

## Human-related barriers to low employee involvement in continuous improvement initiatives: A phenomenological study of manufacturing workers in Indonesia

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### ABSTRACT

Continuous Improvement (CI) has become a fundamental management philosophy for achieving sustainable competitiveness in the manufacturing industry. However, despite its widespread adoption, many CI initiatives fail due to human-related barriers that hinder implementation at the organizational level. This study aims to identify and analyze the key human factors that impede CI implementation in Indonesian manufacturing industries while exploring strategies to overcome these challenges. Using an exploratory qualitative design, data were collected through in-depth interviews with 15 manufacturing practitioners and analyzed using thematic analysis. The findings reveal seven major human-related inhibitors to successful CI implementation: complacency, misperception, irritability, individualism, work rigidity, frustration, and stress. Collectively, these factors erode motivation, weaken collaboration, and intensify resistance to organizational change, thereby limiting organizational learning and performance improvement. The results corroborate existing literature emphasizing the significance of human and cultural aspects in sustaining CI initiatives. To address these barriers, the study highlights the importance of fostering a supportive organizational culture that promotes psychological safety, teamwork, and continuous incremental learning through the Kaizen philosophy. Management interventions should focus on strengthening human engagement, realistic goal setting, and reward mechanisms that value collective effort and continuous learning. This study contributes to the growing body of knowledge on CI by providing an in-depth understanding of the human dimensions of continuous improvement within manufacturing contexts in developing countries. The findings provide both theoretical insights and practical guidance for leaders seeking to cultivate sustainable CI cultures driven by people rather than processes.

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### INTRODUCTION

The manufacturing industry today operates in a dynamic and highly competitive environment that requires firms to develop adaptive and innovative capabilities to sustain performance (Bag et al., 2021). In response to increasing demands for productivity, quality, and competitiveness, manufacturing organizations have widely adopted continuous improvement (CI) and lean manufacturing practices as systematic approaches to operational excellence (Panigrahi et al., 2023). Rooted in lean production principles, CI emphasizes the continuous identification and elimination of waste, the reduction of non-value-added activities, and the creation of greater customer value with fewer resources (Batwara et al., 2023). Empirical studies further demonstrate that CI and lean implementation can reduce production defects, lead time, customer complaints, and process

waste while improving productivity and operational performance (Habib et al., 2023; Setiawan & Hernadewita, 2022).

Despite the well-documented benefits of CI, its implementation remains challenging because organizational, cultural, leadership, and human-related barriers frequently hinder successful execution (Ramírez-Zavala et al., 2024). Consequently, many CI initiatives fail to achieve their intended objectives or to sustain improvements over time (McLean et al., 2017). Among the critical determinants of successful CI implementation is employee involvement, as employees play a central role in identifying improvement opportunities, solving operational problems, and sustaining continuous improvement practices throughout the organization (Mazzocato et al., 2026; Ramírez-Zavala et al., 2024). Nevertheless, employee engagement continues to be a global concern. According to Gallup's State of the Global Workplace 2023 report, only 23% of employees worldwide are engaged at work, whereas 59% are classified as "quiet quitting" (not engaged) and 18% as "loud quitting" (actively disengaged), highlighting a substantial engagement challenge across industries (Gallup, 2023).

Several studies have identified organizational, managerial, and human-related factors that inhibit employee involvement in CI. Employees who feel undervalued or perceive a mismatch between CI initiatives and organizational culture may show lower motivation, collaboration, and willingness to participate in improvement activities. Previous reviews also indicate that weak management commitment, unsupportive leadership, inadequate training, poor communication, insufficient feedback mechanisms, and low employee involvement are major barriers to successful CI implementation (McLean et al., 2017; Ramírez-Zavala et al., 2024). Moreover, CI training and the use of a shared improvement method are important for strengthening employee involvement, suggesting that the absence of structured participation systems may result in inconsistent and unsustainable employee engagement in CI activities (van Assen, 2021).

Although previous studies have substantially advanced the understanding of CI implementation, most have primarily focused on organizational, managerial, and technical factors, such as leadership commitment, organizational culture, communication, training, and implementation systems, while giving comparatively limited attention to the psychological and behavioral mechanisms underlying employee participation (McLean et al., 2017; Ramírez-Zavala et al., 2024). This dominant perspective implicitly assumes that employees will naturally engage in CI once favorable organizational conditions have been established. However, empirical evidence suggests that employee involvement is not automatically generated by organizational interventions alone but is also shaped by individual perceptions, experiences, and behavioral responses (van Assen, 2021).

