4%, with the lowest incidence in Lima (71.4%). Counterproductive behaviors vary among regions, with an average of 16.4%, and the Southern Region stands out at 27.6%. Attrition intention shows an average additional cost of 38.0%, with the Southern Region reporting the highest percentage (38.6%).

In Peru, Law No. 27942, Law against Sexual Harassment, obliges companies to implement clear policies to prevent and sanction sexual harassment in the workplace (WSH). These obligations include creating an internal policy known to all employees, providing ongoing training programs on the identification and management of WSH, and establishing a protocol for receiving, investigating, and resolving complaints promptly and confidentially. Companies should ensure confidentiality and protection against retaliation for victims and witnesses, establish accessible reporting channels, conduct impartial investigations, and apply appropriate disciplinary sanctions. In addition, they should form specialized committees to handle WSH cases and ensure that supervisors act proactively to prevent and respond to WSH allegations.

Following the guidelines of Convention 190 and Recommendation 206 of the International Labor Organization (ILO), measuring the prevalence and costs of WSH and all types of gender-based violence is crucial to understanding their scope and impact and formulating effective policies to promote safe and respectful work environments. Peru has ratified this convention, assuming obligations that include implementing legislative and administrative measures to prevent and combat WSH.

Even though many managements express an apparent commitment towards preventing WSH and promoting gender equality, the persistence of implicit and explicit resistance demonstrates a significant gap between corporate discourse and actual practice (Vara-Horna et al., 2023). This underscores the need for more comprehensive and committed approaches to overcome the challenges associated with WSH and promote a workplace culture of respect and safety. There are unconscious biases in prevention that limit its effectiveness, often leading to the

implementation of superficial or non-structural actions that do not address the underlying causes of WSH (Vara-Horna et al., 2024b). Therefore, it is crucial that companies not only formulate preventive policies but also ensure their rigorous and effective implementation, focusing on changing organizational and cultural structures that perpetuate harassment and discrimination.

2.2. Cost dynamics during WSH prevention

Profitability, in a business context, is the ability of an investment to generate economic benefits more than initial costs. It is necessary to evaluate any initiative's efficiency and financial success.

Costs can be direct or indirect: 1. Direct costs are those that relate to a specific activity or project that generates expenditures. Indirect costs are usually hidden costs, including non-obvious costs such as lost productivity, absenteeism, forced turnover, and psychological costs to victims and witnesses of WSH.

Companies' response to WSH is a direct cost because it involves allocating money to address the organizational consequences of WSH, such as avoiding fines or complying with the law and proactively implementing prevention programs. These direct costs can be an investment to the extent that they translate into a reduction in indirect costs. They can be profitable when the cost reduction, over time, is greater than the initial investment. However, if companies see WSH prevention as a mere legal obligation, they can hardly make it profitable. On the contrary, a proactive vision is required to prevent WSH from occurring. This implies a structural strengthening of the equitable culture in the organization and a deep understanding of the cost-benefit dynamics of prevention.

There are many knowledge gaps and unrealistic expectations about the results of prevention programs, which can affect their sustainability. False expectations can cause companies to abandon programs because they do not see "concrete results" quickly. As with any investment, it is necessary to have a projection in time and of the magnitude of the risks:

1. First, there is a tendency to think that WSH is reduced to isolated cases that do not require strategic attention; however, it is very prevalent; at least 1 in 3 female workers may be harassed within each company. Moreover, the costs caused by WSH are often invisible, not monetized, and if not accurately identified and accounted for, may be underestimated.
2. Second, the direct cost of prevention programs, which must be intensive and sustained over time to produce significant changes, is underestimated since WSH is a resilient problem. A simple campaign or training cannot eliminate it from one year to the next.
3. Thirdly, reducing these costs is not linear; there are usually cost transactions, mobilities between categories, and increases in some areas that must be understood, as they are an expected part of this process.

This section explores the cost and cost-effectiveness dynamics of WSH prevention to provide a comprehensive view of how preventive interventions can positively and negatively affect labor costs and profitability. Understanding these dynamics can clarify what to expect when deploying prevention programs, allowing companies to set realistic expectations and optimize their investment.

2.2.1. Delimiting the cost approach

The costs associated with WSH can come from various sources and present themselves in different forms, each with different implications for the organization.

There are three primary sources of costs:

- Victims. Sexual harassment affects the well-being and productive capacity of the harassed women, which ends up impacting the organization through loss of productivity, absenteeism, staff turnover and resources needed for recovery.
- Perpetrators. Although less discussed, the costs associated with perpetrators include the resources invested in disciplinary, legal and rehabilitation processes and the impact on the company's reputation and legitimacy. These costs can be significant, especially involving legal action and sanctions.
- Witnessing staff. Colleagues who witness sexual harassment also generate significant costs due to the time and resources they devote to supporting victims. While necessary and valuable, this support can affect witnesses' ability to perform their tasks efficiently.

Nature of costs:

- Tangibles. Tangible costs, such as productivity losses, psychological care expenses, and legal fines, can be directly quantified and monetized. These costs are visible and can be recorded in the company's financial statements.
- Intangibles. Intangible costs include the impact on staff morale, decreased organizational cohesion and commitment, and damage to the company's reputation. Although they cannot always be monetized, these costs are necessary to understand the full impact of WSH on the organization.

Types of costs:

- Loss of productivity. The main consequence of WSH is decreased labor productivity, which can manifest in absenteeism, lower performance, and higher turnover. This cost type is tangible and can be quantified through various performance metrics.
- Fines and penalties. Companies may face fines and legal penalties for failing to comply with sexual harassment regulations, which increases direct financial costs. These costs are a direct consequence of the lack of adequate preventive measures.
- A budget has been allocated to address the problem. Implementing prevention programs and managing WSH cases require a significant investment in training, psychological support, and legal advice. Although

direct, this type of cost is essential to creating a safe and respectful work environment.

This section focuses specifically on analyzing the dynamics of tangible productivity costs derived from victims and witnesses.

2.2.2. Understanding the change process

To understand the dynamics of the business costs of sexual harassment, the process of change and the intermediate variables affected by harassment must be analyzed. WSH does not directly cause costs; many intermediate variables are affected first, then translated into costs. Depending on what those variables are, there are three key routes:

- **Capacity Pathway**. WSH affects workers' mental health and well-being, decreasing their productive capacity and work efficiency. Variables such as presenteeism, absenteeism, and critical incidents are increased. Normally, these costs are tangible, as they can be quantified through various procedures that account for work time lost due to harassment.

- **Justice Route.** Organizational Justice theory suggests that when personnel perceive injustices, their motivation and commitment decrease, which increases counterproductive behaviors such as the intention to quit or sabotage the job. This insubordination and "silent resignation" is often invisible, becoming evident when critical incidents or job abandonment have occurred. WSH damages relationships of respect and dignity within the organization, affecting the perception of organizational justice, so a significant association between these two variables is expected. These costs are normally intangible and can be identified and valued but not directly monetized.

- **Climate Pathway.** WSH severely damages the organizational climate, as this phenomenon isolates victims, involves and affects witnesses, compromises the reputation and legitimacy of harassers in command positions, and challenges the organization's ability to protect and respond appropriately. Social Capital theory suggests that a deteriorated organizational climate diminishes cohesion and trust, translating into significant production costs and decreased efficiency. Indeed, cooperation, trust and civility are severely affected when staff are aware of these incidents, sometimes experience vicarious trauma (they are affected by the suffering of others) or are conflicted by having the perpetrators as colleagues or supervisors. These impacts erode the organization's social capital, weakening support networks and solidarity among staff. Moreover, although the costs associated with a deteriorated organizational climate may not be directly tangible, its impact is profound. It manifests itself in various forms, such as reduced efficiency, decreased commitment and collective morale.

2.2.3. Base costing model

Cost studies are based on some essential probabilistic assumptions: A1. A substantial percentage of women workers suffer harassment. A2. A percentage of them (not all) suffer harm or harmful effects from harassment. A3. A substantial proportion of these harms or effects result in quantifiable costs. These assumptions condition a basic formula commonly used in economic impact studies and cost analysis (Vara-Horna, n.d.).

Step one. Starting with prevalence is critical because it provides a basis for estimating the magnitude of the problem. Accurate prevalence estimates are crucial and must be based on reliable and up-to-date data. If prevalence is based on the number of reported cases, it underestimates its true magnitude. In the case of bullying, many factors make disclosure difficult, from cultural factors that justify it and make it invisible to organizational barriers that limit reporting. The anonymous and specialized survey is the most effective way to obtain a value close to the real prevalence in the working world. It must meet all ethical requirements and measure violence and harassment using a comprehensive list of operationalized behaviors.

Step two. It is essential to recognize that not all harassed women suffer harmful consequences to the same extent. Therefore, identifying the proportion affected is critical to understanding the real impact. This is usually done in two ways: either by directly asking the person to report the harmful consequences of harassment (direct method) or by comparing the group of harassed female workers with a harassment-free control group (comparative method). This second method is more convenient for estimating other pernicious effects of harassment outside the worker's knowledge.

The validity and reliability of these methods depend on the strength of the underlying assumptions and the consistency of the data used. The direct and comparative methods have inherent limitations, particularly regarding causal inference. In the direct method, reliance on self-reporting raises doubts about the accuracy of recollections and subjective interpretation of events, leading to underestimation or overestimation of impact. On the other hand, the comparative method must contend with attributing observed differences between the affected and control groups specifically to bullying, isolating the effect of confounding variables that were not adequately controlled for or accounted for.

To increase the robustness of these measures, strict methodological controls must be employed. This includes using validated instruments for direct reporting that minimize recall bias and subjective interpretation and rigorous statistical controls in comparative analyses to isolate the effect of harassment from other influential factors.

The **third step** is to measure the adverse effects of lost productive days, monetary costs or any other quantitative indicator representing the average value per person affected. From this step, the average value lost per individual can be calculated, which will serve as a basis for global imputations (Walker and Duvvury, 2016; Williams, 2014). At the end, an estimate of the total economic cost is obtained by multiplying the number of cases affected by the average cost per case (Krol & Brouwer, 2014).

2.2.4. Preventing WSH increases organizational efficiency

The X-Efficiency theory (Leibenstein, 1966) suggests that organizations do not always operate at maximum efficiency due to internal factors, such as staff behavior or human resource management. WSH is a factor related to staff behavior that impairs the internal efficiency of an organization. Sexual harassment generates involuntary production costs, also known as opportunity costs, which negatively affect labor productivity. Following the Resources and Demands theory (Bakker and Demerouti, 2017), workers' valuable personal resources, such as energy, time, and attention, can be overburdened by harassment, leading to a deterioration in their work performance.

Implementing prevention policies can significantly improve internal efficiency by creating a more productive work environment. By reducing harassment, companies can free up valuable resources and improve the efficiency of their workforce, ultimately contributing to improved profitability and sustainability.

However, costs are only a basic indicator of productive loss; the implications are much greater and are oriented to the entire system's efficiency. As seen in the previous section, WSH impacts beyond the direct victims, also affecting the work environment (climate route) and the perception of fairness among personnel (justice route).

In the first case, the existence of sexual harassment in an organization can lead to a climate of fear and distrust, where staff feel insecure and demotivated. Staff witnessing WSH also experience a significant impact, devoting time and resources to support victims, which can diminish their own productivity.

In the second case, WSH damages the internal reputation and legitimacy of the organization. Sexual harassment is an attack on organizational justice. Its presence within the company is evidence of an abuse of power that violates women's fundamental human rights. This situation reflects a “macho society” that has permeated the organizational culture, violating the internal values of respect and justice. Because WSH often occurs invisibly in the eyes of the organization, it can create the false perception that the company does not care about its workers and tolerates such acts. This is dangerous because it destroys the relationship of trust and legitimacy between the company and its staff.

From the above, WSH costs indicate system inefficiency, but represent only the tip of the iceberg of a series of non-tangible costs, including internal reputation, legitimacy, occupational safety and organizational values. Addressing WSH not only improves productivity, but also the efficiency of the entire organizational system by strengthening cohesion, fairness and trust within the organization.

2.2.5. Decrease the prevalence and incidence of WSH to reduce costs

To reduce the costs caused by workplace sexual harassment, it is essential to reduce both its prevalence and intensity. Both indicators are important: prevalence refers to the number of women sexually harassed during a year, while intensity (incidence) indicates the number of cumulative incidents they have experienced in that year.

Normally, in a company, serious and costly cases of sexual harassment are a minority, while most cases are of lesser intensity and have lower costs at the individual level. It should be noted that this polarity can distort the company's perception of the problem. Indeed, few serious cases of WSH, which are usually detected in complaints, make the problem seem too complex to solve, giving the false impression that WSH only exists when it is critical (e.g., sexual coercion) and not when it is an indicator of gender harassment or unwanted sexual attention.

Most cases of WSH are not so obvious, are often underestimated by both perpetrators and victims and yet significantly affect productivity. In addition, WSH, in its milder forms, can act as a "gateway" to more serious behavior if not properly addressed. Failure to act against less severe incidents can normalize inappropriate behavior and perpetuate a culture of impunity, leading to higher prevalence and more serious incidents in the future.

Evidence shows that while sexual coercion causes high productive costs, other forms of WSH, such as unwanted sexual proximity and gender-based harassment, also generate significant costs. Individual costs should not be confused with costs at the aggregate level. Although the costs of severe cases are higher at the individual level, the cumulative costs of "mild" cases may be higher at the organizational level due to their higher prevalence.

From the above, for cost reduction to be effective, it is essential that prevention strategies address both the prevalence and intensity of WSH. Reducing the prevalence means reducing the total number of women who are sexually harassed by creating a work environment where such behaviors are less common. Reducing the intensity of WSH means reducing the severity and frequency of sexual harassment incidents over time.

2.2.6. WSH witness personnel also have indirect costs.

Staff who witness WSH also bear significant indirect costs. By committing time and resources to support their harassed colleagues, witnessing staff experience a

decrease in their own productivity. This time and resources voluntarily allocated to support harassed colleagues are part of the social capital that organizations aspire to develop. However, not only do bystanders devote time to support, but they can also be affected emotionally, with collateral damage resulting in involuntary loss of productivity.

