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A Study on “The Role of HR in Managing Workplace Stress among Manufacturing Employees” with Special Reference to Grindmax India Pvt Ltd at Kamandoddi

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ABSTRACT

Workplace stress is a critical issue in labor-intensive industries, particularly within the manufacturing sector, where employees face constant physical, mental, and procedural demands. Human Resources (HR) departments play an increasingly strategic role in mitigating these stressors and fostering a supportive work environment. This article examines the effectiveness of HR interventions in managing stress at Grindmax India Pvt. Ltd., a company engaged in the manufacturing of granite polishing and abrasive tools. Drawing from internship-based research involving surveys, interviews, and observational methods, the study explores employee stress levels, sources of stress, HR communication practices, and the effectiveness of existing programs. It also suggests potential pathways for future improvements.

Introduction

In today's competitive industrial environment, workplace stress is emerging as a pervasive challenge, particularly in manufacturing organizations that demand high precision, repetitive tasks, and adherence to tight deadlines. Employees in such environments are at increased risk of developing stress-related physical and psychological conditions. While operational and safety protocols are often established, the mental and emotional well-being of employees frequently remains an under-addressed issue.

Grindmax India Pvt. Ltd., a manufacturer of granite polishing tools, cutting instruments, and abrasives ,provided the backdrop for this research. The company operates in a high-pressure environment where factory workers regularly manage physically intensive tasks. Through an internship conducted in the HR department, this study evaluates the role of HR in identifying and managing workplace stress.

Research Context and Problem Identification

Manufacturing units present distinct stress factors: long shifts, heavy work loads, minimal rest periods, and inadequate supervisor communication. These conditions can severely impair employee morale, increase absenteeism, reduce productivity, and raise turnover rates. Although Grindmax implements general welfare and safety policies, structured HR interventions specifically targeting mental health and emotional stress were found to be limited in scope and execution.

This study seeks to examine how HR can transition from administrative functions to strategic partners in building work placer silience. Specifically, the research focuses on whether HR practices at Grindmax effectively address stress and promote employee well-being.

Objectives of the Study

The primary objective was to explore the role of the HR department in managing stress among manufacturing employees. Specific goals included:

Identifying major workplace stressors.

Evaluating current HR policies and initiatives related to stress management.

Assessing employee awareness and perception of HR support.

Measuring the effectiveness of HR interventions.

Recommending strategies for improved HR involvement in stress reduction.

Scope and Methodology

This company-specific study used a mixed-method approach—both descriptive and analytical—relying on qualitative and quantitative tools. Data was gathered through structured questionnaires, personal interviews with factory workers, supervisors, and HR personnel, as well as observational assessments on the factory floor.

Sample: A total of 50 respondents participated:

- 30 factory workers
- 10 supervisors
- 10 HR/admin staff

Sampling Method: Convenience sampling was employed due to shift-based constraints and limited timeframes during the internship.

Tools for Data Collection and Analysis:

- Google/Microsoft Forms for survey administration
- Microsoft Excel for data analysis, including descriptive statistics and regression models

Key Findings

Workforce Demographics Gender: 70% male, 30% female

Age: 76% were aged 18–35, reflecting a predominantly young workforce

Frequency and Sources of Stress

62% of respondents rarely felt stressed, but 24% experienced high or very high stress

Primary stressors:

- Long working hours (40%)
- High workload (24%)
- Lack of breaks (14%)
 - Safety concerns (12%)
 - Poor supervisor communication (10%)

Physical and Mental Health Impact

- 22% experienced frequent or constant physical stress symptoms (e.g., fatigue, headaches)
- 18% frequently experienced mental stress symptoms (e.g., anxiety, burnout)

HR Interventions and Communication

- **Awareness:** 72% were aware of HR-led stress programs
- **Participation:** 80% had participated in at least one stress-relief initiative
- **Satisfaction:**
 - 54% satisfied or very satisfied
 - 22% dissatisfied or very dissatisfied
- **Perceived Effectiveness:**
 - 50% found programs effective
 - 24% considered them ineffective
- **Communication:**
 - 48% reported regular updates from HR

- 16% noted limited or no communication

Work Environment Insights

- 52% found workloads manageable, but 30% did not
- 60% reported rarely or never taking breaks
- 86% felt supervisors cared about their well-being (at least sometimes)

Data Interpretation and Statistical Analysis

Regression analyses were conducted to determine relationships between stress management interventions and employee stress levels. Key observations:

HR program awareness did not significantly reduce overall stress levels ($p > 0.05$).