Internal factors—including resistance to change, fear of making mistakes, lack of psychological safety, diminished motivation, low confidence in expressing improvement ideas, and other human-related barriers—remain relatively underexplored, particularly from the perspective of employees' lived experiences (Edmondson, 1999). Consequently, the existing CI literature provides only a partial explanation of why technically well-designed improvement initiatives frequently fail to generate sustained employee involvement (Ramírez-Zavala et al., 2024). Addressing this theoretical and empirical gap is therefore essential for developing a more comprehensive understanding of CI implementation that integrates organizational systems with the human and behavioral dimensions of workplace change (Ramírez-Zavala et al., 2024).

Therefore, this study aims to explore human-related barriers that contribute to low employee involvement in CI implementation, drawing on the lived experiences of middle managers in Indonesia's manufacturing industry. Middle managers are selected as the primary participants due to their strategic position between top management and frontline employees, which enables them to directly observe, interpret, and influence employee responses to CI initiatives. By adopting a phenomenological approach, this research captures empirically grounded insights into the psychological and behavioral factors that hinder employee participation in CI. The findings are expected to contribute theoretically by extending the CI literature beyond its dominant organizational and technical focus, particularly within a developing-country context. Practically, the study provides actionable insights for managers and practitioners to design more human-centered CI strategies aimed at enhancing employee involvement and reducing the risk of CI implementation failure.

## RESEARCH METHOD

### Research Design

This study employed a qualitative research design with a phenomenological approach, selected because the research problem centers on understanding participants' lived experiences in implementing continuous improvement (CI) practices in their daily work. Phenomenological inquiry seeks to describe individuals' everyday experiences as subjectively perceived and interpreted (López, 2014). As both a philosophical foundation and methodological framework, phenomenology examines human experience from the first-person perspective (Mäcklin, 2021). Originating from Edmund Husserl and later expanded by Heidegger, Sartre, and Merleau-Ponty (Üstün & Özgürler, 2007), phenomenology aims to capture phenomena as experienced by individuals without imposing external interpretations. Its essence lies in the systematic examination of lived experience, referring to the subjective reality as perceived and meaningfully interpreted by individuals (Matz, 2024).

To access pure consciousness and uncover the essence of experience, researchers must bracket or suspend prior assumptions through the process of Epoché (Molchanov, 2022; Thomas & Sohn, 2023). Derived from the Greek term meaning "to suspend judgment," Epoché represents a methodological suspension of belief in the external world to focus solely on immediate experience (Matz, 2024). By setting aside biases, researchers remain open to authentic participant descriptions, enabling deeper and more genuine insight into the phenomenon (Zahavi, 2021). This aligns with Creswell (2015) view that phenomenological inquiry requires setting aside the natural attitude until the fundamental structures of experience emerge. Through the disciplined suspension of preconceptions and rigorous reflective engagement, phenomenology endeavors to elucidate the essential structures of lived experience as they present themselves in consciousness, in their intentional and contextual character.

### Participants

Participants were selected based on professional experience in the manufacturing industry using three inclusion criteria: (1) the company demonstrated established experience and best practices in CI; (2) the company maintained a formal, programmatic commitment to CI; and (3) the company operated as a large-scale manufacturer with infrastructure supporting high-volume production. These criteria ensured that selected organizations could offer meaningful insights into effective CI implementation and employee engagement. The study explored how human elements influence the success or challenges of CI initiatives as perceived by individuals directly involved.

Table 1. Sources of informants from manufacturing industry

No	Initial	Position categories	Gender	Years of experience	Qualification level
1	SYH	Mechanical Manager	Male	17	Bachelor Degree
2	ADN	Specialist Engineer	Male	5	Master Degree
3	SSP	Engineering Supervisor	Male	5	Bachelor Degree
4	DPW	Senior Specialist Engineer	Male	8	Bachelor Degree
5	AKR	Senior Leader of Production	Male	29	Bachelor Degree
6	RSM	Engineering Leader	Male	5	Bachelor Degree
7	DJW	Plan Manager	Male	27	Bachelor Degree
8	BSK	Section Head	Male	27	Master Degree
9	WHY	Project Manager	Male	11	Master Degree
10	FCJ	Senior Project Planing	Male	12	Bachelor Degree
11	TGS	Head of Production Department	Male	10	Associate Degree
12	AGN	Deputy Manager Welding Production	Male	11	Bachelor Degree
13	DNY	Chief Officer	Male	13	Bachelor Degree
14	HRP	Departemen Head of Dies Maintenance	Male	28	Bachelor Degree
15	YAP	Marketing Manager	Male	7	Bachelor Degree

A purposive sampling strategy was used to identify participants with substantial experience, involvement, and recognition in CI activities. The final sample consisted of 15 employees from various large manufacturing companies in Indonesia, representing both managerial and operational roles engaged in planning, executing, and evaluating CI programs. Each provided in-depth perspectives on human factors that enable or hinder CI implementation. Detailed demographic and organizational information is presented in [Table 1](#).