Specifically, WSH can produce two types of indirect costs on witness personnel:

- **Voluntarily dedicated time and resources.** Witnesses dedicate time and effort to support their harassed colleagues, which expresses positive social capital. This type of cost, although it temporarily reduces individual productivity, reflects a transfer of well-being within the organization and should be adequately promoted and managed by prevention programs.
- **Lost time and capacity due to collateral damage**. The emotional impact, such as vicarious trauma, worry, fear, and anxiety resulting from witnessing harassment, can lead to an unintended decrease in productivity. This cost is a harmful consequence and represents a transfer of distress that must be controlled and avoided.

The first type of cost, which involves voluntary support and solidarity, should be encouraged within a structured framework of prevention programs, as it strengthens social capital and improves the organizational climate. This type of intervention, known as "Bystander/Upstander", seeks to create awareness in the staff to identify cases of WSH, and effectively support with referrals according to the company's procedures and routes of action. Therefore, witness costs are expected to increase once prevention is initiated.

On the other hand, the second type of cost, which results from the negative psychological impact, must be mitigated through specific interventions that protect and support the bystander, preventing the WSH from creating a toxic work environment. If this type of cost increases even after prevention has been initiated, it is very likely that the program will require a design adjustment, as it would be transferring the costs from the victims to the witnesses.

2.2.7. Do not confuse cost reduction with cost shifting

It is important to understand that costs associated with WSH prevention may be shifted between different areas rather than eliminated. The initial investment in prevention programs may migrate costs from one category to another, but not necessarily reduce them immediately. Ignoring this may exaggerate return expectations, putting the sustainability of prevention at risk.

For example, as mentioned previously, increasing awareness of the WSH problem may encourage staff who witness these incidents to become more active and willing to provide support to victims. While this positive response strengthens social capital and fosters a more supportive work environment, it may also increase indirect costs. Witnesses may devote more time and resources to supporting their

colleagues, which can affect their own productivity and generate additional costs for the organization.

In the same vein, harassed women may also become more critical and demanding of the company's performance, recognizing more incidences and impacts of harassment, which may increase individual costs. This increased awareness and demand for justice may increase individual costs related to case management, psychological support, and legal action. Indeed, the expectations created by the prevention program may increase the demand for justice from many women with chronic harassment experience, feeling that the company is not living up to its "promise" of zero tolerance, conditioning the emergence of counterproductive behaviors, such as sabotage or silent resignation.

While reflecting progress in identifying and addressing the problem, all these costs also represent a transfer of costs rather than an immediate reduction, making it appear that the program has been ineffective in the final balance. However, cost transfer is a normal phenomenon in the process of change: if these costs can be understood within the path or model of change, they are indications of the positive impact of prevention, even though, on the bottom line, the impact may appear to be nil.

2.2.8. Individual costs can be increased

Usually, the calculation of WSH costs is based on the average difference in productivity between harassed and non-harassed workers. This difference is significantly higher when comparing severe WSH cases with mild cases. Severe cases of WSH involve a greater loss of productivity due to the harm suffered by the victims. This translates into increased absenteeism, lower work performance and a greater need for additional support and resources to recover and manage these cases. As a result, companies with more severe cases will have a higher individual productivity cost, compared to those companies with more minor cases.

In this context, it is often the case that the first years of implementing preventive programs achieve a reduction -mainly- of the less severe cases of WSH; however, the most severe cases tend to persist. As a result, although the number of WSH cases decreases, the average cost per case may increase, as the remaining cases are the most severe and costly. It is not that the damages have become more intense and costly after implementing prevention, but rather - as the less severe cases decrease - the average cost is realized primarily with the more intense cases, so it gives the appearance of being more costly.

WSH does not occur uniformly among all female workers. There are varying levels and intensities of WSH severity and different probabilities of causing harm. Therefore, not only prevalence, but also incidence should be measured. When a preventive program is implemented, it is usual that the less severe and intense cases decrease first, while the more severe cases persist. Indeed, training and awareness-raising can persuade low-intensity bullies to change their behavior. In addition,

these initiatives increase awareness of the problem among female workers, facilitating its identification and elimination in less severe cases. However, the most intense cases of WSH are often linked to strong power relations between harassers and victims, having implications beyond the awareness and willingness of the parties involved. These imbalances can make it difficult to report and resolve the harassment. In addition, severe cases of WSH can cause profound psychological and emotional damage, requiring more intensive and prolonged interventions, such as psychological support and legal counseling. Finally, as the organization becomes more aware of and sensitive to WSH, more attention is likely to be paid to severe cases, which may increase the resources devoted to their resolution. For this reason, these cases may linger longer, requiring more in-depth and sustained interventions to be addressed.

2.2.9. Periodic evaluation makes the progressive decrease of WSH visible.

Although individual costs may increase initially, the progressive decrease in WSH cases will lead to a cumulative recovery of lost productivity over time. Therefore, the cost-effectiveness of prevention must be evaluated over time, as a function of the rate of change (reduction in WSH occurring year to year). This implies that preventive programs must include a direct cost of continuous evaluation. In this context, better prevention also requires evaluation.

The theory of Quality Costs explains that a strategic increase in prevention and assessment costs can significantly reduce failure costs, which are all those costs caused by WSH. Prevention costs include investment in training programs, awareness policies and support systems. Evaluation costs refer to monitoring and auditing efforts to ensure compliance with prevention policies. On the other hand, failure costs include productivity losses, absenteeism, staff turnover and legal costs associated with WSH cases. By investing in prevention and assessment, companies can minimize these failure costs.

Continuously measuring the prevalence, impacts and costs of WSH is crucial to identify opportunities for investment efficiency and continuous improvement of the preventive program. It is not enough to measure changes in prevalence; the incidence and individual impacts on productivity must also be measured.

Progressive costing helps to understand program efficiency and encourages program improvement. Ongoing evaluation allows companies to adjust their prevention strategies, identify areas for improvement and ensure that resources are used effectively.

In addition, ongoing evaluation provides valuable data to justify the investment in prevention programs to senior management and other stakeholders. By demonstrating that the reduction in failure costs outweighs the investment in prevention and evaluation, the case for these programs is strengthened. It also facilitates the identification of trends and patterns that can inform future strategic decisions, enabling more proactive and effective WSH management.

2.2.10. Keeping the focus on the long-term

Sexual harassment in the workplace is a profound manifestation of discrimination and gender-based violence, rooted in organizational structures and resistant to suppression. Beyond expecting immediate changes, adopting a perspective of patience and consistency in addressing this problem is essential. In this context, it is prudent to be wary of sudden changes and focus on long-term trends to assess the effectiveness of interventions.

There are many reasons for this caution:

1. First, changes can take many forms: There may be a decrease in WSH incidents while prevalence is maintained (no reduction in the number of women harassed, but a reduction in the number of harassment incidents). There may also be a reduction in some indicators of WSH, such as gender harassment or unwanted sexual contact, while indicators of sexual coercion may remain constant. Along the same lines, some indicators may vary within each dimension, while others do not show significant changes.

2. Second, it is essential to recognize that reducing WSH incidents will not necessarily translate immediately into reduced costs. This is because the previous harm caused by WSH may require time to fade. Also, the effects of WSH may decrease on some intermediate variables, such as employee morale and motivation, but not necessarily on the overall costs associated with productivity and organizational performance.

3. Third, resistance to change in the context of WSH can be exacerbated by the phenomenon known as "Gender Backlash," where efforts to promote gender equality and prevent WSH can face active or passive resistance (Vara-Horna et al., 2023). Indeed, WSH is often hidden in the exercise of patriarchal tacit power, a form of sexist discrimination that objectifies and devalues women in everyday work practices and is "backed" by **inequitable microcosms** within the organization. Even in companies with equality policies, these microcosms can persist and perpetuate discriminatory and abusive practices. Therefore, to effectively address WSH and its roots, it is essential to strengthen **equitable management** competencies throughout the hierarchical structure of the entire organization (Vara-Horna et al, 2023b, 2023c). This involves identifying and sanctioning perpetrators and addressing the tolerance for perpetration that may exist at various levels of the organizational hierarchy. Training and sensitization of all levels of the organization on gender equity and WSH prevention are crucial to creating a truly inclusive and safe environment.

   These **organizational microcosms**, rooted in social and cultural patterns of discrimination and gender-based violence, perpetuate a toxic work environment that tolerates and fosters WSH. In these environments, abusive and exclusionary practices are not only common, but are often justified or overlooked due to deeply internalized norms and attitudes. Women workers in

> these contexts face a double burden: not only must they deal with the harassment itself, but also with an organizational structure that does not adequately protect them and that, in many cases, may even aggravate their situation.

In inequitable microcosms, WSH may be viewed as acceptable or usual behavior, minimizing its severity and blaming victims rather than perpetrators. The absence of clear policies and rigorous enforcement allows bullies to continue their behavior without fear of significant consequences. Unbalanced power dynamics, where hierarchical superiors exercise disproportionate control over their subordinates, facilitate abuse and exploitation, making it difficult for victims to report harassment without fear of retaliation. In this context, women witnesses may feel unable to intervene or may choose not to do so, either for fear of reprisals or because of a culture of silence that discourages the reporting of such conduct.

Transformation towards equitable management is essential to addressing these structural causes. Equitable management involves assessing and promoting fair, respectful, open, and inclusive behaviors by immediate senior managers (Vara-Horna et al., 2015, 2023). By implementing equitable management, companies can dismantle the toxic microcosms perpetuating WSH. However, as a structural change, it requires sustaining prevention over time.

Thus, the effectiveness of WSH interventions must be evaluated over the long term, understanding that cultural and structural changes require time and persistence. A continuous and holistic approach is needed that focuses not only on policies and procedures but also on transforming attitudes and behaviors throughout the organization.

III. Methodology

The effort to estimate the costs of sexual harassment in the world of work represents a scientific discipline that is still in its early stages. Advances in the field have increasingly focused on a combination of econometric and accounting methods tailored to address various cost categories and various types of violence and harassment. As the field evolves, researchers and practitioners are navigating a landscape in which the choice of a model for overall cost estimation is more of a strategic and practical decision than a strictly methodological one. This process involves balancing methodological rigor with practical applicability, ensuring that the chosen approach can be adapted to the diverse realities of work environments (Vara-Horna, n/d). And this study is no exception.

3.1. Design

In an ideal context, determining the cost-effectiveness of prevention consists of comparing the investment made in the program with the improvements in labor productivity. The improvements must exceed the investment to say that prevention is cost-effective. Demonstrating that the prevention program has been effective in reducing or eliminating sexual harassment in the workplace. This reduction has translated into improved productivity and associated cost savings.

In the first challenge, the preventive program must be well designed (ad hoc) to be expected to decrease WSH. This implies that the programmed activities target the central causes of bullying and are sustained over time. Indeed, international evidence shows that interventions that are evidence-based, intensive, continuous, focused on structural causes, and with a change model behind them tend to be more effective in decreasing gender-based violence (Jewkes et al., 2021). Meanwhile, sporadic, non-structural, disjointed activities without a conceptual model do not produce significant changes.

Measuring this effect implies measuring the changes in both WSH levels and their consequences over time. This implies at least a baseline to serve as a point of comparison before and after and the presence of a control group to isolate any extraneous variables unrelated to the intervention. In that sense, comparing two randomized groups allows any significant differences observed post-intervention to be attributed to the independent variable (in this case, WSH prevention). However, in daily practice, companies rarely measure a baseline or establish control groups - much less randomized- to evaluate their interventions' effectiveness. They usually apply the program to the entire company and hope for some impact. This seriously affects companies' ability to evaluate the program's effectiveness and report changes in KPI indicators.

Another challenge with this point is the validity of the measurement of the variables. Accurately measuring the prevalence and intensity of WSH is not a simple task, requiring a high level of technical competence and care with ethical

issues to probe personnel. Poorly designed instruments, without evidence of reliability and validity, may underestimate the real level of the problem. Data collection procedures may bias the information obtained without ensuring confidentiality and anonymity. Personnel should not be obliged to answer questionnaires, as the company would be abusing its authority. Rigorous measurement requires that personnel be treated respectfully, ensuring informed consent, non-maleficence and retribution in the survey process. This requires a Research Ethics Committee to review and approve the procedure. Unfortunately, this has not been happening in practice either.

In the second challenge, measuring the impact of WSH on productivity is essential. Measurement must quantify cost indicators of an organizational nature. This is also a challenge because it requires understanding how harassment translates into productivity costs, which must be documented under a change model. Companies need these KPIs to justify the investment and sustain it over time. Indeed, it is not enough to measure the impact at the individual level and direct reference (e.g., saying that harassment has affected your work or generated fear) but to obtain controlled comparisons on units of productivity time or quality of work. These individual intangible effects must be translated into tangible effects accounted for at the production level. Moreover, not all harassed women have productive costs; many of them overcome them with resilience; on the other hand, harassed women are not the only ones with productive costs; there are also the personnel who witness and the perpetrators.

The above shows that the methodological reality is far from the ideal scenario. In this context, estimating the cost-effectiveness of prevention is almost impossible. This shortcoming contrasts with the urgent demand for information on this subject.

A case-control design has been implemented as a first step to overcome these limitations. This methodological approach is a non-experimental design that observes two groups of people exposed to different conditions to evaluate over a comparable time the impact of interventions (Kazdin, 2023; Westreich, 2019). In this case, the design serves to evaluate the impact of the sexual harassment at work (WSH) prevention program implemented by Konecta Peru (case), compared to a control group of companies that do not have explicit preventive programs or only comply with the measures mandated by law (control). These groups are compared to measure the occurrence of the outcome (prevalence of WSH and associated costs). Adjusted models are used to control for differences between groups and provide an accurate estimate of the impact of the preventive program.

Its characteristics are:

1. *Selection of the Cases.* The cases correspond to female workers of Konecta Peru, a company that has implemented a management model to prevent WSH for over six years. The sample includes 608 female workers selected probabilistically from a total population of 12,191 workers. Three hundred

eighty-six workers were from Lima (63.5%), and 222 were from Northern Peru (36.5%).

2. *Selection of the Control Group.* The control group comprises 1,086 workers from private companies in Lima (62.9%) and Northern Peru (37.1%). These companies do not have explicit preventive programs or only comply with the measures required by law.

3. *Measurement of variables.* A structured, construct-based survey with high levels of reliability and validity was used to measure the presence of WSH among female workers in both groups. The surveys included questions on the prevalence of WSH and its effects on labor productivity. The implementation period was during the second half of 2022 and 2023.