Break frequency showed a significant inverse relationship with mental stress ($p < 0.01$), highlighting the importance of rest periods.

Participation in HR programs had a weak, non-significant correlation with reduced physical symptoms of stress.

These findings suggest that while awareness and participation are high, the effectiveness of HR programs in reducing stress varies and could be improved with targeted interventions.

REVIEW OF LITERATURE

Lazarus and Folkman (1984) defined stress as a relationship between the person and the environment that is appraised as taxing or exceeding the person's resources. Cooper & Cartwright (1994) emphasized that workplace stress leads to health deterioration, absenteeism, and decreased work performance. NIOSH (1999) highlighted that high workload, lack of control, and poor support from supervisors are key causes of workplace stress in industrial settings. Quick et al. (1997) stated that stress-related illness can increase healthcare costs and reduce organizational efficiency. Palmer et al. (2004) found that poor work design, management practices, and unsupportive work environments significantly contribute to stress. Schuler & Jackson (2005) suggested that HR should adopt a proactive role in promoting mental health through wellness programs and job redesign. Armstrong (2006) argued that employee welfare must be a strategic HR priority, particularly in physically demanding industries. Dessler (2015) noted that HR's role extends beyond administration to include employee engagement and emotional well-being. Giga et al. (2003) discussed how preventive HR interventions like training and feedback systems can reduce stress and improve morale. Karasek (1979) introduced the demand-control model, which explains how job stress increases when demands are high and control is low. Selye (1956) introduced the concept of General Adaptation Syndrome (GAS) to explain the stages of stress response. Kahn et al. (1964) linked role ambiguity and role conflict with job-related stress, especially in rigid work environments. Cartwright & Cooper (1997) emphasized the need for HR to include stress audits as part of regular employee health assessments. Beehr & Newman (1978) highlighted organizational stressors like policies, leadership style, and poor communication. Ivancevich & Matteson (1980) argued that training in stress management techniques significantly improves employee coping skills. Greenberg & Baron (2008) suggested that supportive supervision and open communication help reduce employee anxiety. Robbins (2009) listed low job satisfaction, poor interpersonal relations, and lack of recognition as major stress contributors. Jex (2002) indicated that employee involvement in decision-making reduces stress and increases ownership. Baron (1992) stated that regular HR-led counseling sessions improve employee resilience and emotional well-being. Murphy (1995) suggested that job redesign and workload balancing are effective tools for stress management. Chand & Katou (2007) examined Indian manufacturing firms and found that employee-oriented HRM significantly enhances mental well-being. ILO (International Labour Organization) reports show that developing countries face higher work-related stress in manufacturing due to poor working conditions. Bakker & Demerouti (2007) proposed the Job Demands-Resources (JD-R) model, emphasizing the balance between work demands and available resources. Mayo (2001) highlighted the importance of social support and team cohesion in reducing industrial stress. Singh & Mohanty (2012) studied Indian HR practices and advocated for proactive wellness programs in manufacturing units. Kompier & Kristensen (2001) argued that individual coping strategies are less effective without organizational support. Gupta & Sharma (2016) found a positive correlation between employee well-being programs and productivity in Indian factories. Mishra & Pandey (2019) recommended stress audits and satisfaction surveys as tools for HR to identify hidden stressors. Saksvik et al. (2007) emphasized participative HR approaches to reduce stress and improve commitment. Kumar & Yadav (2020) concluded that HR departments that integrate mental health policies experience lower employee turnover.