### **Data Collecting**

Data were collected over a twelve-month period (February 2023–February 2024), during which the researchers cultivated sustained, empathetic engagement with participants to establish mutual trust and openness, thereby creating the methodological conditions necessary for the faithful articulation of participants' lived experiences (de Paula et al., 2014).

The primary data source consisted of individual, semi-structured in-depth interviews, which are central in phenomenological inquiry for accessing participants' subjective experiences (Creswell, 2013). In total, fifteen participants were interviewed. Semi-structured interviews allowed narrative sharing while maintaining thematic focus (Quinney et al., 2016; Matz, 2024). The interview protocol used open-ended questions to elicit rich descriptions and follow-up questions were adapted during the interviews based on participants' responses and contextual cues (Bevan, 2014). A reflective research journal was also maintained to record field activities, contextual observations, and interpretive reflections.

Before data collection, participants were fully informed about the study's purpose, procedures, and voluntary nature, and each provided written informed consent with the option to withdraw at any time. The interviews explored experiences related to CI, guided by three core questions concerning human-related barriers, their underlying causes, and strategies for overcoming them. All interviews were conducted in Bahasa Indonesia, lasted approximately 60–70 minutes, and were audio-recorded with participants' permission. To support triangulation, observations on the production floor were conducted and documentary evidence related to CI implementation was collected after obtaining official approval from the organization, such as internal meeting minutes, company profiles, improvement policy documents, improvement forms, control charts, activity schedules, activity reports, standard operating procedures, activity photos, performance assessments, participant resumes, and other documents relevant to the research needs to strengthen the information.

### **Data Analysis**

All field data were transcribed verbatim and imported into ATLAS.ti 9 for systematic organization and coding. The pattern-matching analysis proceeded through five iterative stages: (1) data selection—identifying key excerpts and repeatedly reviewing transcripts to ensure accuracy; (2) initial coding—assigning concise labels to significant statements; (3) pattern identification—analyzing relationships among codes to detect recurring patterns and contrasts; (4) categorization—grouping related codes into broader conceptual categories; and (5) concept mapping—visualizing interconnections among categories, quotations, and codes to refine emerging themes. The analytic process sought to identify common themes and capture the essence of participants' lived experiences with CI in manufacturing settings.

Table 2. Coding Label: Misperception

Coding Label	Verbatim
Misperception	<p><i>“The main obstacles come from manpower and understanding. It was initially difficult to make the team understand what we were trying to achieve. When we started a project, we really had to emphasize where we wanted to go and ensure everyone understood the purpose.” (P2)</i></p> <p><i>“They interact with people who have different ways of thinking, and no one corrects or clarifies it. So their mindset becomes wrong and remains that way. Many of them, especially those who have worked for more than 10 or 15 years, feel like ‘this is my area, why should you tell me what to do?’.” (P3)</i></p> <p><i>“Misperception. So the misperception is that they feel treated like children when asked to clean or sweep. Some say, ‘I operate robots or machines, why should I sweep?’ They think it’s not their level of work. They also feel it’s not their responsibility. They say, ‘I’m already tired standing all day, why should I clean or wipe the machine? That’s the subordinates’ job’.” (P12)</i></p>

### Trustworthiness

This study ensured the trustworthiness of its findings through several validation strategies, including methodological triangulation, prolonged engagement, member checking, and focus group discussions (FGD). Continuous communication and rapport with participants were maintained throughout data collection to enhance interpretive accuracy and contextual understanding. Collectively, these strategies strengthened the study’s credibility, dependability, confirmability, and transferability (Guba & Lincoln, 2005).

Methodological triangulation was conducted by cross-checking interview data with supporting documents and field notes, thereby reinforcing data accuracy and reliability. Prolonged engagement was achieved through three phases of data collection: eight participants in the first phase, twelve in the second, and fifteen in the third, at which point theoretical saturation was reached. Member checking involved returning interview transcripts to participants for verification, ensuring that interpretations accurately reflected their intended meanings and minimizing researcher bias (Birt et al., 2016). FGDs further examined theme coherence and validated the theoretical and practical relevance of the findings through input from experts in manufacturing, continuous improvement, human resource development, applied cognitive science, vocational and technology education, evaluation, and management. Dependability was also supported by a systematic audit trail documenting all research procedures and analytical decisions.

### Ethical Considerations

Ethically, the study adhered to international standards. Although IRB approval was not required under Indonesian regulations, all principles concerning human subjects were strictly observed. Participation was voluntary and involved written informed consent, with participants free to withdraw at any time. Confidentiality and anonymity were maintained through pseudonyms and secure data storage. All procedures aligned with the principles of respect for persons, beneficence, and justice as outlined in the Belmont Report (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979).

