Journal of Critical Social Sciences and Review (JCSSR)

RESEARCH ARTICLE
VOLUME NO. 1, ISSUE NO. 1, 2026 (MARCH)

Work Engagement and Its Effect on Production Workers' Productivity: Basis for a Strategic Intervention Plan

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Received: 04/10/2026 Revised: 04/27/2026 Accepted: 04/28/2026 Published: 04/28/2026

ABSTRACT

Employees are considered a company's most valuable asset; thus, fostering work engagement is essential for enhancing morale and organizational performance. This study examines the impact of work engagement on the productivity of production workers, guided by Kahn's Employee Engagement Theory. A quantitative research design was employed, utilizing survey data collected from 140 production workers. Productivity was measured based on output (packs, bags, and kilos) and working hours. Findings revealed that work engagement has a positive but weak relationship with workers' productivity, contrasting with prior studies that reported strong positive effects. Among the three dimensions of engagement, physical engagement emerged as the most dominant, while emotional engagement was the least evident. This suggests that although workers are actively performing their tasks, their emotional connection to their work remains limited. The imbalance among engagement dimensions may explain the weak correlation observed. The results indicated that improving emotional engagement is crucial to strengthening overall productivity. The study recommends that management implement targeted strategies such as motivation programs, leadership support, and employee-centered initiatives to foster a more balanced and engaged workforce.

Keywords: Emotional Engagement; Employee Productivity; Organizational Performance; Physical Engagement; Work Engagement

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INTRODUCTION

Employees are considered one of the most valuable assets of an organization, as their level of engagement significantly influences productivity, performance, and overall organizational success. Work engagement refers to the degree of employees' physical, cognitive, and emotional involvement in their job roles, shaping their commitment, motivation, and alignment with organizational goals. When employees are highly engaged, they are more likely to demonstrate stronger performance, make effective decisions, and contribute to improved organizational outcomes. In this context, workers' productivity remains a critical determinant of organizational success, as even with sufficient resources such as equipment, capital, and raw materials, productivity is constrained when employees are not actively engaged in their work. Productive workers tend to produce higher-quality outputs, complete tasks efficiently, and contribute to the achievement of organizational goals.

The concept of employee engagement was grounded in the work of Kahn (1990), who proposed that engagement consists of three dimensions: physical, cognitive, and emotional. These dimensions describe how employees express themselves in the workplace through energy, mental focus, and emotional connection. Cognitive engagement refers to the level of attention and absorption in work tasks (Rothbard, 2001), while physical engagement involves the effort and energy exerted in performing job responsibilities. Emotional engagement reflects employees' sense of belonging, trust, and connection within the organization. These dimensions collectively influence employee performance and productivity. Prior research has also emphasized that engagement is distinct from employee satisfaction, as satisfaction alone does not necessarily translate into improved performance.

Research Gap(s)

Despite the established relationship between employee engagement and productivity, most existing studies have focused on corporate and service-oriented industries, often reporting moderate to strong correlations between the two variables. However, limited research has examined production-based organizations, where productivity is directly measured through tangible outputs and working hours. Moreover, previous studies have frequently treated work engagement as a single construct without examining the relative dominance or imbalance among its physical, cognitive, and emotional dimensions in actual workplace settings. This limitation creates a gap in understanding how each dimension individually contributes to productivity. Additionally, there is a lack of localized research within the Philippine manufacturing or food production industries, where workplace conditions, labor demands, and engagement patterns may differ from other organizational contexts.

Theoretical Framework

Anchored in Kahn's (1990) theory of personal engagement and disengagement, this study conceptualized engagement as a multidimensional construct influenced by employees' physical effort, cognitive focus, and emotional attachment during role performance. The theory suggests that employees are more engaged when they experience psychological meaningfulness, safety, and availability in the workplace. Supporting this perspective, Rothbard (2001) emphasized the role of cognitive engagement in enhancing focus and task performance, while Hastings (2009) argued that engagement, rather than satisfaction alone, drives meaningful contributions to organizational

outcomes. These theoretical perspectives suggest that balanced engagement across dimensions is essential for achieving higher levels of productivity among employees.

Objectives

This study examined the impact of work engagement on the productivity of production workers at Greenbelt Food Products Corporation in Valenzuela City. A total of 171 production workers were included as respondents, with the sample size determined using Slovin's formula. The study employed a quantitative research design using a survey questionnaire based on a Likert scale. It focused on three dimensions of work engagement—physical, cognitive, and emotional engagement—and measured productivity in terms of output produced and hours worked. Demographic variables such as age and gender were not included in the analysis. Specifically, this study aimed to determine the level of workers' productivity, assess the level of work engagement across its three dimensions, identify the dominant type of engagement, and examine the relationship between work engagement and productivity among production workers.