4. *Covariate Adjustment.* To reduce selection bias in estimating the impact of WSH prevention, we used linear modeling adjusted for demographic and occupational covariates between the two groups.

5. *Intra-group estimation of WSH Costs.* Within each group (Konecta and the control group), lost productivity days between harassed and non-harassed workers were compared to determine the effect of WSH. The variables considered included productivity days lost due to absenteeism, presenteeism, tardiness, critical incidents, and other forms of labor inefficiency. Costing calculations followed the international methodology of Duvvury, Vara-Horna, and Chadha (2022).

6. *Inference.* The comparison between Konecta and the control group allows us to determine the impact of prevention on reducing WSH prevalence and associated costs in Konecta. The marginal between-group difference of the marginal within-group differences is assumed to be the impact of prevention on productivity cost reduction.

7. *Calculations:* (First Phase) The impact of prevention on WSH is estimated using logistic regression adjusted for demographic and occupational covariates. Comparison between case (Konecta) and control allows us to identify the difference in the prevalence of WSH attributed to preventive measures. (Second Phase). The cost of WSH within each group (case and control) is estimated using linear regression adjusted for the same covariates. This allows us to calculate how many days of productivity are lost due to WSH in each group. (Third Phase). The adjusted productivity costs between case and control are compared to determine the financial impact of preventive measures. The difference in lost productivity costs between the case and control groups is interpreted as the savings achieved by prevention.

Thus, creating an artificial control group becomes necessary to obtain indirect estimates. This artificial control group allows us to indirectly evaluate the impact

of preventive measures by comparing the prevalence of WSH and associated costs between a company with a consistent and sustainable prevention model for six years and a set of private companies that have not implemented the same preventive policies. Because the two groups are not equivalent, one must adjust for demographic and occupational differences to provide a weighted estimate, reducing the risk of interference or extraneous variables contaminating the results (internal validity). This statistical approach helps the estimates to reflect the effects of preventive interventions in a less biased way, differentiating them from other factors that could influence the results. On the other hand, external validity (generalization of the results) can also be affected by the lack of randomization between the control group and the case. However, by using a representative and robust sample of the case (Konecta) and comparing it with a large control group constructed from a relevant database that followed the same measurement methodology (Vara-Horna et al., 2024), the results may be more generalizable to similar contexts in other companies and regions.

3.2. Sample and covariates

The sample included 608 Konecta female workers, selected probabilistically from a total population of 12,191 workers, with a 3.5% margin of error. Of these, 386 workers were from Lima (63.5%) and 222 from the north of the country (36.5%). For the control group, 1,086 female workers from various private companies were included, of which 683 were from Lima (62.9%) and 403 from the north of the country (37.1%).

Adequate sample size in both the case (Konecta Peru) and control groups provides several critical advantages:

1. **Confounding Control**. In observational case-control studies, confounding variables may likely influence the results (Savitz & Wellenius, 2016). A large sample size allows for statistical adjustment for these variables, improving the study's internal validity and allowing for a more accurate comparison between case and control groups.
2. **Statistical power**: A larger sample size increases the statistical power of the study, increasing the probability of detecting real differences between groups if they exist. This reduces the probability of committing a type II error, where one could incorrectly conclude that there is no effect when, in fact, there is.
3. **Precision of Estimates**: A large sample provides more precise estimates of effect measures and produces narrower confidence intervals. The more extensive data reduces random variability, allowing a more accurate assessment of true differences between groups.
4. **Representativeness and Generalizability**: The probabilistic sample selection in both Konecta and the control group ensures that the results represent the population of interest. This enhances the generalizability of the findings to other similar companies and contexts, increasing the applicability of the results.

Table 1 summarizes the characteristics of the sample, according to case and control.

Table 1
Characteristics of case and control samples

Variables	Indicators	Other companies (control)	Konecta Peru (case)	X^2
Region	Lambayeque	27.7	23.0	0.059
	Piura	5.8	7.9	
	La Libertad	3.6	5.6	
	Lima	62.9	63.5	
Labor activity	Administrative personnel	40.3	6.7	1195.5**
	Address	10.2	9.0	
	Operators	49.5	84.2	
Contract	Indefinite	49.6	17.4	230.5**
	Temporary	43.8	78.3	
	Service Leasing	6.6	4.3	
Working hours	Less than 20 hours	4.4	3.5	24.5**
	Between 20 and 39 hours	7.8	5.3	
	40 to + hours	87.8	91.3	
Length of service	Less than 1 year	20.8	39.5	163.3**
	Between 1 and 2 years	25.1	31.7	
	Between 3 and 5 years	18.2	17.6	
	Between 6 and 9 years old	13.3	8.4	
	More than 10 years	22.7	2.8	
Gender of employer	Man	44.0	47.7	2.1
	Woman	56.0	52.3	
How long have you been your boss?	Less than 1 year	37.6	77.8	269.4**
	Between 1 and 2 years	31.4	16.1	
	Between 3 and 5 years	17.1	4.9	
	More than 5 years	13.9	1.2	
Number of people in charge of the boss(es)	Average (S.D.)	16.2 (31.9)	18.7 (25.2)	169.1**
Monthly income (soles)	Less than 1200	17.4	77.0	637.3**
	Between 1201 and 2000	30.0	18.9	
	Between 2001 and 3000	15.2	2.0	
	Between 3001 and 4000	12.1	0.7	
	Between 4001 and 5000	9.4	0.2	
	Between 5001 and 10000	11.8	0.3	
	More than 10000	4.1	1.0	
Where you work	In the company	68.5	60.2	302.4**
	Alternate home/business	26.8	6.3	
	Telework	4.7	33.6	
Age	Average (S.D.)	35.5 (9.57)	30.3 (8.23)	331.1**
Marital status	Single	55.5	67.9	26.5**
	Married/Cohabitant	36.5	26.8	
	Divorced/Separated	7.2	4.3	
	Widow	0.8	1.0	
Have children	Yes	52.2	49.3	1.2
Schooling	Basic	6.8	15.8	286.3**
	Technique	24.9	38.2	
	Incomplete university	11.2	29.3	
	Full university education	46.9	16.3	
	Postgraduate	10.3	0.5	

** Bilateral asymptotic significance ($p<0.001$).

The comparison between Konecta Peru and other companies shows significant differences in several demographic and labor variables, necessary to understand the context in which both entities operate and to adjust any comparative analysis on the prevalence and impact of sexual harassment in the workplace.

Regional distribution. Both groups have a similar regional distribution, with most female workers concentrated in Lima (62.9% in other companies and 63.5% in Konecta Peru). *Labor Activity.* There is a marked difference in labor composition. In other companies, administrative personnel make up 40.3%, while in Konecta Peru it is only 6.7%. On the other hand, operators account for 84.2% in Konecta Peru compared to 49.5% in other companies. *Type of Contract.* Konecta Peru has a higher proportion of workers with temporary contracts (78.3%) than other companies (43.8%). *Working Hours.* Most workers in both groups work 40 hours or more per week, although Konecta Peru has a slightly higher proportion (91.3% vs. 87.8% in other companies). *Length of service.* Konecta Peru has a higher proportion of workers with less than 1 year of seniority (39.5%) and a lower proportion with more than ten years (2.8%) than other companies. *Monthly Income.* Income distribution shows a marked difference, with 77.0% of Konecta Peru workers earning less than 1,200 soles per month, compared to only 17.4% in other companies. *Marital Status.* Konecta Peru has a higher proportion of single female workers (67.9%) than other companies (55.5%). *Schooling.* Schooling also shows significant differences: Konecta Peru has a higher proportion of workers with technical schooling (38.2% vs. 24.9%) and incomplete university education (29.3% vs. 11.2%), while other companies have more workers with complete university education (46.9% vs. 16.3%) and postgraduate education (10.3% vs. 0.5%).

The comparison shows that Konecta Peru has a higher proportion of younger workers, with less seniority and lower income, which is usual in telemarketing companies. These structural differences may influence the prevalence and reporting of WSH, and the effectiveness of the preventive policies implemented. The higher proportion of temporary contracts and lower income in Konecta Peru may increase vulnerability to WSH. However, they may also reflect a more dynamic and flexible environment where preventive policies are more necessary and, possibly, more effective.

Their probability of association is calculated to evaluate how these variables are associated with WSH by group (see Table). Overall, monthly income was not significant in any of the groups, suggesting that it does not clearly influence the probability of WSH. Having children significantly reduces the probability of WSH at Konecta ($b = -0.865$, $p < 0.01$), but was not significant at other companies. Having a boss of the opposite sex increases the probability of WSH at other companies ($b = 0.420$, $p < 0.01$) but not at Konecta. Age decreases the probability of WSH in both groups, with high significance ($b = -0.054$ in other companies and -0.057 in Konecta, $p < 0.01$). The number of people under the boss was not significant in either group. Working in the Northern Region significantly reduces the probability of WSH in other companies ($b = -0.524$, $p < 0.01$), but not in Konecta. Longer job seniority increases the probability of WSH in both groups (b

= 0.280 in other companies and 0.357 in Konecta), with high significance. Working from home significantly reduces the probability of WSH in both groups (b = -1.159 in other companies and -0.781 in Konecta, p < 0.01). Education level was not significant in either group. In other companies, being divorced/separated increased the probability of WSH. In Konecta, marital status was not significant.

Table 2
Logistic model of demographic and labor variables associated with WSH.

Variable	Other companies	Konecta
Monthly income	0.000 (0.001)	-0.001 (0.001)
Has children	0.090 (0.189)	-0.865 (0.273) *
Boss's gender	0.420 (0.143) *	0.407 (0.217)
Age	-0.054 (0.011) **	-0.057 (0.019) **
Number of people under the manager's command	0.001 (0.002)	-0.006 (0.006)
Northern Region	-0.524 (0.181) **	-0.176 (0.228)
Length of service	0.280 (0.077) **	0.357 (0.142) *
Where you work		
Alternate days	-0.288 (0.212)	-1.049 (0.577)
At home	-1.159 (0.399) **	-0.781 (0.256) **
Education level	0.017 (0.074)	0.151 (0.115)
Labor activity		
Administrative	0.212 (0.176)	0.248 (0.477)
Managers	-0.014 (0.292)	0.036 (0.409)
Type of contract		
Temporary	0.154 (0.206)	-0.314 (0.359)
Location	0.104 (0.348)	-0.361 (0.659)
Marital status		
Married/Cohabitant	-0.089 (0.193)	0.189 (0.298)
Divorced/Separated	0.604 (0.305) *	-0.384 (0.803)
Intercept	-0.145 (0.613)	1.216 (1.258)

Notes: In parentheses, standard error. Other companies: LR chi2(17)) = 61.27, p<0.001, Pseudo R2 = 0.0496. Konecta: LR chi2(16)) = 79.77, p<0.001, Pseudo R2 = 0.1236. Significance: * p < 0.05, ** p < 0.01.

The fact that monthly income and educational level were not significant in any of the groups is evidence that WSH is a cross-cutting problem that affects women regardless of their economic position within the organization. According to Power and Control theory, WSH may relate more to power dynamics and hierarchy than female workers' economic/educational level.

Along the same lines, the number of people under the boss's command was not significant in any of the groups. However, it was highly significant when the boss was male, where there was a greater likelihood of harassment. Gender-based power relations and the stereotypes and beliefs that support them have considerable predictive power. WSH as an indicator of abuse of power becomes more evident when the likelihood of being harassed increases in younger female workers, or those separated/divorced; who are perceived to be more vulnerable and "lacking protection" from a partner or "more available" sexually. In that context, greater exposure in time and place increases the likelihood of WSH in both groups. Female workers with more time in the company are more exposed to WSH situations due to the duration of their exposure in the work environment or changes in power and control dynamics over time. This is corroborated - in the

opposite direction - when working from home significantly reduces the likelihood of WSH.

When comparing the predictors between the two groups, it is evident that the WSH prevention model at Konecta has generated improvements in some critical predictors, evidencing a safer and more equitable work environment. For example, at Konecta, having children or being divorced/separated significantly reduces the likelihood of WSH, suggesting a more respectful organizational culture towards workers with family responsibilities or a change in cultural patterns that traditionally justify harassment. Furthermore, at Konecta, having a male boss does not increase the likelihood of WSH, indicating the effectiveness of the gender equality and awareness policies implemented.

Due to all these differences, these demographic and labor variables will be adjusted using regression and matching techniques for a comparable comparison. This adjustment will allow us to control for structural differences between groups and more objectively evaluate the impact of the WSH prevention policies implemented by Konecta Peru.

3.3. Measurement

A structured, construct-based, self-report survey was used, with high levels of reliability and validity. In addition to demographic and occupational information, the questionnaire included the following variables:

Sexual harassment at work. A 10-item scale, based on the Sexual Experiences Questionnaire - Workplace (SEQ-W) by Fitzgerald et al. (1995), to evaluate gender harassment, unwanted sexual contact and sexual coercion experienced by women in their work environment, perpetrated by colleagues, clients or superiors within the organizations. The questions covered the last 12 months, with seven response options (never, one time, two times, 3 to 5 times, 6 to 10 times, 11 to 19 times, and more than 20 times). This brief scale, adapted in Bolivian companies (Vara-Horna, 2022) and Peruvian companies (Vara-Horna et al., 2024), consistently evidenced solid indicators of reliability and construct validity (Gender harassment: Alpha=0.939, AVE=0.837; Unwanted sexual attention, Alpha=0.876, AVE=0.702; Sexual coercion, Alpha=0.803, AVE=0.510).

Witnessing sexual harassment in the workplace. This 5-item scale records, firstly, the occasions and duration dedicated to supporting colleagues who have experienced sexual harassment, considering the last 12 months. Second, it records the number of days lost due to worries, lateness, or absences directly attributable to having witnessed the harassment, considering the same period.

Loss of labor productivity. The scale was developed by combining presenteeism, absenteeism, tardiness, and labor incidents.