## RESULT AND DISCUSSION

The findings of this study are presented in response to the central research questions: What are the employee-related barriers to the implementation of CI initiatives in manufacturing industries? Why do these factors hinder CI efforts? and How can such barriers be mitigated? The results indicate that performance barriers in CI reflect fundamental challenges associated with organizational culture transformation and human management practices. This study revealed that the most critical obstacles to CI implementation in Indonesian manufacturing industries are rooted in human factors, emphasizing the central role of employees as the key drivers of continuous improvement. These

findings are consistent with prior systematic literature reviews suggesting that many CI initiatives fail due to insufficient attention to human resource management and organizational culture alignment (Ramírez-Zavala et al., 2024).

Through data analysis, seven major components were identified as human-related inhibitors to successful CI initiatives: complacency, misperception, irritability, individualism, work rigidity, frustration, and stress. These interrelated barriers collectively hinder employee engagement and adaptation during CI implementation. An overview of these human-related barriers is presented in Figure 1.



Figure 1. Human barriers cause of low involvement in continuous improvement initiatives

### Complacency Toward Improvement Outcomes

Complacency emerged as a major behavioral barrier to the implementation of CI initiatives in the manufacturing sector. This theme captures employees' tendency to feel excessively satisfied with the current state of operations, thereby resisting further changes or improvements. As defined by the Oxford Learner's Dictionaries, complacency refers to "a feeling of satisfaction with yourself or with a situation, so that you do not think any change is necessary." In this study, complacency was described by several participants as a form of resistance to improvement efforts, for example, as one respondent explained.

*"From the human side, there are types of employees who are stagnant or resistant. Some are even pessimistic; that itself becomes a barrier." (P1)*

Another participant further elaborated that operators often resisted improvement initiatives proposed by engineering teams, perceiving such changes as threats to their comfort or work routines.

*"The real challenge is the operators themselves. They often say, 'Just let things stay as they are.' When we propose improvements, they reject them because they fear it will affect things like overtime opportunities." (P6)*

Similarly, a participant highlighted that complacency often stems from habitual behaviors and the perception that previous improvement efforts were sufficient.

*"It's all about habits. They think, 'We've done this before.' For example, with the 5S program, cleaning, organizing, wiping things down. They feel like it's routine, nothing special, even though the goal should go beyond that." (P12)*

Complacency was also associated with a closed mindset and low openness to new ideas, as expressed by another informant.

*"People who are not open-minded are the ones who hinder continuous improvement." (P13)*

The findings suggest that complacency reflects a deep-seated cultural and psychological barrier within manufacturing organizations. Employees who are overly content with existing

performance standards tend to reject or delay CI initiatives, thereby perpetuating operational stagnation. This aligns with Cho and Johar (2011), who argue that individuals with low performance expectations often experience premature satisfaction upon reaching minimal goals, subsequently diminishing their motivation for higher achievement.

Moreover, complacency was found to manifest in symbolic rather than substantive improvement behaviors, such as performing 5S activities superficially without internalizing their continuous improvement spirit. This behavioral pattern reflects a cultural normalization of mediocrity, wherein employees equate minimal compliance with meaningful progress.

Consistent with Endalamaw et al. (2024), the present study underscores that employee reluctance to adopt new practices can significantly hinder innovation, often driven by fear of failure or disruption of established routines. In the manufacturing context, operator-level resistance becomes particularly critical, as these employees are directly involved in process execution and improvement initiatives. Their resistance not only slows implementation but can also undermine collective urgency for change, echoing Mitcheltree's (2023) findings on complacency-induced collaboration gaps that impair innovation speed.

Furthermore, the tendency to preserve comfort zones, whether to maintain overtime opportunities or to avoid cognitive strain. This demonstrates that complacency is not merely ignorance but a strategic choice to maintain personal equilibrium. This behavior highlights the importance of addressing motivational and cultural aspects of CI, beyond procedural training.

Lastly, closed-mindedness exacerbates the effects of complacency by reducing adaptability to new information and limiting problem-solving flexibility. As noted by Reb et al. (2015), low openness negatively influences work performance by constraining cognitive flexibility and adaptation to change. Thus, fostering an open and reflective organizational mindset is essential to mitigate complacency and sustain CI momentum.

### Misperception in the CI Implementation

A shared understanding among employees regarding the objectives and processes of CI is essential for its successful implementation. Divergent or inaccurate perceptions of CI goals can create significant barriers that hinder organizational learning and process enhancement. Several participants described how misperceptions among employees led to confusion and resistance during CI implementation, for example as one respondent explained.

*“The main obstacles come from manpower and understanding. It was initially difficult to make the team understand what we were trying to achieve. When we started a project, we really had to emphasize where we wanted to go and ensure everyone understood the purpose.” (P2)*

This quote illustrates the importance of establishing a shared vision before initiating CI projects. Without clear communication about the purpose and expected outcomes, employees may develop fragmented interpretations that disrupt coordination and engagement. Another participant described how social influence and peer interactions often perpetuate misunderstanding about CI.