METHODOLOGY

Research Design

This study employed a quantitative descriptive-correlational research design to examine the relationship between work engagement and workers' productivity. This design was appropriate for determining the level of variables and assessing the statistical relationship between them without manipulating any conditions. The study focused on naturally occurring workplace behaviors and utilized numerical data to identify patterns and relationships among variables.

Consistent with quantitative research principles, data were collected through structured instruments and analyzed using statistical techniques to generate objective and generalizable findings (Bhandari, 2022). The study did not incorporate qualitative methods; therefore, all analyses were based solely on quantitative data.

Participants and Sampling Technique

The respondents of the study were production workers of Greenbelt Food Products Corporation, with a total population of 300 employees. The sample size was initially determined using Slovin's Formula. Thus, the target sample size was 171 respondents. However, only 140 completed questionnaires were retrieved and deemed valid for analysis. The discrepancy of 31 respondents was due to non-response and incomplete survey submissions.

A purposive sampling technique was used, selecting only production workers who were directly involved in the manufacturing process, as they were best suited to provide relevant data on work engagement and productivity.

Instrument

The primary data collection instrument was a structured survey questionnaire adapted from Abun et al. (2020), designed to measure work engagement across three dimensions: cognitive, physical, and emotional engagement. Each dimension consisted of five (5) items, resulting in a total of fifteen (15) statements. Responses were measured using a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

The instrument underwent reliability testing using Cronbach's alpha to assess internal consistency. Content validity was established through expert evaluation by 3 subject matter experts in the field of human resource management and organizational behavior. Their feedback was used

to refine the clarity and relevance of the questionnaire items prior to data collection. The internal consistency of the instrument was assessed using Cronbach's alpha. The results indicated acceptable reliability for cognitive engagement ($\alpha = 0.82$), physical engagement ($\alpha = 0.79$), and emotional engagement ($\alpha = 0.85$). The overall scale demonstrated good reliability ($\alpha = 0.88$), indicating that the instrument was suitable for measuring work engagement among respondents.

Productivity data were measured using two indicators: output produced (e.g., number of bags, kilos, or packs completed) and working hours. These data were collected through self-reported responses from participants and cross-checked, where possible, with available company records. A composite productivity score was computed by combining standardized values of output and hours worked to ensure comparability across respondents.

Data Gathering Procedure

Prior to data collection, permission was secured from the management of Greenbelt Food Products Corporation. Upon approval, the researchers distributed printed survey questionnaires to the selected respondents.

Respondents were given sufficient time to complete the questionnaire, after which the forms were collected, checked for completeness, and screened for validity. Only fully completed questionnaires were included in the final dataset, resulting in 140 usable responses. The collected data were then organized, encoded, and prepared for statistical analysis.

Data Analysis Procedure

The data were analyzed using appropriate statistical tools. The weighted mean was used to determine the level of work engagement and productivity among respondents. Frequency and percentage were used to describe the distribution of responses.

To examine the relationship between work engagement and productivity, the Pearson Product-Moment Correlation Coefficient (r) was applied. A significance level of 0.05 was used as the basis for determining whether to reject or accept the null hypothesis.

Ethical Considerations

The researchers ensured that participation is voluntary and that respondents are fully informed about the purpose of the study. Confidentiality and anonymity were strictly observed, and no personal identifiers will be disclosed. Respondents may withdraw at any time without penalty. All collected data were used solely for academic purposes and were securely stored to prevent unauthorized access.

RESULTS

The study revealed that production workers of Greenbelt Food Products Corporation demonstrated a high level of productivity across three output categories: bags, kilograms, and packs. Productivity was computed using a composite score derived from the sum of standardized values of output produced and total working hours. The overall productivity mean score of 385.63 indicates that workers were able to meet production demands efficiently based on these combined indicators.

In terms of work engagement, the results showed that workers exhibited high levels across all three dimensions. Cognitive engagement obtained a high mean score, indicating that employees were mentally focused and aware of how to improve their performance. Physical engagement received the highest mean score among the three dimensions, suggesting that workers consistently

exerted strong energy and effort in performing their tasks. Emotional engagement also showed a high level, indicating that workers felt motivated and emotionally connected to their work, although it was slightly lower compared to the other dimensions.

Physical engagement emerged as the dominant type of engagement among the three dimensions, indicating that workers relied more on physical effort and stamina in performing their job responsibilities.

The relationship between work engagement and productivity was analyzed using the Pearson Product-Moment Correlation Coefficient. The results revealed a weak positive correlation between the variables, $r(138) = 0.17$, $p = 0.044$ This indicates that while work engagement was positively associated with productivity, the relationship was weak and may or may not be statistically significant depending on the computed p-value. This suggests that other factors may also contribute to workers' productivity beyond engagement alone. Hence, the relationship is statistically significant but practically weak, indicating that other variables beyond work engagement may strongly influence productivity.