- *Presenteeism.* The scale is composed of six items to record the level of distraction and exhaustion at work for various reasons. The response options range from "never" to "more than 20 days". Each option's lower limit was considered as the basis for calculating days lost. This scale is based on the one developed by Vara-Horna (2013) and validated by Duvvury et al. (2022) to assess burnout and work distraction caused by domestic violence against women. Its most recent use in Bolivian companies shows satisfactory internal consistency (Alpha=0.908) and construct validity (AVE=0.686) (Vara-Horna, 2022). In Peruvian companies, the results are equally satisfactory (Alpha=0.952, AVE=0.766) (Vara-Horna et al., 2024).

- *Absenteeism and tardiness.* Scale composed of 8 items to record the number of absences from work, considering various reasons such as personal or family health problems (2 items), legal issues (1 item), and tensions in labor relations (2 items). Regarding tardiness, the duration of late arrivals to work was recorded (less than 1 hour, between 1 and 2 hours, and more than 2 hours). The response options ranged from "never" to "more than ten days." The day's lost calculation is based on each option's lower limit. These scales are based on those developed by Vara-Horna (2013) and validated by Duvvury et al. (2022) to assess absenteeism and tardiness related to domestic violence against women. In Peruvian companies (Vara-Horna et al., 2024), they have shown high levels of reliability and validity (Absenteeism due to health problems, Alpha=0.877, AVE=0.781; Absenteeism due to work stress Alpha=0.770, AVE=0.626; Tardiness, Alpha=0.845, AVE=0.647).

- *Labor incidents.* Scale composed of 4 items to record the number of labor problems related to the quality of work and labor relations affected by such quality. The response options range from "never" to "more than ten times." The day's lost calculation is based on each option's lower limit. This scale was initially developed by Vara-Horna (2013) and has demonstrated strong reliability (Alpha=0.824) and construct validity (AVE=0.658) in Bolivian (Vara-Horna, 2022) and Peruvian (Alpha=0.868, AVE=0.632) companies (Vara-Horna et al, 2024).

Sabotage and production deviation. A six-item scale based on the scale of counterproductive behaviors proposed by Spector et al. (2006). The original scale evaluates five dimensions: sabotage, withdrawal, production deviation, theft, and abuse toward other personnel. For this research, only two dimensions have been selected: sabotage (three items) and production deviation (three items). The response options range from "never" to "more than ten times." The evaluation period is the last 12 months. In Peruvian companies, these scales have shown high levels of reliability and validity (Production deviation: Alpha=0.831, AVE=0.621; Sabotage: Alpha=0.796, AVE=0.566) (Vara-Horna et al., 2024).

Intention to drop out of the labor market. This scale consists of three items that capture the desires and behaviors associated with leaving work during the last 12 months.

It is based on the proposals of Nielsen et al. (2013). The response alternatives range from "never" to "always." In Peruvian companies, it has shown high levels of reliability and validity (Alpha=0.925, AVE=0.804) (Vara-Horna et al., 2024).

Equitable management. A 10-item scale was designed to measure the frequency of management behaviors related to fairness, openness, respect, and inclusion that participants observed in their immediate boss. Each item presents six response options ranging from "never" to "always." The overall score is obtained by calculating the average of the ten items previously aligned in direction. This scale is based on the adaptation of the Inequitable Management Patterns Scale developed by Vara-Horna (2015), and in Peruvian companies has shown high-reliability values (Alpha=0.909) and construct validity (AVE=0.507) (Vara-Horna et al., 2024).

3.4. Procedure

The data obtained from the control group comes from research conducted by the Universidad de San Martín de Porres (USMP), the Lima Chamber of Commerce, under the auspices of the European Union and Spanish Cooperation (Vara-Horna et al., 2024). The data was collected during the second half of 2022 and 2023, inviting the participation of private companies in Metropolitan Lima and Callao and the northern region of Peru in La Libertad, Piura, and Lambayeque.

The data obtained for this case comes from the company Konecta Peru, which is part of a tripartite collaboration agreement with T-Cuida and the USMP. The data was collected during the second half of 2023, inviting a representative sample of randomly selected female workers from Lima, La Libertad, Piura, and Lambayeque to participate.

The questionnaires were applied after coordination with the authorities of each company, usually the area in charge of human resources. **Data collection** (surveys) was done digitally and in person throughout the study. The questionnaire was anonymous, confidential, and voluntary. Likewise, the SurveyMonkey platform was used for the digital questionnaires. The procedure consisted of creating survey links that were then shared, along with a speech, to contacts in the company. All responses were exported and sorted in a database in a ".sav" file. A structured self-report questionnaire was applied to the face-to-face questionnaires. The responses from the face-to-face questionnaires were tabulated using the SPSS statistical software.

The protocol was approved by the **Ethics Committee** of the Universidad de San Martín de Porres (IRB 00003251). The ethical principles established in The Belmont Report (1979) were followed: respect, beneficence, and justice. (1) Respect, all command personnel were informed of the objective and nature of the study and were guaranteed informed consent through a question. (2) Non-maleficence, the research sought to preserve the personal safety of the respondents, prioritizing the security of the information through anonymous, confidential

surveys and without access to individual responses. (3) Justice, the results of this research - at a global level - will be provided to companies with specific recommendations and dissemination events.

The **costing calculations** follow the international methodology developed by Duvvury, Vara-Horna, and Chadha (2022), adapted to determine the number of days lost due to sexual harassment at work. In this case, days lost due to WSH is the statistically significant difference when comparing the groups of harassed and non-harassed workers. The comparison variable is the number of days lost in labor productivity, consisting of the linear combination of absenteeism, presenteeism, tardiness, and work incidents during the last 12 months.

- Days lost due to absenteeism (AUS_diasp) measures the number of days lost due to absenteeism, calculated as the mean of the days lost due to illness (a1 and a2), added to the days lost due to other reasons (a3) and the mean of the days lost because the work environment is hostile (a4 and a5). The calculation is: COMPUTE AUS_diasp = sum((mean(a1,a2)),a3,(mean(a4,a5))).

- Days lost due to Tardiness (TAR_diasp) measures the number of days lost due to tardiness by weighting the number of times late according to the estimated duration of the tardiness in fractions of an hour (ta1, ta2, ta3). The calculation is: COMPUTE TAR_diasp = sum(ta1*.125, ta2*.25, ta3*.375).

- Days lost due to labor incidents (INCL_diasp) measures the number of days lost due to the number of quality failures and critical labor incidents, calculated as the mean of the incident items (il1 to il4) multiplied by a factor of 0.5. The calculation is: COMPUTE INCL_diasp = mean(il1 to il4)*.5.

- Days lost due to presenteeism (PRES_diasp) measures the number of days lost due to presenteeism, i.e., when employees are physically present but do not perform adequately due to distractions or demotivation, calculated as the mean of the presenteeism items (p1 to p6). Calculation: COMPUTE PRES_diasp = mean(p1 to p6).

The application of these formulas shows that the composition of lost productivity days due to WSH is distributed as follows: 40.5% for absenteeism, 4.8% for tardiness, 6.4% for critical quality incidents, and 48.3% for presenteeism. Although companies usually deduct the salary of workers late or absent from work, this deduction does not fully reflect the productivity costs caused by tardiness and absenteeism; therefore, they must be included in the cost analysis. There is, in effect, an opportunity cost associated with the work that is not performed due to these absences or tardiness. This opportunity cost translates into a loss of efficiency and productivity that can negatively impact the company's overall performance.

In addition, critical quality incidents and presenteeism also represent significant productivity losses. Presenteeism, where employees are physically present but unable to work effectively due to health issues, stress, or other harassment-related factors, can be a major source of lost productivity that is not reflected in salary deductions. Therefore, it is crucial to consider these issues when assessing the full impact of WSH on the company and the benefits of implementing effective preventative measures.

Analysis. Several statistical analyses were performed to compare WSH prevalences and means and assess the impact of prevention policies on labor productivity. First, statistical contrasts and hypothesis tests were performed to compare the study groups' WSH prevalences and productivity means. We used t-tests for mean comparisons and chi-square tests for prevalences.

In addition, logistic regression analyses were performed to estimate the impact of prevention policies on the prevalence of WSH, controlling for covariates. This approach allowed us to identify the adjusted probabilities of experiencing WSH as a function of implementing preventive policies. Linear regression models were also used to quantify the effect of WSH reduction on productivity costs, considering variables such as lost productivity days and costs associated with staff turnover.

To understand the direct and indirect effects of WSH on labor productivity, partial least squares structural variance equations (PLS-SEM) were used. This approach allowed us to decompose the effects and determine the relationship between WSH, prevention policies, and labor productivity. All statistical techniques were performed using STATA 18 software for regression analysis and hypothesis testing, and SmartPLS 4 for structural equation modeling.

All goodness-of-fit tests were performed to ensure the validity and reliability of the models. These tests included model fit, assessment of multicollinearity, and verification of normality and homoscedasticity assumptions. These tests' results confirmed our analyses' robustness, providing a solid basis for the study's conclusions.

Calculation of prevention profitability. The methodology used in this study uses the calculation of lost productivity, equated to value-added, to ensure comparability and standardization between companies. This approach, accepted in academia, allows for robust and standardized analysis, regardless of differences in structure, size, or sector of the companies being compared. However, while value added is a necessary metric to measure a company's overall efficiency comparatively, it is not sufficient to accurately measure the marginal gains or losses essential for making investment decisions.

Therefore, to calculate the profitability of prevention, the study focuses on opportunity cost. In applied studies, especially those aimed at influencing business decision-making, it is essential to provide results that managers and executives can

use to justify their investments. Return on Investment (ROI), calculated based on opportunity cost, directly measures how much value is recovered or avoided through implementing preventive policies. This approach is key to the justification of programs within the company, as it demonstrates how such investments can translate into significant savings and tangible benefits.

Opportunity cost is precious in this context, as it focuses on the potential gain the company could recoup by implementing measures to reduce HSL. This approach provides a more accurate assessment of the real return on investment by excluding sunk costs, such as wages. This avoids inflating ROI with costs that the company already incurs regardless of the intervention, focusing on the additional revenue or avoiding losses that result directly from the investment.

Opportunity cost aligns perfectly with assessing the cost-effectiveness of strategic decisions, especially in the context of HSL. Investments in prevention and mitigation should be justified in terms of recoverable revenues or avoided losses. This method provides a clear measure of the economic value lost by not acting, which is crucial for calculating an ROI that directly reflects the tangible benefits of such interventions.

Integrating both approaches into the analysis is beneficial to provide a more complete picture. While value-added continues to be useful for comparatively measuring the overall efficiency and productivity of the company, opportunity cost is used to calculate ROI and justify specific investments in preventive programs. This combination ensures that the analysis is not only methodologically sound and comparative, but also practical and directly applicable to business decision making. In this way, the study not only provides a comprehensive assessment of the economic impact of HSL, but also offers managers the necessary tools to justify and optimize their investments in prevention, ensuring that these translate into concrete and sustainable economic benefits.

IV. Results

Prevalence

This section compares the prevalence of different indicators of sexual harassment in the workplace (WSH) between Konecta Peru and a group of other companies. The analysis uses Chi-square tests (X^2) to determine the statistical significance of the observed differences (see Table 3).

Table 3
Prevalence of Sexual Harassment in the Workplace (percentages)

	Konecta Peru	Other companies	X^2
WSH gender harassment	**18.8**	**24.7**	**7.8***
Stories with sexual content / Sexist jokes	16.5	17.9	1.7
Discrimination against women in the workplace	6.1	9.5	6.1*
Sexist comments	9.7	17.3	18.1**
WSH unwanted contact	**11.3**	**17.1**	**9.9***
Comments on appearance	8.7	14.7	12.7**
Insistence for appointments	6.1	7.8	1.8
Attempted intimate touching	2.6	2.6	0.01
WSH sexual coercion	**2.3**	**2.7**	**0.24**
Hints of rewards in exchange for sex	1.5	1.3	0.08
Feeling threatened with retaliation	1.5	1.9	0.33
Threats to accept sexual encounters	1.2	1.1	0.03
Attempted sexual abuse	0.5	0.8	0.66
WSH Total	22.5	30.1	11.1**

Significant differences * $p<0.05$, ** $p<0.001$

The results show that the overall prevalence of WSH is significantly lower in Konecta Peru (22.5%) compared to other companies (30.1%), with a statistically significant difference ($X^2 = 11.1$, $p < 0.01$). This suggests that the policies and programs implemented by Konecta Peru have effectively reduced WSH.

Specifically, the prevalence of the gender harassment dimension is lower in Konecta, Peru (18.8% vs. 24.7%, $X^2 = 7.8$, $p < 0.05$), indicating a more equitable and respectful work environment. In addition, discrimination against women at work (6.1% vs. 9.5%, $X^2 = 6.1$, $p < 0.05$), sexist comments (9.7% vs. 17.3%, $X^2 = 18.1$, $p < 0.01$) and comments about appearance (8.7% vs. 14.7%, $X^2 = 12.7$, $p < 0.01$) are significantly less frequent at Konecta Peru, reflecting a greater awareness and respect for the dignity of female workers. Regarding unwanted contact, Konecta Peru also shows a lower prevalence (11.3% vs. 17.1%, $X^2 = 9.9$, $p < 0.05$), suggesting the effectiveness of preventive measures in reducing this type of behavior.

However, stories with sexual content and sexist jokes (16.5% vs. 17.9%, $X^2 = 1.7$, $p > 0.05$) and insistence for dates (6.1% vs. 7.8%, $X^2 = 1.8$, $p > 0.05$) although slightly lower in Konecta Peru, these differences did not reach statistical significance. Similarly, indicators of sexual coercion, such as attempts at intimate touching (2.6% in both groups, $X^2 = 0.01$), hints of rewards in exchange for sex (1.5% vs. 1.3%, $X^2 = 0.08$), feeling threatened with retaliation (1.5% vs. 1.9%, $X^2 = 0.33$), threats to accept sexual encounters (1.2% vs. 1.1%, $X^2 = 0.03$), and attempts at sexual abuse (0.5% vs. 0.8%, $X^2 = 0.66$), showed no significant differences, suggesting that these behaviors remain persistent challenges.

The overall prevalence results show that -in effect- Konecta has better indicators than the other control companies, mainly in the most frequent and less severe dimensions of WSH. However, as explained in the theoretical framework, the dimension of sexual coercion is shown to be very resilient.

4.2. Incidence

This section analyzes the average number of reported incidents of workplace sexual harassment (WSH) between Konecta Peru and a group of other companies. The data include the mean and standard deviation (SD) of the reported incidents, providing a comprehensive view of the differences in the experience of WSH between workers in both groups and its relationship with the average number of lost productivity days.