*“They interact with people who have different ways of thinking, and no one corrects or clarifies it. So their mindset becomes wrong and remains that way. Many of them, especially those who have worked for more than 10 or 15 years, feel like ‘this is my area, why should you tell me what to do?’.” (P3)*

This statement highlights how social norms and informal communication networks can reinforce misconceptions, particularly among long-tenured employees who perceive CI initiatives as external intrusions into their established routines. Misperceptions also emerged regarding the nature of CI as a system. Some employees viewed CI as a short-term program rather than an ongoing, systematic process of improvement as one respondent stated.

*“The main issue is their understanding. They think CI is not a system. But it should be a system, meaning that it has to be standardized regardless of who the leader is.” (P12)*

Such limited understanding prevents employees from internalizing CI as a continuous cycle embedded in organizational routines and standards. A particularly striking example of misperception

appeared in the context of 5S implementation. Several employees perceived 5S-related tasks, such as cleaning or organizing work areas, as menial or inappropriate for their roles.

*“Misperception. So the misperception is that they feel treated like children when asked to clean or sweep. Some say, ‘I operate robots or machines, why should I sweep?’ They think it’s not their level of work. They also feel it’s not their responsibility. They say, ‘I’m already tired standing all day, why should I clean or wipe the machine? That’s the subordinates’ job’.” (P12)*

These quotes reveal how role identity and status perception can distort employees’ understanding of CI principles, leading them to disengage from essential improvement activities. The findings suggest that misperception acts as a cognitive and cultural barrier in the institutionalization of continuous improvement. Misunderstandings about CI objectives, ownership, and purpose often stem from insufficient communication, entrenched social influences, and hierarchical work cultures. When employees fail to perceive CI as a collective, system-based process, they tend to interpret it as an external management initiative rather than an integral part of their daily work.

This observation aligns with Bailey (2020), who emphasizes that clear goal communication and shared understanding are prerequisites for effective CI adoption. Moreover, the role of social cognition and peer influence in shaping employee perceptions has been widely documented (Boyd-Rogers et al., 2022). In contexts where informal norms dominate, misconceptions tend to persist, especially among senior employees who wield local authority or perceive themselves as “owners” of specific work areas.

The perception of CI as a temporary program rather than a continuous system also reflects a fundamental gap in organizational learning. When employees conceptualize CI as a one-off initiative, they are less likely to engage in iterative problem-solving or sustain improvements over time. This misconception undermines the sustainability of CI and contributes to cyclical declines in performance once external supervision or incentives cease.

The case of 5S misperception further illustrates how status-based resistance can impede engagement. Employees’ feelings of being “devalued” when asked to perform basic housekeeping tasks indicate a cultural disconnect between the philosophy of lean management which emphasizes shared responsibility and prevailing hierarchical work norms. This disconnect leads to role-based disengagement, where employees exclude themselves from CI participation due to perceived incongruence with their job identity.

In sum, the findings indicate that misperceptions surrounding CI stem from a combination of communication failure, social reinforcement, and status-driven cognition. Addressing these barriers requires consistent organizational communication, participatory training, and leadership modeling that redefines CI not as a top-down directive but as a shared and continuous learning system.

### **Irritability in Workplace Relationships**

Interpersonal irritability among employees emerged as a significant barrier to the effective implementation of CI in manufacturing organizations. Interpersonal irritability manifested as sensitivity to tone, feedback, or interpersonal disagreement. Employees with high irritability tend to react emotionally to situations that others may perceive as normal, particularly in hierarchical contexts where directive communication is common. Such emotional reactivity can disrupt collaboration, erode trust, and diminish collective engagement in improvement initiatives. For example, one participant illustrated this dynamic as follows.

*“Don’t be too sensitive. Young workers today often are. Leadership styles differ. I usually lead by giving direction and setting examples, but some leaders have a harsher tone. Their intentions are good, but those who can’t handle it easily get offended. Sometimes they quietly resign without saying anything.” (P14)*

This account underscores how variations in leadership communication styles can be misinterpreted by employees who are more emotionally reactive, especially between generations. The issue does not necessarily stem from the content of the message but from the perception of tone or delivery, which can trigger defensive responses and disengagement. Another participant

emphasized the relational consequences of irritability, highlighting incompatibility between supervisors and subordinates.

*“It’s about human relations. Sometimes people just don’t get along. Ideally, a leader should set an example, inspire, and guide others. But often employees feel uncomfortable when they’re told to do things others are asked to do, which causes dissatisfaction.” (P13)*

These narratives indicate that irritability undermines relational harmony and perceived fairness, leading to reduced motivation and cooperation within work teams. Employees who feel slighted or unfairly treated may withdraw psychologically or even physically from CI activities, thereby weakening team cohesion.