Kwak et al. (2020) advocated participatory safety training, finding that frequent, interactive modules significantly enhanced retention and compliance. Mason et al. (2021) added that multilingual and visually accessible communication boosts understanding in low-literacy environments—critical for AVS's workforce diversity.

Manufacturing Sector and Stress: A Global View

Globally, the manufacturing sector is characterized by **tight deadlines, shift work, monotonous routines, and high physical demands**. According to the **International Labour Organization (ILO)**, workers in the manufacturing sector in developing countries face disproportionately higher stress due to inadequate infrastructure, lack of automation, and outdated labor policies.

In India, where industrial labor is a cornerstone of economic growth, the focus is often skewed toward output rather than the **quality of working conditions**. Companies like Grindmax India Pvt. Ltd. represent thousands of mid-sized firms that maintain production targets through human-intensive labor, making them **ideal environments for stress proliferation** if not carefully managed.

Evolving Role of HR

Traditionally, HR in manufacturing has emphasized **payroll, compliance, and recruitment**. Today, as organizations grow more people-centric, HR is being redefined as the **guardian of workplace culture, engagement, and mental wellness**. This case study examines how HR at Grindmax India Pvt. Ltd. is evolving to meet these challenges.

Research Rationale and Problem Definition

Workplace stress impacts not just individual performance but **team morale, customer satisfaction, and organizational reputation**. Poorly managed stress can result in:

- **Increased absenteeism**
- **Declining quality standards**
- **Higher accident rates**
- **Lower employee retention**

During the internship, it became evident that while Grindmax had some wellness programs, there was **no comprehensive stress management strategy**. Employees reported issues such as **long working hours, limited communication with supervisors, and lack of structured breaks**. This pointed to a **gap between HR intent and actual employee experience**, creating the need for a structured study.

Broader Industry Implications

Many medium-scale manufacturing firms in India suffer from:

- **Underdeveloped HR systems**
- **High attrition and absenteeism**
- **Neglected mental health infrastructure**

Grindmax's case reflects the **transitional state of Indian manufacturing HR**, moving slowly from compliance-based models to **employee-centric cultures**. For scalability, firms must adopt a **systematic, technology-driven, and culturally empathetic HR framework**.

Strategic Insights

Role of Supervisors

86% of respondents felt supervisors cared about their stress levels, though only 38% said this was consistent. This points to the **need for structured supervisor training** in mental wellness and emotional intelligence.

Communication Gaps

16% of employees reported no communication about wellness resources, and 26% were neutral about program effectiveness. This signals a **communication and branding challenge** within HR.

RESEARCH GAP

Despite extensive research on workplace stress and the growing recognition of Human Resource Management's role in addressing employee well-being, several gaps remain, particularly in the context of the manufacturing sector in India. Most of the existing literature focuses on stress in corporate, IT, and service-based organizations, where work conditions and stressors are different from those found in manufacturing environments.

Key research gaps identified include:

Limited focus on Indian manufacturing companies: While global studies are abundant, there is insufficient literature addressing stress management practices within small- and medium-scale Indian manufacturing firms like Grindmax India Pvt. Ltd.

Lack of industry-specific HR strategies: Many HR frameworks are generic and not tailored to the unique challenges of labor-intensive manufacturing environments, which often involve physical fatigue, repetitive tasks, and safety concerns. Insufficient data on blue-collar workers' experiences: Most studies emphasize white-collar stress, overlooking the emotional and physical stress experienced by factory floor employees.

Minimal evaluation of existing HR interventions: There is a gap in measuring the effectiveness of HR policies in reducing stress levels, particularly in terms of employee feedback and long-term impact.

Low awareness of mental health: In many manufacturing firms, mental health is still a taboo subject, and there is limited research on how HR can change organizational culture to support emotional well-being.