Table 4
Incidents and average WSH costs, according to size per woman harassed.

	Other companies			Konecta Peru		
	Prevalence	Incidence	Days lost	Prevalence	Incidence	Days lost
WSH Total	30.1%	6.6 (10.2)	2.7	22.5%	7.8 (20.4)	3.0
WSH gender harassment	24.7%	5.4 (8.7)	2.9	18.8%	5.5 (10.1)	3.1
WSH unwanted contact	17.1%	3.3 (4.7)	1.7	11.3%	4.3 (8.4)	3.6
WSH sexual coercion	2.7%	2.4 (1.5)	0.4	2.3%	10.3 (20.9)	5.2

Note: In parentheses, standard deviation.

The average number of total WSH incidents is slightly higher at Konecta Peru ($M = 7.8$, $SD = 20.4$) than other companies ($M = 6.6$, $SD = 10.2$). This difference suggests greater variability in the number of incidents reported at Konecta Peru, indicating that while some workers report few or no incidents, others experience significantly more incidents.

Regarding gender harassment, the average frequency of incidents is similar between Konecta Peru ($M = 5.5$, $SD = 10.1$) and other companies ($M = 5.4$, $SD = 8.7$). However, the higher standard deviation at Konecta Peru indicates a greater dispersion in the data, suggesting that experiences of gender harassment vary more widely among Konecta workers. Unwanted contact has a higher average number of incidents at Konecta Peru ($M = 4.3$, $SD = 8.4$) than other companies ($M = 3.3$,

SD = 4.7). The standard deviation is also higher in Konecta Peru, indicating greater variability in experiences of unwanted contact among female workers.

Sexual coercion shows a notable difference, with significantly higher average incidents at Konecta Peru (M = 10.3, SD = 20.9) compared to other companies (M = 2.4, SD = 1.5). The extremely high standard deviation at Konecta Peru suggests a large variability in incidents of sexual coercion, implying that some workers experience very high levels of sexual coercion. In contrast, others may experience no more than one incident.

The results indicate that, although the prevalence of WSH in general is lower in Konecta Peru, the average incidents for certain types of WSH are higher compared to other companies. As discussed in the theoretical framework, this may be due to several reasons: 1. Increased Awareness and Reporting. An organizational culture that promotes the reporting of WSH incidents may result in higher reporting and, therefore, a higher average number of incidents. This is a side effect of training. 2. Variability in Experience. However, the high standard deviation in WSH incidents suggests that, although the overall prevalence is low, they may be more extreme or severe when incidents occur. This may reflect variability in individual workers' experience, with some facing significantly worse situations than others. In this context, post-incident management could remain a challenge, resulting in a higher number of reported incidents due to recurrence or lack of adequate resolution.

4.3. Witnesses

Table 5 compares the productive impacts associated with the support provided by witnesses of workplace sexual harassment (WSH) between Konecta Peru and other companies. The data reflect the differences in the frequency of assistance to harassed colleagues and the productive consequences of these actions.

Table 5
WSH witnessing and its impact on productivity

	Konecta	**Other companies**
A colleague asked you for advice or support by WSH	10.0%	9.0%
Provided support/assistance	15.5%	16.2%
Had difficulty concentrating, worried about harassed colleague	12.8%	11.2%
Arrived late to support harassed colleague	7.7%	5.9%
Failed to support harassed colleague	5.6%	3.0%
Time (average days and D.E.) committed to supporting colleagues	0.78 (1.36)	0.59 (0.89)
WSH: Tempo committed to supporting colleagues who are also harassed	1.01 (1.95)	0.72 (1.04)

In terms of requests for advice or support from harassed colleagues, 10.0% of female employees at Konecta Peru reported receiving such requests, compared to 9.0% at other companies. Although the proportion is slightly higher at Konecta Peru, both figures are similar.

Female workers in both samples show almost equal proportions when providing support or assistance, with 15.5% in Konecta Peru and 16.2% in other companies. However, difficulties in concentrating due to concerns about harassed colleagues are more frequent in Konecta Peru (12.8% vs. 11.2%).

Tardiness and absences for supporting harassed colleagues are also more common at Konecta Peru, with 7.7% tardiness and 5.6% absences, compared to 5.9% and 3.0% at other companies, respectively. These data indicate a greater commitment and involvement in supporting harassed colleagues at Konecta Peru. Along the same lines, the average time committed to supporting harassed colleagues is higher in Konecta Peru, with an average of 0.78 days (SD = 1.36) compared to 0.59 days (SD = 0.89) in other companies. The higher standard deviation at Konecta Peru suggests greater variability in the time spent on support, which may reflect differences in the intensity and duration of the support provided.

However, not all this time is dedicated voluntarily. The results indicate that female employees at Konecta Peru not only show greater commitment to supporting harassed colleagues but also face greater negative productive consequences, such as concentration difficulties and lost work time. This greater commitment and involvement may reflect a more supportive and WSH-conscious organizational culture at Konecta Peru.

Support Beyond That Requested. The data show that more workers provide support (15.5% in Konecta Peru, and 16.2% in other companies) than those who request advice or support (10.0% and 9.0%, respectively). This indicates that peer support responds to explicit requests and a proactive initiative of female employees to assist their harassed colleagues.

Involuntary Productive Impacts. Workers who provide support to harassed colleagues experience productive impacts that go beyond the voluntary time spent on these activities. Concentration difficulties, tardiness, and absences indicate unintended consequences that affect their work performance. These impacts are more noticeable at Konecta Peru, where the percentage of affected workers is higher in all these categories.

Double Impact on Victims and Witnesses. The analysis reveals that workers who have also been victims of WSH spend more time supporting other harassed colleagues (1.01 days at Konecta Peru versus 0.72 days at other companies). This situation creates a double negative impact: workers not only suffer from their own experience of harassment but also face greater emotional and productive burdens in supporting other victims. The higher standard deviation in Konecta Peru suggests a wide variability in these experiences, which could reflect differences in the severity of WSH and the workers' ability to provide support.

The findings underscore the importance of considering both the direct effects of WSH and the indirect impacts on workers who support their colleagues. At

Konecta Peru, commitment and solidarity among workers are evident, but so are the negative consequences regarding productivity and well-being.

4.4. Inequitable microcosms

The results in Table 6 show that the inequitable management patterns of immediate superiors are significantly related to the prevalence of sexual harassment at work (WSH), although with some differences between other companies and Konecta Peru.

Table 6
Patterns of inequitable management of the immediate superior boss and its relationship with the WSH

	Other companies		Konecta Peru	
	Not harassed	Harassed	Not harassed	Harassed
Stiffness				
He does not listen to reasons, ideas or advice that contradict his own point of view.	25.6	39.3	26.8	34.3
Does not admit to making mistakes to his staff. Blames others.	38.3	53.1	28.9	40.9
You don't care about your staff's problems. You don't try to understand and support them.	19.0	33.3	19.5	32.8
Abuse of power				
It rewards its personnel arbitrarily and unfairly; it has favoritism.	14.6	30.9	18.3	26.3
He/she is selfish. He/she thinks only of him/herself and not of the benefit of the organization. Appropriates the merit of others.	5.2	12.5	4.7	7.3
Treats his employees as if they were his servants or inferior to him.	3.1	7.9	3.4	6.6
Communicates aggressively with your staff. You raise your voice in an intimidating, scolding or shouting manner; or you ridicule them by making humiliating comments.	3.5	9.7	4.5	6.6
Exclusion				
It allows conflict among its collaborators, as it does not attend to complaints of insults or harassment among them.	1.2	8.5	2.1	9.5
When he gets angry with someone on his team, he pushes them aside or looks down on them, ignores them, excludes them.	3.3	10.0	3.6	12.4
Restricts the creativity and innovative ideas of the team in charge.	7.2	12.1	5.3	12.4

Note. Percentages represent the cumulative of the most frequent options (often, almost always and always). Excludes never, almost never and rarely.

Rigidity: In both companies, harassed workers report more frequently that their bosses do not listen to reasons, ideas or advice that contradict their point of view, do not admit mistakes and do not care about staff problems. This suggests a more authoritarian and less supportive work environment in the presence of WSH.

Abuse of power: Harassed workers in both companies also report more frequently experiencing abuse of power, such as arbitrary reward, favoritism, and appropriation of others' merit. In Other companies, 30.9% of female employees mentioned favoritism compared to 14.6% of non-bullied employees, while in Konecta Peru, the percentages were 26.3% and 18.3%, respectively. Aggressive communication by the boss is also more prevalent among harassed workers, indicating a hostile environment that may exacerbate the WSH experience.

Exclusion: Exclusion is also a significant pattern. Harassed workers report that their bosses allow conflict among co-workers and exclude those they are angry with. In Other companies, 8.5% of harassed workers reported that their bosses allow conflict, compared to 1.2% of non-harassed workers. Konecta Peru's percentages are 9.5% and 2.1%, respectively. Restrictions on creativity and innovative ideas are also more reported by harassed workers in both companies.

These results suggest that inequitable management patterns are closely related to the prevalence of WSH. Indeed, at the scale level, equitable management explains 9.6% of the reduction in workplace sexual harassment at other firms (B = - 0.312), and 13.5% of the reduction at Konecta (B = - 0.368). This makes sense, insofar as an environment where bosses do not listen and do not admit mistakes, abuse their power and exclude their female employees not only contributes to a negative work environment, but can also facilitate the occurrence of WSH.

Table 7 presents a comparison between Konecta Peru and other companies in terms of equitable management, incidence and prevalence of workplace sexual harassment (WSH), and various productivity indicators. The results not only demonstrate the effectiveness of equitable management in reducing workplace sexual harassment (WSH) and improving productivity, but also evidence the existence of **inequitable microcosms** within companies. These microcultures, characterized by inequitable, abusive, rigid and exclusionary management by immediate superiors, significantly impact the prevalence of WSH and various work performance indicators.

Equitable management is present in 83.9% of cases in Konecta Peru, compared to only 80% in other companies. As evidenced earlier at the indicator level, in Konecta Peru, the prevalence of WSH is significantly lower when equitable management is present (18.2%) compared to its absence (44.9%). Similarly, in other companies, the prevalence of WSH is 24.6% with equitable management and 52.6% without.

WSH incidents also show a notable reduction when fair management is in place. At Konecta Peru, the incidence of WSH is 0.83 incidents with fair management versus 6.66 in those without. In other companies, incidents are 1.37 with fair management and 4.51 without. These data indicate that fair management significantly reduces WSH incidents in both comparisons.

Lost productivity days - for any cause - are lower when there is fair management. At Konecta Peru, the number of days lost is 3.92 with fair management and 5.28 without. In other companies, days lost are 4.43 with fair management and 7.07 without. This suggests that fair management contributes to lower overall productivity loss.

The percentage of workers who have witnessed WSH in their colleagues is lower when there is equitable management. In Konecta Peru, 21.8% of workers with equitable management have witnessed WSH, compared to 33.7% without equitable management. In other companies, these percentages are 18.9% and 27.7%, respectively. In addition, the days lost for witnessing and supporting WSH cases are also lower with equitable management.

Equitable management lowers the intention of desertion and counterproductive behaviors. In Konecta Peru, the intention of desertion is 67.8% with equitable management compared to 90.8% without it. In other companies, these percentages are 65.1% and 88.9%, respectively. Counterproductive behaviors are 12.6% in Konecta Peru with equitable management, compared to 27.6% without it. In other companies, counterproductive behaviors are 17.3% with fair management and 35.0% without it.

Table 7
Equitable management, WSH and global productivity indicators

	Other companies		Konecta	
Equitable management of the immediate supervisor	No (20%)	Yes (80.0%)	No (16.1%)	Yes (83.9%)
WSH (average incidents)	4.51 (9.35)	1.37 (5.28)	6.66 (24.01)	0.83 (3.07)
WSH (prevalence)	52.6%	24.6%	44.9%	18.2%
Lost productivity days (average)	7.07 (6.14)	4.43 (4.68)	5.28 (5.09)	3.92 (4.36)
WSH Witnesses	27.7%	18.9%	33.7%	21.8%
Witnesses (average days lost)	0.23 (0.69)	0.09 (0.39)	0.26 (0.69)	0.17 (0.75)
Intention to drop out (%)	88.9%	65.1%	90.8%	67.8%
Counterproductive behaviors (%)	35.0%	17.3%	27.6%	12.6%

Note: All comparisons with significant differences. Standard deviation in parentheses

Equitable management appears to play a crucial role in reducing WSH and its associated negative impacts. Companies with equitable management practices, such as Konecta Peru, show lower WSH rates, lower productivity loss, lower attrition intention and less counterproductive behaviors. These results suggest that equitable management can mitigate the negative effects of WSH by creating a safer and more productive work environment.

4.5. Impacts on productivity

The results show that sexual harassment at work generates a decrease in labor productivity, evaluated through absenteeism, work incidents, absenteeism and

tardiness, in the workers of both Konecta Peru and the other companies. Table 8 compares the percentages of these indicators between those who experience sexual harassment at work and those who do not. In practically all cases, the percentages are considerably higher when there is sexual harassment at work.