Irritability in workplace interactions represents an affective barrier to organizational learning and change. In the context of CI, where teamwork, feedback, and constructive criticism are essential, heightened emotional sensitivity can obstruct communication and inhibit collective reflection. Employees who are prone to irritability often interpret corrective feedback or direct communication as personal criticism, which can escalate into interpersonal tension and reduce participation in improvement efforts.

The findings correspond with prior research suggesting that emotional regulation and organizational support are critical to maintaining engagement in high-demand work environments. Kumar et al. (2022) found that strong organizational support enhances employee empowerment and reduces emotional reactivity, fostering a more resilient workforce capable of managing conflict constructively. Conversely, when employees perceive low levels of support or fairness, irritability tends to increase, resulting in withdrawal behaviors such as avoidance or resignation.

Poor emotional management also disrupts the social fabric of teams. In a manufacturing environment that relies heavily on interdependence, irritability can hinder coordination, a culture of mutual assistance, and communication flows, which are critical factors for successful CI. Fan et al. (2016) emphasize that emotional strain and interpersonal tension can directly impair cooperation and decision-making quality, reducing the organization’s capacity for sustained improvement. Similarly, perceived inequity can exacerbate irritability, further weakening trust between employees and their supervisors, such as unequal task assignments or preferential treatment (Roehling et al., 2010).

These findings suggest that addressing irritability requires more than individual coping strategies; it demands systemic interventions in organizational culture and leadership communication. Establishing emotionally intelligent leadership, promoting open dialogue, and ensuring procedural fairness can help mitigate irritability-driven conflicts. Building psychological safety is also vital to enabling constructive feedback loops within CI systems where employees can express concerns without fear of reprisal.

Overall, the study demonstrates that irritability in workplace relationships acts as a subtle yet pervasive inhibitor of continuous improvement in manufacturing contexts. While technical competence and process efficiency are often emphasized, the emotional and relational dynamics among employees equally determine the sustainability of CI initiatives. Managing irritability through leadership empathy, fair work allocation, and emotional intelligence training can therefore enhance organizational resilience and foster a more collaborative improvement culture.

### **Individualism in a Teams**

Individualistic behavior emerged as a critical barrier to the successful implementation of CI initiatives in the manufacturing sector. Evidence from the field reveals that employees who prioritize personal interests over collective goals tend to impede the collaborative processes essential for CI, for example, as one participant stated.

*“The main obstacle is personal attitude. Being too individualistic. That individualistic attitude is what hinders progress.” (P13).*

The participant further explained that individualism often manifests as ego-centered behavior, where individuals prioritize self-interest and independence over teamwork.

*“Individualism here means being selfish. We’re not Superman who can do everything alone. We need help from others.” (P13)*

These reflections highlight a fundamental misalignment between personal autonomy and the interdependent nature of CI practices. Continuous improvement relies on processes that are incompatible with a self-focused mindset such as collective learning, cross-functional collaboration, and shared accountability. When employees focus primarily on personal recognition or success, knowledge sharing diminishes, communication becomes fragmented, and innovation stagnates.

Individualism within CI teams represents not merely a behavioral tendency but a cultural and structural challenge that undermines collective performance. In manufacturing contexts, CI is inherently social and iterative, requiring mutual support, feedback exchange, and joint problem-solving. When individuals act independently without integrating their efforts into the team's objectives, the flow of organizational learning becomes disrupted. This finding reinforces the argument of Tortorella et al. (2021), who observed that excessive individualism impedes CI by weakening the cooperative mechanisms needed for continuous problem-solving and performance enhancement.

Moreover, individualism often reflects an ego-driven orientation, where employees perceive their contributions through the lens of personal benefit rather than shared value creation. This self-interest reduces motivation to participate in improvement teams and diminishes trust among team members. Wickramasinghe and Chathurani (2020) similarly found that individuals are less likely to engage in collaborative efforts when they fail to perceive tangible or social rewards from group participation. Consequently, individualistic tendencies can foster competitive rather than cooperative dynamics, eroding the psychological safety required for open idea exchange and experimentation, both of which are essential for CI.

In contrast, effective CI implementation requires a collectivist mindset, namely a mindset that values cooperation, interdependence, and shared responsibility. CI teams thrive when members recognize that improvement outcomes are co-created rather than individually achieved. This aligns with the socio-technical perspective that emphasizes the integration of human collaboration with process optimization to achieve sustainable performance gains. Therefore, overcoming individualism requires cultivating a team-oriented organizational culture, supported by leadership practices that reward group achievements, encourage peer learning, and build interdependence across functional boundaries.