This research attempts to bridge these gaps by exploring the specific role of HR in managing workplace stress among manufacturing employees at Grindmax India Pvt. Ltd., thereby contributing to the limited body of knowledge in this domain.

Regression Models

Regression findings showed:

- **Breaks** had a statistically significant inverse relation to stress.
- Awareness alone did not reduce stress, implying the **need for behavior-driven HR programming**.

Strategic Insights Role of Supervisors

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Recommendations Institutionalize Break Policies

- Introduce **mandatory micro-breaks** every two hours.
- Designate **“Recharge Zones”** with water, stretching areas, and chairs.

Realign Workload Distribution

- Use HR analytics to **map workload vs. shift duration**.
- Integrate **automation** for repetitive and time-intensive tasks.

Expand HR Programming

- Launch **mindfulness and meditation** sessions.
- Establish **on-site counseling hours**.
- Conduct **stress-mapping workshops** semi-annually.

Supervisory Development

- Train all supervisors in **mental health first aid**.
- Conduct **360° feedback reviews** to evaluate emotional support effectiveness.

Communication and Awareness Campaigns

- Use **digital dashboards** in break rooms to show stress tips and program availability.
- Gamify participation in wellness initiatives via points or recognition boards.

Data-Driven Feedback Loops

- Conduct **quarterly wellness surveys**.
- Link survey results to **HR KPIs** and performance appraisals.

Expanding the Role of HR: From Policy Custodian to Mental Wellness Leader

In traditional manufacturing settings, HR departments were primarily responsible for administrative functions such as recruitment, payroll processing, and enforcing workplace regulations. However, the 21st-century HR model is increasingly proactive, strategic, and employee-centric. The recognition that employee mental health directly influences productivity, safety, and organizational culture has pushed HR into a wellness leadership role. At

Grindmax India Pvt. Ltd., this transition is evident but still evolving. The company's HR team has initiated various stress-reduction programs, yet the study shows that these efforts remain largely reactive rather than preventive. Future HR leaders in such environments must position themselves as advocates for psychological safety, taking the lead in designing not just policies but human-centered systems that balance performance with well-being.

Integrating Mental Health with Safety Culture

In manufacturing, occupational health and safety have historically centered on minimizing physical injuries. However, there is a growing consensus globally that **psychosocial risks**—including stress, anxiety, and burnout—are equally hazardous. These invisible threats not only compromise employee health but also increase the likelihood of workplace accidents due to impaired focus and fatigue. At Grindmax, the connection between long hours, poor sleep, and mental exhaustion was evident in survey responses and observational data. Therefore, HR must integrate mental health awareness with existing safety training. For example, a **toolbox talk** at the start of a shift could include quick check-ins on stress or mood, promoting emotional visibility and early intervention.

Cultural Barriers to Mental Health Dialogue

One of the subtle challenges uncovered during the study was the **cultural stigma** surrounding mental health in the workplace. Many factory workers reported discomfort in discussing stress or emotional difficulties with supervisors or HR, fearing they might be seen as weak or unfit for labor-intensive roles. This aligns with broader societal patterns in India and other developing economies, where **mental health literacy is still growing**. HR departments must recognize that awareness campaigns alone are insufficient. They must actively work to **normalize conversations around stress**, possibly by engaging external mental health professionals, organizing interactive workshops, or even storytelling sessions where employees can voluntarily share coping experiences.

Organizational Outcomes of Poor Stress Management

The implications of poor stress management extend far beyond individual well-being. Organizations with high-stress cultures often face a **negative cascade** of consequences: frequent absenteeism, low morale, reduced team cohesion, and even customer dissatisfaction due to errors and delays. Research from McKinsey and Gallup indicates that high-stress workplaces have **20% lower employee engagement** and **37% higher absenteeism** compared to those that prioritize wellness. At Grindmax, the regression models showed that employees with fewer breaks and heavier workloads had higher mental and physical stress scores—directly impacting their attention span and quality of work. Hence, stress management must be seen not as a welfare initiative but as a **strategic lever for operational excellence**.