Table 8
Presenteeism, work incidents, absenteeism, tardiness and presenteeism, according to experience of WSH

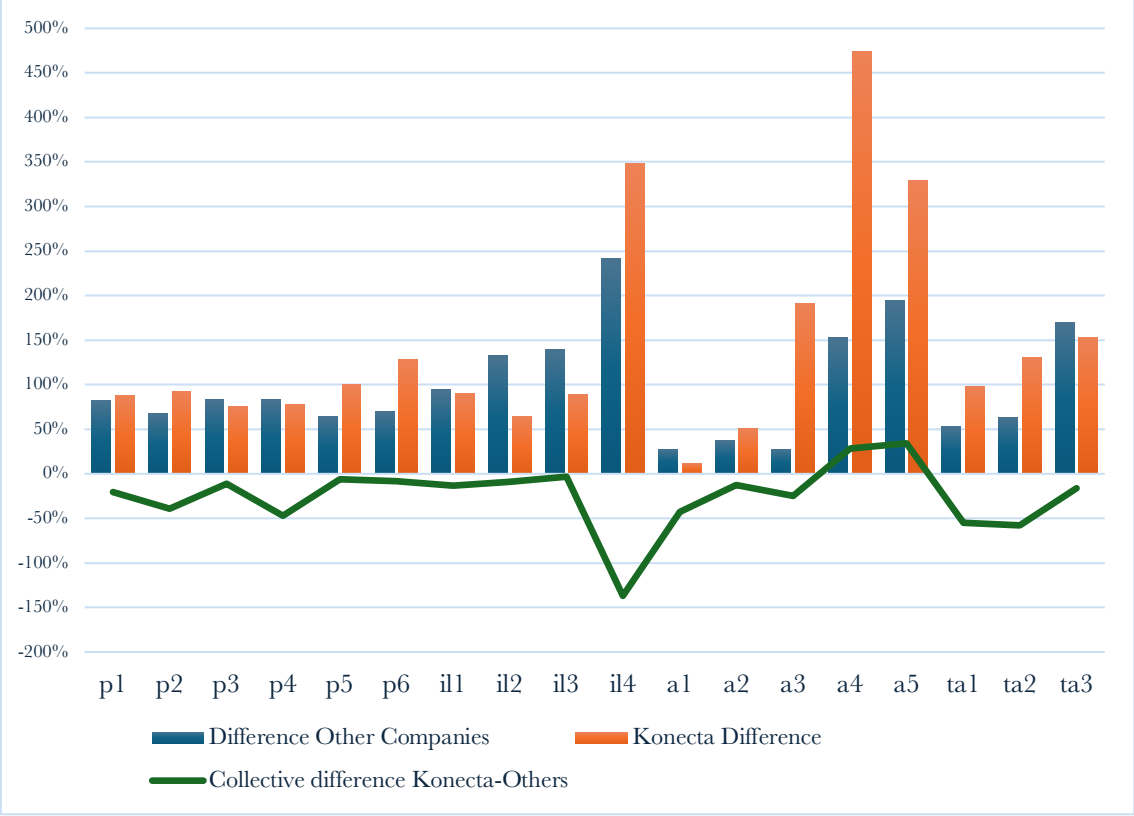
	Other companies		Konecta Peru	
	Not harassed	Harassed	Not harassed	Harassed
Presenteeism				
Q1 Have you had difficulty concentrating at work?	60.9	81.1	57.1	85.4
Q2 Have you been very distracted at work?	51.9	74.5	46.7	73.0
Q3 Have you had any concerns that have affected your work?	61.2	79.5	56.9	77.4
Q4 Have you been working slower than usual?	57.3	75.9	47.8	71.5
Q5 Have you been tired, exhausted at work?	73.3	89.4	67.3	88.3
Q6 Have you been without energy to work?	65.7	83.2	58.2	87.6
Labor incidents				
IL1 Have you had any difficulties in performing your job?	36.0	57.3	31.8	61.3
IL2 Have you had any problems with the quality of your work?	28.4	51.9	30.4	48.2
IL3 Has your boss ever complained/ reprimanded you for your performance?	23.9	42.5	25.3	36.5
IL4 Have your colleagues complained/admonished you for your performance?	10.9	24.9	5.9	18.2
Absenteeism and tardiness				
A1 She was absent because she was sick or had some ailment or health indisposition.	58.2	68.9	58.4	62.0
A2 Failed to attend to your physical or mental health.	47.9	58.2	43.5	62.0
A3 Missed to address legal issues.	12.3	16.0	9.6	22.6
A4 Missed to avoid running into someone from work.	1.5	3.5	2.1	5.8
A5 Missed because he no longer feels well at work.	5.9	17.0	8.1	29.9
T1 Did not miss, but arrived late or was less than 1 hour late.	46.6	56.4	36.9	58.4
T2 Did not miss, but arrived late or was late by 1 to 2 hours.	15.7	20.8	12.1	23.4
T3 Did not miss, but was late or more than 2 hours late.	6.2	11.8	5.9	13.9

Note: Values are percentages.

Comparing both groups, it is observed that, in general, fewer non-assaulted workers at Konecta lose productivity days. However, more assaulted workers at Konecta lose productivity. In other words, when there is no WSH, Konecta has better performance indicators than the other companies, but when there is WSH, it has more critical indicators. Comparing the impact of WSH on the number of workers who lose productive days, there is an overall difference in the number of workers who lose productivity of 37.5% in other companies. In contrast, in Konecta Peru, the difference is 53.2%.

This paradoxical result is expected because, as explained in the theoretical framework, prevention programs tend to eliminate first the cases of mild sexual harassment, leaving the more serious ones as remnants. This produces a double effect: it reduces the lost days of workers without WSH but intensifies the lost days of workers still harassed, widening the gap between the two groups. This difference is seen when comparing the average number of days lost per group, finding that, at the individual level, Konecta has more average days lost than the other companies. However, at the collective level, Konecta has better indicators (see Figure 1).

Figure 1
Percentage differences in the number of days lost between harassed and non-harassed workers (individual level) by company, and the number of days lost at the collective level.



Note: In Konecta (orange bars), the difference in days lost between harassed and non-harassed workers is higher than Other companies (blue bars). This suggests that, at the individual level, harassed workers at Konecta suffer a more significant loss of productivity. At the collective level (green line), however, Konecta shows a lower loss of productive days than other companies, indicating that total productivity is better overall.

On the other hand, the same trend can be seen in all indicators of intention to quit and in counterproductive behaviors related to production deviation and sabotage in Konecta and the other companies. This trend is more accentuated among harassed workers, as detailed in Table 9.

Except for attrition intention indicators (which tend to be very high in the sector to which Konecta belongs), the other counterproductive behaviors such as sabotage or productive deviation, have similar patterns to lost days.

- Intention to quit: In both companies, the intention to quit is significantly higher among workers who have experienced WSH. In Other companies, 76.4% of those harassed have thought about quitting their job, compared to 52.0% of those who have not been harassed. In Konecta Peru, these values are 77.6% and 58.6%, respectively. Similarly, a higher percentage of harassed workers in both groups have been looking for a new job and would quit their job if they could. This suggests that WSH is a determining factor in job dissatisfaction and intention to leave.
- Sabotaging behaviors: Although less prevalent than intention to quit, sabotage behaviors also show a higher incidence among harassed workers. In Other companies, 10.5% of harassed employees intentionally wasted company materials/supplies, compared to 5.0% of non-harassed employees. At Konecta Peru, this difference is even more pronounced (16.1% versus 1.9%). This pattern is repeated in other sabotage behaviors, such as intentionally damaging a piece of equipment or littering the workplace.
- Production deviation: Production deviation, which includes doing work poorly on purpose, working slowly, and not following instructions, is also more prevalent among harassed workers. In Other companies, 19.5% of harassed workers worked slowly on purpose, compared to 9.5% of non-harassed workers. Konecta Peru's percentages are 24.8% and 6.4%, respectively.

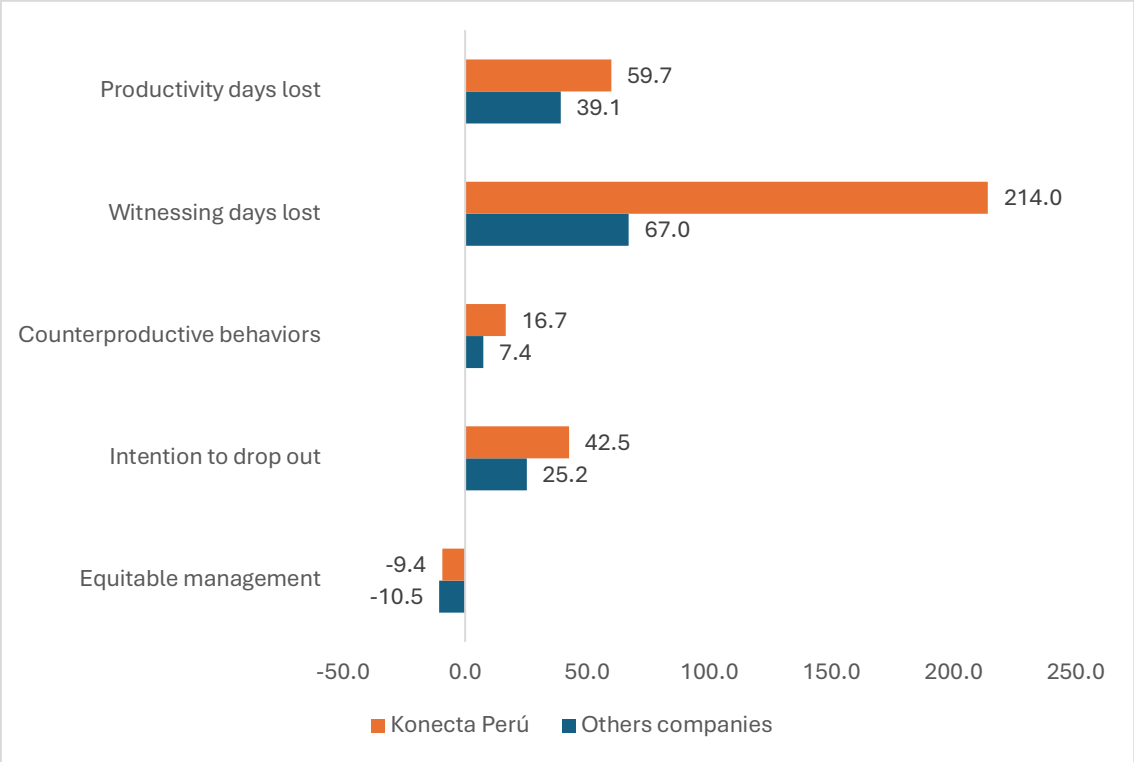
Table 9
Intention to quit and counterproductive behaviors of sabotage and production deviation, according to experience of sexual harassment at work (Percentages)

	Other companies		Konecta Peru	
	Not harassed	Harassed	Not harassed	Harassed
Intention to drop out				
Have you thought about quitting your job?	52.0	76.4	58.6	77.6
Have you been looking for a new job?	42.5	70.4	51.4	71.5
If you could, would you quit your job?	49.2	76.9	53.5	83.2
Sabotage				
Did you intentionally waste company materials/supplies?	5.0	10.5	1.9	16.1
Did you intentionally damage a piece of equipment or company property?	2.3	2.5	1.1	2.2
Did you litter or litter on purpose at your workplace?	1.5	2.2	0.8	5.8
Production variance				
Intentionally, did you do your job badly?	1.6	3.4	2.5	10.9
Intentionally, did you work slowly?	9.5	19.5	6.4	24.8
Intentionally, did you not follow the instructions given at work?	5.7	12.4	3.2	15.3

Note: Values are percentages.

Figure 2 presents -in summary- the percentage changes associated with sexual harassment at work (WSH) in Konecta Peru and other companies. These data reflect the percentage differences in averages between sexually harassed workers and those who have not experienced harassment, allowing a clear comparison of the impacts of WSH in both work contexts.

Figure 2
Average percentage changes associated with WSH (individual costs)



Note. For each group, the percentage reflects the difference in the comparison of averages between sexually harassed and harassment-free workers.

The results indicate that harassed workers in Konecta Peru lose 59.7% more days of work productivity compared to 39.1% in other companies. This difference suggests that the impact of harassment in terms of lost productivity is greater at Konecta Peru, possibly due to the higher incidence of remaining cases and the substantial improvement in the harassment-free group.

The impact of witnessing WSH in colleagues is significantly higher in Konecta Peru, with a 214% increase in lost days compared to 67% in other companies. This result is to be expected, as prevention programs tend to create a more sensitive or reactive work environment to WSH incidents, with a greater willingness of colleagues to be alert and supportive when they detect cases, which affects -indirectly- productivity in a more pronounced way.

In addition, counterproductive behaviors increased by 16.7% among harassed workers at Konecta Peru, compared to 7.4% at other companies. This indicates that workers at Konecta respond to WSH with greater disruption to their work

activities, reflecting an environment that is more affected by harassment but increasingly aware of organizational justice.

At Konecta Peru, the intention to defect is notably higher, with a 42.5% increase among harassed workers compared to 25.2% in other companies. This finding suggests that WSH has a more severe impact on worker retention at Konecta Peru, which may imply the need to further improve support and retention strategies, even more so in a high-turnover sector such as Konecta.

On the other hand, among workers who have been harassed, the perception of fair management decreased by 9.4% in Konecta, Peru, and by 10.5% in other companies. Although the decrease is similar in both groups, the result suggests that WSH negatively affects the perception of fairness in management, which could affect organizational culture and trust in management.

Overall, the results show that even though the prevalence of WSH is lower at Konecta, the negative impacts of harassment, in terms of lost productivity days, days lost due to witnessing WSH, counterproductive behaviors, and intention to quit, are more pronounced compared to other companies. This may be due to several reasons already theoretically foreseen, including the higher average individual cost of the most serious cases of harassment, greater awareness and sensitivity towards WSH at Konecta, and a more reactive and attentive work environment to WSH incidents. However, increased expectations also result in a more critical and negative perception when WSH incidents occur.

4.6. Model of change

Table 10 presents the direct and indirect effects of workplace sexual harassment on lost labor productivity in Konecta Peru and other companies. The results show that, although the magnitude of some effects varies, the change mechanism is consistent in both groups.

Direct Effects. WSH significantly impacts the generation of counterproductive behaviors in both companies. In Konecta, the coefficient is 0.239 ($p < 0.001$), while in other companies it is 0.272 ($p < 0.001$), with no significant difference between the groups ($p = 0.401$). Likewise, WSH increases the intention to drop out, with coefficients of 0.263 in Konecta and 0.282 in other companies ($p < 0.001$ in both cases), and the difference is not significant ($p = 0.363$).

The direct impact of WSH on lost productivity is greater in Konecta ($b = 0.195$, $p < 0.001$) than in other companies ($b = 0.121$, $p < 0.001$), although the difference is not significant ($p = 0.233$). Counterproductive behaviors result in significant productivity loss, with a larger effect in other companies ($b = 0.238$, $p < 0.001$) compared to Konecta ($b = 0.165$, $p < 0.001$), but the difference is not significant ($p = 0.177$). Attrition intention also has a strong impact on productivity loss, with coefficients of 0.381 in Konecta and 0.321 in other companies ($p < 0.001$ in both cases), and the difference is not significant ($p = 0.137$).