In summary, the findings underscore that individualistic attitudes constitute a socio-behavioral impediment to the effective implementation of continuous improvement in manufacturing organizations. Such tendencies hinder collaboration, weaken knowledge sharing, and diminish the collective capacity for innovation. Promoting a culture of interdependence through leadership modeling, team-based incentives, and collaborative learning structures, can mitigate the negative effects of individualism and enhance the overall sustainability of CI initiatives.

## Work Rigidity

Work rigidity, or excessive adherence to established routines and procedures, emerged as a significant barrier to the effective implementation of (CI) initiatives in the manufacturing context. Employees exhibiting rigid work patterns often display limited flexibility in adapting to new methods or shifting from one task to another. This behavioral pattern reflects a high dependence on habitual routines and a reluctance to engage in change-oriented activities. For example, one participant articulated this sentiment clearly.

*"Sometimes the workers just don't want to bother. They prefer not to make things complicated. But if they avoid doing something new, it can actually become dangerous. When we introduce new methods or improvements, they often find them troublesome." (P4)*

Similarly, another participant described how employees' perceived busyness and attachment to daily targets hindered participation in improvement programs.

*"The third issue is the feeling of having no time. Usually, they say things like, 'I'm too busy,' or 'The production target isn't finished yet, and now we're asked to do 5S activities, sir.' This becomes an obstacle." (P12)*

The findings reveal that work rigidity functions as both a cognitive and behavioral constraint that restricts employees' ability to engage in adaptive learning and improvement initiatives. Employees who are overly dependent on established routines perceive CI-related activities as additional burdens rather than as opportunities for performance enhancement. This perception fosters a resistance to change, which is detrimental to the iterative and participative nature of CI. As McLean et al. (2017) argue, entrenched routines and comfort with the status quo often create psychological inertia that limits organizational learning and process innovation.

Rigid work patterns also reflect a misalignment between operational goals and improvement culture. Employees' focus on meeting short-term production targets leaves little room for strategic reflection or process optimization. Such a focus reinforces the belief that CI is a secondary activity rather than an integrated component of daily operations. This aligns with Tomar (2017), who found that employees immersed in repetitive tasks tend to experience disengagement and reduced motivation to participate in improvement programs. Over time, employee disengagement contributes to persistent inefficiencies and weakens organizational agility, a critical capability for maintaining competitiveness in increasingly dynamic manufacturing environments.

Furthermore, work rigidity reveals a limited understanding of the long-term benefits of CI. Employees' reluctance to allocate time for improvement activities indicates a narrow focus on immediate output rather than continuous learning and quality enhancement. This short-term orientation not only undermines the collective momentum for CI but also signals the need for cultural transformation within the organization. Establishing CI as a shared organizational priority, rather than as an additional task, is critical for overcoming such behavioral rigidity.

In summary, work rigidity constitutes a systemic behavioral obstacle to continuous improvement in manufacturing organizations. It manifests through excessive attachment to routines, perceived lack of time, and resistance to adopting new methods. These tendencies hinder the flexibility, adaptability, and collaborative spirit necessary for effective CI implementation. Addressing this issue requires management interventions that integrate CI into daily work practices, reduce the perceived trade-off between routine and improvement, and foster a culture that values experimentation and learning as integral to operational success.

### **Frustration Arising from Previous Improvement Failures**

Employee frustration resulting from previous unsuccessful improvement initiatives was identified as a significant barrier to the implementation of CI practices in manufacturing organizations. Such frustration often emerges when employees have invested considerable effort and skill in past improvement projects but failed to achieve the desired outcomes. For example, one participant explained.

*“When someone already has the skills but fails several times, their enthusiasm for improvement decreases. Sometimes the targets are set too high. Instead of aiming for something too ambitious, it's better to focus on small, continuous improvements, that's what Kaizen means. Big innovations often require major efforts but stop after one failure, and when that happens, people get discouraged.” (P7)*

The findings indicate that previous experiences of failure can lead to emotional exhaustion and motivational decline, which in turn hinder employees' willingness to engage in future CI initiatives. Repeated failures generate a sense of learned helplessness and reduce employees' perceived efficacy in achieving improvement goals. This psychological state aligns with Le and Ho (2020), who describe frustration as a cognitive-emotional response to repeated unsuccessful attempts to influence desired outcomes.

The demotivation observed among employees is often intensified by unrealistic performance targets and pressure to achieve rapid, large-scale improvements. When expectations exceed employees' perceived control, frustration escalates and manifests as withdrawal or disengagement from improvement activities. Consequently, rather than fostering innovation, such an environment perpetuates a fear of failure and a risk-averse culture, which are antithetical to the spirit of continuous improvement.