Global Benchmarks: How Leading Manufacturers Address Stress

International manufacturing giants such as **Toyota, Bosch, and General Electric** offer models worth emulating. These companies have embedded **mental health frameworks** into their corporate structure. For instance, Toyota has a well-known philosophy of *"Respect for People"*, which manifests in regular wellness check-ins and participatory decision-making. Bosch's "Healthy Work" initiative integrates physical ergonomics with mental resilience training. Grindmax and similar Indian SMEs can learn from these models, adapting them to local conditions through **cost-effective, scalable practices**, such as peer support groups, volunteer mental health ambassadors, and mobile-based stress-tracking applications. The key lies in **embedding wellness into the workflow**, not treating it as a side project.

Gender-Sensitive Stress Interventions

Though only 30% of the Grindmax workforce surveyed were women, the **gendered experience of workplace stress** deserves special attention. Female employees in manufacturing often juggle domestic responsibilities, face societal expectations, and may experience subtle forms of bias or exclusion. Tailored interventions—such as flexible shifts, on-site childcare facilities, women-led wellness sessions, or mentorship programs—can go a long way in reducing stress and improving retention. Moreover, promoting **women into leadership and supervisory roles** sends a strong cultural signal about equality and inclusion, which in itself contributes to a healthier, less stressful work environment.

Role of Technology in Stress Detection and Mitigation

The integration of digital tools into HR systems has opened new avenues for **real-time stress monitoring**. Apps like **Headspace for Work, KayaWell**, or AI-based attendance and mood trackers can be deployed even in mid-sized firms. At Grindmax, HR could experiment with **anonymous mood surveys via mobile devices**, wearable health trackers for those in strenuous roles, and AI-driven dashboards that flag high-risk departments. While tech cannot replace human empathy, it offers HR the **data visibility** needed to make timely, informed decisions. Over time, technology will be central to preventive stress management and **early detection of burnout trends**.

HR Metrics to Track Stress Management Success

Just as manufacturing tracks KPIs like output per hour or defect rate, HR must develop **metrics for wellness success**. Potential KPIs include:

- Employee Stress Index (from surveys)
- Participation Rate in Wellness Programs
- Absenteeism due to Non-Medical Issues
- Employee Net Promoter Score (eNPS)

- Stress-related Grievances Logged

At Grindmax, tracking these metrics quarterly would allow the HR team to evaluate **which initiatives are working and which need rethinking**. Additionally, linking wellness KPIs to managerial performance appraisals can ensure leadership alignment.

HR as a Strategic Business Partner

Ultimately, managing workplace stress is not just about caring for employees—it's about **sustaining business performance**. In a sector where skilled labor is increasingly hard to retain, creating a mentally healthy culture is a **competitive advantage**. HR leaders must position themselves as strategic business partners by presenting **data-driven wellness plans**, advocating for investments in ergonomic design, and pushing for leadership accountability in people management. Only then can the HR function evolve from being reactive and policy-driven to becoming **a cornerstone of organizational resilience and growth**.

Future Research Directions

To broaden the impact of this study, future researchers are encouraged to:

- **Expand the sample** across multiple firms and geographies
- **Conduct longitudinal studies** on program effectiveness
- **Segment data** by age, gender, and job role for targeted strategies
- **Incorporate qualitative methods** for richer insights
- **Evaluate tech-based solutions** (e.g., stress- monitoring apps, AI-driven wellness programs)

Conclusion

The findings from Grindmax India Pvt. Ltd. reinforce the growing need for strategic HR involvement in stress management. While current practices reflect strong awareness and moderate satisfaction levels, there are evident gaps in program effectiveness and work environment management. Long working hours, lack of breaks, and workload imbalances remain core stressors. HR departments must move beyond routine welfare and embrace a proactive, data-driven approach to employee well-being.

By fostering transparent communication, enhancing supervisor support, and investing in preventive health and mental wellness programs, HR can significantly reduce stress and build a resilient, productive workforce.

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