Table 10
Direct and indirect effects of workplace sexual harassment on lost work productivity

Route of change	Konecta	Other companies	Diff.	P. Sig.
Direct effects				
WSH→ Counterproductive Comp.	0.239**	0.272**	-0.034	0.401
WSH→ Attrition intention	0.263**	0.282**	-0.020	0.363
WSH→ Lost productivity	0.195**	0.121**	0.074	0.233
Counterproductive comp.→ Lost Productivity	0.165**	0.238**	-0.073	0.177
Attrition intention→ Lost productivity	0.381**	0.321**	0.060	0.137
Indirect effects				
WSH→ Attrition Intention→ Lost Productivity	0.100**	0.091**	0.009	0.377
WSH→ Comp. Counterprod.→ Lost Productivity	0.039**	0.065**	-0.025	0.197
Total effects				
WSH→ Counterproductive Comp.	0.239**	0.272**	-0.034	0.401
WSH→ Attrition intention	0.263**	0.282**	-0.020	0.363
WSH→ Lost productivity	0.334**	0.276**	0.058	0.234
Counterproductive comp.→ Lost Productivity	0.165**	0.238**	-0.073	0.177
Attrition intention→ Lost productivity	0.381**	0.321**	0.060	0.137

Note. Partial least squares structural variance equations. R^2 : Other companies (Counterproductive Comp. = 0.074; Attrition Intention = 0.080, Lost Productivity = 0.25), Konecta (Counterproductive Comp. = 0.057; Attrition Intention = 0.069, Lost Productivity = 0.294). Values for Konecta and other companies are standardized beta coefficients. Significance ** $p<0.001$

Indirect Effects. The analysis of indirect effects shows that intention to defect mediates the effect of WSH on lost productivity, with coefficients of 0.100 in Konecta and 0.091 in other firms ($p < 0.001$ in both cases), with no significant difference (0.009, $p = 0.377$). Similarly, counterproductive behaviors mediate the effect of WSH on lost productivity, with coefficients of 0.039 in Konecta and 0.065 in other firms ($p < 0.001$ in both cases), and the difference of -0.025 is not significant ($p = 0.197$).

Total Effects. The total effects of WSH on counterproductive behaviors are significant and similar in both companies ($b = 0.239$ in Konecta and 0.272 in other companies, $p < 0.001$ in both cases), without a significant difference ($p = 0.401$). Similarly, the total effects of WSH on intention to defect are comparable ($b = 0.263$ in Konecta and 0.282 in other companies, $p < 0.001$ in both cases), with a non-significant difference ($p = 0.363$).

The total impact of WSH on lost productivity is significant in both groups, being higher in Konecta ($b = 0.334$, $p < 0.001$) compared to other companies ($b = 0.276$, $p < 0.001$). However, the difference of 0.058 is not significant ($p = 0.234$). Counterproductive behaviors and intention to defect have a significant impact on productivity loss in both groups, with coefficients of 0.165 and 0.238 ($p < 0.001$) for counterproductive behaviors and 0.381 and 0.321 ($p < 0.001$) for intention to defect in Konecta and other companies, respectively.

These results show the theoretical consistency of the causal path of the consequences of WSH, which not only produces direct effects on productivity but also adds indirect effects by increasing counterproductive behaviors and turnover probabilities. These combined (total) effects cause WSH to have a greater impact on productivity (From b=0.195 to b=0.334 at other firms and from b=0.121 to b=0.276 at Konecta). Despite the reduction in WSH prevalence and costs at Konecta Peru, the persistence of these effects is evidence that the mechanism of change is consistent. This underscores the need for interventions that reduce the prevalence and incidence of WSH and mitigate its residual and structural effects on the organization.

4.7. Costs and profitability

4.7.1. Productivity Cost Savings

Table 11 analyses the prevalence and costs of workplace sexual harassment (WSH) in Konecta compared to other companies, using the direct method (unweighted means) and regression adjustment. Although both models show positive results for Konecta Peru compared to other companies, the regression-adjusted model should be considered more reliable because it can control for confounding variables and provide a more accurate estimate of the impact of preventive measures.

Unadjusted comparisons show that Konecta has a significantly lower prevalence of WSH (22.5%) compared to other companies (30.1%), representing a reduction of 25.2%. Konecta has an 11.2% increase in lost productivity days per person due to WSH, with 2.97 days compared to 2.67 days in other companies. At Konecta, there are fewer female workers affected by WSH per 100 female workers (66.8) compared to other companies (80.4), representing a reduction of 25.2%. Lost productivity per full-time worker is lower at Konecta (28.3 days) compared to other companies (34.0 days), representing an improvement of 16.9%.

However, **when adjusting for differences and controlling for demographic and labor variables, the results maintain the trend** but decrease the difference. Konecta has a 21.1% lower prevalence than the other companies. Konecta has a 12% increase in lost productivity days per person due to WSH, with 2.7 days compared to 2.4 days in other companies. At Konecta, there are fewer female workers affected by WSH per 100 female workers (60.8) compared to other companies (68.7), representing a 21.1% reduction. Lost productivity per full-time worker is lower at Konecta (25.7 days) compared to other companies (29.1 days), representing an improvement of 11.6%.

Table 11
Estimates of WSH Business Productivity Costs and Prevention Effectiveness

	Other companies	Konecta Peru	Difference (Prevention effectiveness)	Difference in %
Direct model without adjustments				
Prevalence of WSH	30.1	22.5	7.6	25.2
Days lost due to WSH (per person)	2.7	3.0	-0.3	-11.2
Per 100 female workers	80.4	66.8	13.5	16.9
WSH-affected population (N=12,191)	3,669.5	2,743.0	926.5	25.2
Projected Costs (lost days)	9,797.5	8,146.6	1,650.9	16.9
Lost productivity (full-time equivalent per capita)	34.0	28.3	5.7	16.9
Value-added annual cost WSH (soles) [b]	1,046,091.6	869,823.1	176,268.5	16.9
Model matching differences				
Prevalence of WSH [a]	28.5	22.5	6.0	21.1
Days lost per WSH (per person) [a]	2.4	2.7	-0.3	-12.0
Per 100 female workers	68.7	60.8	7.9	11.6
WSH-affected population (N=12,191)	3,474.4	2,743.0	731.5	21.1
Projected costs (days lost)	8,373.4	7,406.0	967.4	11.6
Lost productivity (full time equivalent per capita)	29.1	25.7	3.4	11.6
Value-added annual cost WSH (soles) [b]	894,033.6	790,748.2	103,285.4	11.6

Note: [a] see Tables A1 and A2 in Annex
[b] Estimates based on minimum salary 2023 (1,025 soles) x 15 salaries, including bonuses and service time. Productivity factor (x2). Annual per capita labor productivity = 34,000 soles (IPE, 2023).

Lost productivity, measured in terms of full-time equivalents per capita, also shows a significant advantage for Konecta Peru. In the other companies, lost productivity reached 29.1 full-time equivalent people, while in Konecta Peru it was 25.7 people. This 3.4-person reduction in lost productivity, equivalent to an 11.6% improvement, indicates that Konecta's HSL prevention policies have effectively minimized the negative impact on labor productivity.

The value-added loss due to HSL is a crucial metric for understanding the economic impact of harassment on the company. In the other companies, the value-added lost was 894,033.6 soles, while in Konecta Peru, it was significantly lower at 790,748.2 soles. The difference of 103,285.4 soles less at Konecta represents an improvement of 11.6%. This reduction in lost value-added suggests that Konecta has been able to mitigate the economic losses associated with HSL more effectively compared to other companies.

4.7.2. Savings on personnel turnover costs

Overall, the turnover rate of *call center companies* is one of the highest globally, hovering around 38% in the United States (PR Newswire, 2023). A critical aspect of prevention's cost-effectiveness is its potential to reduce turnover. Indeed, results

show that the implementation of preventive programs to reduce workplace sexual harassment (WSH) at Konecta has had a significant impact on staff retention.

Two alternative methods are used to calculate this impact and estimate the personnel turnover costs saved:

A. Indirect method

1. The average dropout intention of women at Konecta varies depending on whether they are harassed. Non-harassed women have a 22.9 percentage point lower intention to leave. In other words, WSH increases the intention to leave by 23 additional female workers for every 100.
2. This value is significant, as various meta-analyses of 155 studies show that intention to quit predicts turnover, with correlations between 0.31 and 0.515. This suggests that the rate of attrition among staff with the intention to quit could range from 9% to 25%. However, considering predictive models with caution, this value could be between 4% and 12.2% (Dalton et al., 1999).
3. Assuming that only 10% of the workers who intend to leave do so, it can be estimated that, without the prevention program, 2.29% of the harassed workers would have left the company.
4. Regarding the number of women who stopped being harassed at Konecta thanks to the prevention program, 2.29% is applied to calculate the number of women retained [731.5 x 0.0229]. This means that because Konecta's program succeeded in reducing WSH, approximately 16.8 women retained their employment with the company. Had it not been for the program, this group of women would have rotated.

B. Direct method

1. Using structural equations, we found that sexual harassment at work predicts 6.9% of turnover intention in the sample of female Konecta workers. In other words, out of every 100 women who intend to leave, almost seven would do so because of harassment.
5. Of the total number of women harassed at Konecta (n=2,743), 71.5% have intentions of leaving. From this resulting group, we calculate the 6.9% with intentions of leaving due to sexual harassment and then assume (as in the previous case) that only 10% of this group leaves the company. [(2743 x 0.715) x 0.069 x 0.10]. This means approximately 13.53 women maintained employment with the company thanks to prevention. Had it not been for the program, this group of women would have rotated.

C. Savings from withholding

Retention between 13.53 and 16.8 women represents a significant reduction in the costs associated with turnover, which usually include separation, replacement, training and lost productivity costs. Turnover costs often vary widely depending on the level of job complexity, but they can be high (Cascio & Boudreau, 2011).

For example, after reviewing 31 research studies, Bahn and Sanchez (2020) find that the average cost of turnover in the USA represents 23.5% of the position's annual salary.

In Konecta Peru's case, the turnover cost is approximately 8.72% of the worker's annual salary [19,399.5 x 0.0872], so the total annual savings would range between PEN 22,887 and 28,419 soles. These savings reflect the economic efficiency of the preventive program and the added value of maintaining a safer and healthier work environment for the workers.

Konecta's efforts to prevent WSH have resulted in tangible economic benefits regarding productivity recovery and employee turnover reduction. This underscores the importance and effectiveness of such initiatives at the organizational level.

4.7.3. Return on investment

To evaluate the financial impact of the measures implemented to improve the work environment and reduce sexual harassment at Konecta Peru, a Return on Investment (ROI) analysis was conducted using two main categories of benefits: the opportunity cost recovered and the savings in staff turnover.

The opportunity cost of each worker absent for one year was for Konecta in 2023 the equivalent of (PEN 681.75 x 12 months) PEN 8,181 soles. This value is multiplied by the equivalent number of workers who stopped being assaulted in Konecta thanks to the prevention program (3.4 people x 8,181 soles), amounting to PEN 27,815.4 soles. To this value is added the savings in personnel turnover, giving accumulated values between PEN 50,702.4 and PEN 56,234.4 soles. On the other hand, the initial investment to implement these measures in 2023 was approximately PEN 45,137 soles.

Using the standard formula [ROI = (Total Benefits - Investment) / Investment], a positive ROI is calculated between 12.33 and 24.58%. This implies that, for each sol invested in the program to reduce sexual harassment, Konecta Peru recovers between 1.12 and 1.24 soles. These results confirm the return on investment and highlight the added value of fostering a safe and respectful work environment, which improves productivity and reduces costs associated with staff turnover.

In conclusion, the investment has proven highly profitable, contributing significantly to the company's financial stability and social sustainability.

4.7.4. Changes over time

To fully understand the impact of the workplace sexual harassment reduction program at Konecta, it is crucial to analyze changes over time, not just in a specific year. Analysis of a single year, such as 2023, provides a helpful snapshot, but needs to capture the cumulative progress and benefits of ongoing interventions. To illustrate this point, one can examine change since the program's inception six

years ago. Unfortunately, no baseline is available. The closest is a corresponding measurement by GenderLab for the year 2020-2021. Indeed, in 2021, Konecta conducted a diagnostic with the support of GenderLab to assess the prevalence of workplace sexual harassment (HSL) among its female employees. This study with more than 1,870 female workers revealed a prevalence of 34% during the last 24 months, coinciding with the national prevalence of sexual harassment in companies, according to the study by Vara-Horna et al. (2024).

Despite the program being six years old, data through 2021 still revealed high rates of workplace sexual harassment (HSL), suggesting that tangible financial benefits may not be evident in the early years of investment. Indeed, in the early years, the ROI may have been negative, given that the upfront costs of the program may outweigh the immediate savings. Therefore, although the ROI for the year 2023 is positive, it is crucial to maintain a long-term approach to maximize the program's benefits. Periodically assessing the impact and adjusting strategies according to changing needs will ensure the sustainability of the results achieved and the continued compliance with occupational welfare and safety standards at Konecta.

V. Conclusions and recommendations

This research provides consistent evidence of the effectiveness and cost-effectiveness of the preventive measures against sexual harassment in the workplace (WSH) implemented by Konecta Peru. Through comparative analysis with a control group, several important findings have been identified that not only underline these policies' ethical and social value but also their positive impact on business efficiency and sustainability.

This study represents a valuable contribution from Konecta Peru to organizations and society by making its case to inform - with evidence - how it works and what results to expect in WSH prevention processes. Soon, incorporating evaluation as a regular practice will allow for more robust and accurate evidence, strengthening estimates and implementing effective preventive policies.

Reduction of WSH prevalence

The study shows that Konecta Peru achieved a significant 21.2% reduction in WSH prevalence compared to the control group. However, when comparing Konecta's data over time (2021-2023), the reduction in prevalence is more pronounced (33.8%). This progress underscores the program's effectiveness and demonstrates that maintaining a prevention program allows Konecta to position itself against other companies better and achieve superior performance compared to its historical performance.

This finding is consistent with previous research suggesting that well-designed and sustained preventive programs can reduce the incidence of WSH in the workplace (McGregor et al., 2019; Vara-Horna et al., 2023, 2024). The decrease in prevalence reflects the effectiveness of the measures implemented and the positive change in organizational culture toward a safer and more respectful work environment.