A more sustainable strategy involves embracing the Kaizen philosophy, which emphasizes incremental, continuous improvements rather than radical transformations. This approach encourages persistence and learning through small, achievable steps, reducing the emotional and psychological burden associated with high-stakes innovation projects. As Gashaj et al. (2022) and Keith et al. (2022) highlight, leveraging failure as a learning mechanism helps individuals transform frustration into resilience, fostering adaptive behaviors essential for long-term improvement success.

Overall, frustration resulting from previous failures represents a critical psychological barrier to sustaining continuous improvement in manufacturing environments. High target expectations, combined with repeated unsuccessful attempts, erode motivation and confidence among employees. By contrast, adopting a Kaizen-oriented mindset enables organizations to cultivate persistence, promote learning from failure, and maintain employee engagement in CI processes. Transforming frustration into constructive learning requires managerial support, realistic goal-setting, and a culture that views failure as a natural component of organizational learning rather than as a setback.

### **Stress Arising from Continuous Improvement Demands**

Employee stress resulting from the perceived burden of CI initiatives emerged as a notable barrier to their effective implementation in manufacturing environments. Several participants reported that employees tend to view CI activities as additional work responsibilities rather than opportunities for development or efficiency enhancement, for example, as one participant explained.

*“For the employees, Kaizen itself has become a burden. They see it as extra work.” (P8)*

The findings reveal that employees often interpret CI demands as an additional workload, particularly when their existing job responsibilities are already intensive. This perception contributes to psychological strain and reduced motivation to engage in improvement activities. When CI initiatives are introduced without clear alignment to employees’ daily tasks or without visible personal or professional benefits, they are more likely to be perceived as managerial impositions rather than collaborative efforts for improvement. This observation is consistent with Castillo (2022), who found that employees frequently feel overwhelmed by the continuous demand for improvement and the pressure to meet increasingly higher performance standards.

Stress induced by CI expectations can manifest as resistance to change, absenteeism, or reduced quality of output. Employees may disengage when the perceived effort required for CI outweighs its expected rewards. Such responses signify a psychological imbalance between job demands and personal resources, as articulated by the Job Demand–Resources (JD-R) model, which theorizes that sustained high job demands in the absence of adequate resources result in burnout and disengagement (Bakker & Demerouti, 2017). When employees lack sufficient autonomy, time, or managerial support to implement CI effectively, stress levels rise, and motivation declines.

Moreover, employees’ perception that CI offers limited tangible benefits exacerbates this stress. As noted by van Assen (2021), CI initiatives that fail to produce meaningful or visible results are often interpreted as bureaucratic exercises rather than genuine efforts toward operational improvement. This disillusionment not only weakens employee engagement but also erodes trust in organizational change processes. Therefore, without proper communication of CI’s value and demonstrable impact, employees may view improvement efforts as futile, reinforcing the perception of CI as an unnecessary burden.

Overall, the results indicate that work-related stress induced by CI demands represents a psychological barrier that undermines employee engagement and the long-term sustainability of improvement programs. When CI is perceived as an additional workload rather than an empowering process, it triggers negative emotional responses such as frustration, fatigue, and resistance. To mitigate this challenge, management must ensure that CI initiatives are clearly integrated into employees’ existing workflows, supported with adequate resources, and communicated as mechanisms for empowerment rather than obligation. Aligning CI with employee well-being and job design principles is essential to fostering intrinsic motivation and maintaining organizational commitment to continuous improvement.

## CONCLUSION

This study identified key human-related barriers that inhibit effective CI implementation in the manufacturing industry. Based on an in-depth qualitative exploration with 15 industrial practitioners, the findings show that the main obstacles to CI success stem from individual attitudes, perceptions, and emotional reactions to change rather than from technical or procedural shortcomings. Seven major human-centered barriers were highlighted: complacency, misperception, irritability, individualism, rigidity, frustration from past failures, and stress generated by CI demands. These interconnected factors foster a resistance mindset that weakens the sustainability of improvement efforts. Complacency reinforces satisfaction with the status quo, misperceptions distort understanding of CI goals, and irritability together with individualistic behavior undermines collaboration. Rigidity restricts adaptation, while accumulated frustration and stress reduce employees' intrinsic motivation to participate in CI activities.

The findings emphasize that human factors remain the decisive element in determining CI success or failure. Although technical systems can be standardized, employee readiness to accept change is essential. Effective CI therefore requires a holistic integration of organizational systems and human-resource strategies, prioritizing continuous learning, open communication, emotional intelligence, and supportive leadership. Practically, organizations must design psychologically sustainable CI initiatives—setting attainable goals, pacing improvements incrementally, and providing recognition to maintain motivation. Addressing these human-related barriers enables manufacturing firms to strengthen operational efficiency while fostering a resilient culture of ongoing learning and innovation. Future studies should further examine how these barriers interact across different organizational contexts and explore intervention models that effectively balance technical rigor with human adaptability to sustain continuous improvement practices.

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