However, this reduction is also evidence of the complexity of the problem. While there has been improvement in reducing mild indicators of sexual harassment, more intense indicators-such as sexual coercion-remain a considerable challenge; this is because WSH is a manifestation of gender discrimination and violence, deeply rooted in social and cultural patterns that also permeate the organizational culture of companies. These patterns create inequitable microcosms that can tolerate, justify, and encourage WSH. In this sense, prevention must be transformative, focusing on addressing and changing these structural causes. This deep and meaningful change takes time, so it warrants sustained prevention.

WSH is highly resistant to change because it is rooted in inequity and sociocultural patterns that permeate organizations. In this sense, implementing long-term sustainable programs is crucial to maintaining a safe and productive work environment free of sexual harassment. Actions that are not programmatic or intensive in prevention are unlikely to produce substantial changes.

Impact on labor productivity

The results also show that the reduction in WSH directly impacted labor productivity. Konecta Peru recovered 967 days of annual labor productivity, equivalent to the productivity of 3.4 full-time female workers. This result is significant, as it demonstrates that prevention policies can translate into tangible and quantifiable benefits for the company. The decrease in productivity costs due to WSH suggests that workers feel safer and more supported, reflected in better work performance and lower absenteeism.

However, the preventive program has not only reduced costs but has also transferred them. This is evident in the increased costs of staff who witness WSH. Staff who witness their colleagues being harassed may face negative consequences, such as additional stress and time spent on the reporting and victim support processes, which affects their productivity and well-being. In addition, the support witnesses provide to victims may require additional resources, such as time away from their work responsibilities. This phenomenon increases the costs associated with personnel, as witnesses may need extra support to manage the stress and emotional repercussions of testifying, as well as compensation for the time and effort devoted to these processes.

Savings in personnel turnover costs

In addition to improved productivity, the study reveals that Konecta Peru achieved significant annual savings in staff turnover costs, estimated at between PEN 22,887 and 28,419 soles per year. Reducing staff turnover reduces the direct costs of hiring and training new staff and contributes to talent retention and team stability. These financial savings reinforce the argument that investing in prevention is an ethical decision and a viable business strategy.

Cost-effectiveness of prevention

Implementing measures to improve the work environment and reduce sexual harassment has proven to be a profitable and strategic investment for the company. The Return on Investment (ROI) analysis reveals a significant positive return, ranging from 12.33% to 24.58%. This translates into a return of between 1.12 and 1.24 soles for each sol invested, confirming that the actions taken are financially viable and beneficial for the work environment.

These results are comparable to other corporate wellness programs: general wellness programs (ROIs of 1.5 to 3 times the investment cost), health and fitness programs (2 to 4 times), mental health programs (2 to 6 times the cost), stress reduction and work environment improvement programs (1.5 to 5 times the investment). It is important to note that these ROIs include both tangible benefits (productivity) and intangible benefits, such as improved team morale, enhanced company reputation, and increased ability to attract and retain talent. These intangible costs have not been quantified in this study, although it is recognized that they contribute significantly to the long-term success of company wellness

initiatives. If these intangible returns were included, the ROI would be much higher.

The ROI obtained by Konecta highlights several key points. First, the increase in labor productivity and reduced staff turnover indicate that a safe and respectful work environment improves staff well-being and directly and positively impacts the company's operational efficiency. These results underscore the importance of prevention policies and the need for continued commitment to maintaining an inclusive and safe work environment.

Second, in addition to the direct financial benefits, the positive impact on the company's reputation is a crucial factor that should be considered. A work environment that promotes equality and respect can attract and retain high-quality talent, translating into superior performance and a competitive advantage in the marketplace. Such policies also strengthen employee loyalty and commitment, creating a stronger and more cohesive organizational culture. It is important to mention that intangible benefits, although not quantified in this analysis, also play a significant role. Improved employee morale, reduced stress, and increased job satisfaction can lead to increased productivity and lower absenteeism, which further benefits the company in the long run.

In conclusion, investments in improving the work environment and reducing sexual harassment are ethically sound and result in clear economic benefits. Companies should consider these policies an integral part of their long-term sustainability and development strategy, thus ensuring a fair, safe, and productive work environment for all employees.

Change over time

Implementing the workplace sexual harassment reduction program at Konecta has shown encouraging results in reducing the prevalence of harassment and associated costs. Between 2021 and 2023, a significant reduction of 33.8% in the prevalence of workplace sexual harassment (HSL) was observed, decreasing from 34% to 22.5%. This reduction has led to considerable economic savings for the company.

Although the program has been in place for six years, data through 2021 showed high percentages of workplace sexual harassment (HSL), suggesting that tangible financial benefits may not be evident in the early years of investment. Indeed, in the early years, the ROI may have been negative, given that the initial costs of the program may outweigh the immediate savings. Therefore, effective program return requires continued investment over time for the benefits to be fully realized.

To ensure sustainability and maximize program benefits, ongoing periodic evaluation is recommended. This will identify areas for improvement, adjust strategies according to the changing needs of the work environment, and consolidate the gains achieved. In addition, the regular evaluation will ensure that

the policies implemented remain effective and aligned with the company's objectives of promoting a safe, inclusive, and productive work environment.

Implications for companies

The results of this study have important implications for business policies and practices.

First, they highlight the need to integrate WSH prevention as a central corporate strategy component, not just as a response to external legal pressures. Companies that invest in preventive policies fulfill their legal and ethical responsibilities and benefit economically through productivity improvements and associated cost reductions.

Second, the findings suggest that WSH prevention can and should be integrated as a regular business practice and not just as a philanthropic initiative. By migrating the motivation for prevention from a philanthropic to a strategic position, companies can ensure these initiatives' long-term sustainability and effectiveness.

Third, the findings underscore that WSH prevention should not only focus on reducing immediate incidents but also on transforming the underlying organizational structures and cultures that allow WSH to persist. This involves developing and maintaining a culture of equality and respect, providing ongoing training, and promoting equitable management policies.

The results indicate that equitable management understood as the evaluation of fair, respectful, open, and inclusive behaviors that are daily and very frequent according to what women workers observe from their immediate superiors, has a significant impact on the reduction of WSH prevalence and incidents, as well as on the improvement of several productivity and work behavior indicators. Therefore, it is critical to promote an organizational culture that values respect and gender equality. Companies should train all personnel, especially leaders and supervisors, on the importance of preventing WSH and identifying and adequately handling harassment cases.

Methodological challenges

This research represents the world's first evidence of the cost-effectiveness of sexual harassment prevention in the workplace. Although it has methodological weaknesses inherent in the case-control design, its rigorous measurement, standardized ethical procedures, solid conceptual framework, and robust analysis provide confidence in the results.

The study reveals that one of the main methodological limitations is the lack of a culture of evaluation in companies. This lack of evaluation translates into a lack of baselines and control groups, making it difficult to measure the impact of preventive measures accurately.

To strengthen the evidence on the cost-effectiveness of WSH prevention, longitudinal studies that include clear baselines and randomized control groups are needed. In addition, it is crucial to develop and use validated measurement tools that can accurately capture the prevalence of WSH and its economic and social impacts. This requirement inevitably calls for collaboration between researchers, companies, and policymakers to facilitate data collection and implement best practices in WSH prevention.

Companies should adopt WSH policies that include continuous monitoring mechanisms and the establishment of baselines for the ongoing measurement of the prevalence, incidence, and costs associated with WSH. This will allow for determining the impact of preventive initiatives and providing rigorous evidence of their effectiveness and cost-effectiveness. In addition, periodic evaluation of preventive programs is essential to identify areas for improvement, adjust strategies as needed, and ensure that they are always aligned with the organization's changing needs.

Conclusions

In conclusion, this research confirms that WSH prevention is an ethical and legal necessity and a cost-effective strategy for companies. Effective prevention policies can significantly reduce the prevalence of WSH, improve labor productivity, and generate savings in turnover costs. Integrating these measures as an integral part of business strategy can help create safer, more equitable, and productive work environments, benefiting employees and the organization.

Moving forward, it is essential that companies continue to invest in WSH prevention and that more research is developed to provide an even stronger evidence base. Organizations can meet their social responsibilities and improve their long-term efficiency and sustainability with a proactive, data-driven approach.

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Annexes

1. Konecta Peru case

Konecta Peru is a leading company providing user experience services and outsourcing solutions. The company offers a wide range of services, including: Customer Service: Personalized customer care and support solutions. Customer Relationship Management (CRM): Comprehensive CRM services to enhance the user experience. Telemarketing: Direct marketing strategies through telephone and digital channels. Business Process Outsourcing (BPO): Outsourcing of administrative and operational processes to optimize business efficiency.

In 2023, the company had an estimated workforce of 20,000 employees, 12,191 of whom were women. Konecta Peru operates in several regions, with a significant presence in Lima and Northern Peru (Lambayeque, Piura, La Libertad).

Founded over a decade ago, the company has established itself as a benchmark in the industry for its commitment to gender equity and labor inclusion. Konecta Peru has implemented a comprehensive program called "Basta Ya" (Enough is Enough) since 2018 to prevent gender-based violence and sexual harassment in the workplace (WSH). This program includes: 1. Awareness and Training: Constant training to 100% of employees through the DidáctiK! platform, which includes workshops and seminars on respect and gender equality. 2. Psychological and Legal Support: Attention in cases of violence, psycho-labor support, and free legal assistance through the Legal Clinic. 3. Job Placement for Women Victims of Violence: Employment opportunities and support for women victims of violence and trafficking. In addition to "Basta Ya", Konecta has implemented other programs such as LIFE (Female Leadership): Empowerment and professional development for women. Them (New Masculinities): Redefining male roles to promote gender equity. InKluye (Diversity and Inclusion): Promoting diversity and inclusion in the workplace. These efforts have been recognized by Great Place to Work Peru, positioning Konecta as a leader in promoting a safe and equitable work environment.

2. Adjusted estimates

Table A1 shows the regression results to assess the differences in the prevalence of Sexual Harassment at Work (WSH) between Konecta Peru and other companies, both without adjustment and controlling for covariates. The results without adjustment show that the prevalence of WSH is significantly lower in Konecta compared to other companies (Coef. = -0.076, $p < 0.01$), a value of 7.6 percentage points. The constant indicates an average prevalence of WSH in the reference group (30.1%). Controlling for covariates, the prevalence of WSH remains significantly lower in Konecta (Coef. = -0.060, $p < 0.05$), a value of 6 percentage points.

Table A1
Differences between Konecta Peru and other companies in the prevalence of WSH

Variables	Coefficient	Std. E.	t	[95% conf.	interval]
No adjustment [a]					
Konecta Peru	-0.076	0.023	-3.350**	-0.120	-0.031
Constant	0.301	0.014	22.180**	0.274	0.328
With covariate control [b]					
Konecta Peru	-0.060	0.024	-2.520*	-0.107	-0.013
Equitable Management of Supervisors	-0.014	0.002	-7.250**	-0.017	-0.010
Intention to drop out	0.018	0.003	5.600**	0.011	0.024
Counterproductive behaviors	0.033	0.007	4.620**	0.019	0.047
WSH Witnesses	0.033	0.005	6.180**	0.023	0.044
Male boss	0.074	0.020	3.710**	0.035	0.113
Age	-0.006	0.001	-4.660**	-0.009	-0.003
Region					
Northern Region	-0.080	0.023	-3.570**	-0.125	-0.036
Length of service	0.029	0.009	3.330**	0.012	0.046
Telework					
Alternate home/office	-0.013	0.028	-0.450	-0.068	0.043
At home	-0.116	0.031	-3.750**	-0.176	-0.055
Constant	0.432	0.110	3.930**	0.217	0.648

[a] N = 1,681, F(1,1679) = 11.25, p<0.001, R^2 =0.0067
[b] N = 1,655, F(11,1643) = 33.01, p<0.001, R^2 =0.1810, ^{Adjusted} R2 = 0.1755, Root MSE = .40413

Table A2 evaluates the relationship between WSH and lost productivity days in two groups: Konecta and Other companies. The results are presented below in two models: one without adjustment and one with covariate control.

In the unadjusted analysis, WSH was significantly associated with an increase in lost productivity days in both groups. In Other companies, the coefficient was 2.675 days ($p < 0.001$), while in Konecta, the coefficient was slightly higher at 2.974 days ($p < 0.001$). When covariates were included in the model, WSH continued to be a significant predictor of lost productivity days in both groups. In Other companies, coefficient was 2.417 days ($p < 0.001$), and in Konecta, the adjusted coefficient was 2.705 days ($p < 0.001$).

The results show that WSH is a significant factor in productivity loss in both companies. In Other companies, each increase in WSH is associated with 2,675 additional days of lost productivity without adjustment and 2,417 additional days with covariate adjustment. At Konecta, these values are slightly higher, with 2,974 additional days without adjustment and 2,705 additional days with adjustment.

These differences reflect WSH's influence on organizational efficiency, highlighting the importance of implementing preventive and corrective measures to reduce WSH and, consequently, improve labor productivity. The consistency in

results across adjusted and unadjusted models reinforces the robustness of these findings.

Table A2
Differences between Konecta Peru and other companies in lost productivity days due to WSH

Variables	Other companies	Std. E.	Konecta	Std. Er.
No adjustment				
WSH prevalence	2.675***	0.331	2.974***	0.421
Constant	4.173***	0.182	3.468***	0.200
With covariate control				
WSH prevalence	2.417***	0.343	2.705***	0.445
Monthly income	0.000	0.099	0.000	0.193
Has children	0.171	0.358	-0.594	0.417
Boss's gender	-0.222	0.315	-0.130	0.360
Age	-0.055*	0.022	-0.005	0.026
People under the boss's command	0.002	0.005	-0.010	0.007
Northern Region	-0.983*	0.391	-0.622	0.375
Length of service	0.496***	0.131	0.319	0.178
Where you work				
Alternate home/office	0.533	0.421	-0.059	0.758
At home	0.822	0.750	-0.150	0.399
Education level	0.111	0.149	-0.242	0.184
Constant	3.886**	1.149	5.115***	1.217

Notes: Other companies: (N = 1,073), $F(1,1071) = 65.26$, $p < 0.001$, $R^2 = 0.0574$. Konecta: (N = 608), $F(1,606) = 49.92$, $p < 0.001$, $R^2 = 0.0761$. Significance: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.