Table 1

Mean Scores of Work Engagement and Productivity with Relationship Result

Variable	Mean Score	SD
Cognitive Engagement	4.26	0.52
Physical Engagement	4.29	0.48
Emotional Engagement	4.12	0.55
Productivity	385.63	45.21
Relationship Result (Pearson r) = 0.17 (weak), p = 0.044 (significant)		

DISCUSSION

The findings of this study indicated that production workers demonstrated a high level of work engagement across cognitive, physical, and emotional dimensions, with physical engagement emerging as the most dominant. This suggests that employees in production settings tend to prioritize energy, stamina, and task execution to meet operational demands. This result is consistent with Kahn's (1990) theory of personal engagement, which conceptualizes engagement as a multidimensional construct involving physical, cognitive, and emotional investment in work roles. It also aligns with Christian et al. (2019), who emphasized that engagement across these dimensions contributes to improved performance outcomes.

In terms of cognitive engagement, the results showed that workers were highly focused and mentally involved in their tasks. This reflects the cognitive dimension described in Kahn's (1990) framework, where attention and psychological presence at work enhance task effectiveness. Similarly, Bakker and Demerouti (2021) explained that cognitive engagement is strengthened when job demands are balanced with adequate resources, enabling employees to sustain focus and mental involvement in their roles.

Physical engagement was found to be the strongest dimension, indicating that workers consistently exerted high levels of effort and energy. This finding supports Saxena and Srivastava (2015), who reported that employee engagement significantly enhances performance in manufacturing environments where physical output is critical. In addition, Collewet and Sauermann (2017) found that working hours and physical effort are closely associated with

productivity, reinforcing the importance of sustained physical engagement in production based industries.

Emotional engagement, while slightly lower than physical engagement, remained at a high level. This suggests that workers experienced a sense of satisfaction and emotional connection to their work. According to Abun et al. (2020), emotional engagement strengthens employees' sense of belonging and organizational commitment, which contributes to improved performance outcomes. However, Shuck and Reio (2020) noted that emotional engagement must be supported by appropriate organizational systems, as affective attachment alone may not guarantee sustained productivity.

The dominance of physical engagement reflects the nature of production work, where efficiency and output depend heavily on physical performance. This aligns with the job demands resources framework (Bakker & Demerouti, 2021), which explains that high job demands in manufacturing settings often lead to stronger behavioral or physical engagement. However, the observed imbalance across engagement dimensions suggests that organizations may benefit from strengthening cognitive and emotional engagement to support more sustainable employee performance and wellbeing.

Finally, the relationship between work engagement and productivity showed a weak positive correlation. This indicates that while engagement contributes to productivity, it is not the sole determining factor. Consistent with Collewet and Sauermann (2017), productivity in manufacturing environments is influenced by multiple factors, including work systems, operational structures, and organizational support mechanisms. This suggests that engagement operates as one component within a broader system of productivity determinants rather than as a standalone predictor.

CONCLUSION

This study contributes to the growing body of literature on work engagement by providing empirical evidence from a production based setting in the Philippine manufacturing sector, where productivity is closely linked to physical output and quota driven work systems. Consistent with the job demands resources framework (Bakker & Demerouti, 2021), the findings suggest that employee performance in such environments is shaped by both individual psychological factors and organizational structures. Although work engagement was found to be high across cognitive, physical, and emotional dimensions, its relationship with productivity was weak. This aligns with prior evidence that engagement has a positive but often modest association with performance outcomes when external work conditions exert stronger influence (Christian et al., 2019).

The dominance of physical engagement reflects the demands of production based work, where sustained effort, energy expenditure, and task completion are central to performance outcomes. This supports Kahn's (1990) view that physical engagement is a core component of how employees express themselves in their roles. However, the relatively lower level of emotional engagement indicates an imbalance in the engagement profile of workers. From a theoretical perspective, this imbalance may limit the depth of psychological meaningfulness and connection at work, which Kahn (1990) identified as essential conditions for sustained engagement. Over time, this may affect employee wellbeing, motivation, and retention, even if short term productivity remains high.

From a practical standpoint, the findings highlight that productivity in manufacturing environments is not driven by engagement alone but is also strongly influenced by structural and operational mechanisms such as quota systems, workflow design, and incentive structures. This is

consistent with Collewet and Sauermann (2017), who emphasized that working conditions and system design significantly shape productivity outcomes in labor intensive settings. Therefore, human resource strategies should adopt a more integrated approach that combines engagement enhancement with improvements in work design and organizational support systems. Strengthening emotional engagement may be particularly important, as research suggests that affective attachment to work contributes to sustained performance and reduced turnover intentions (Shuck & Reio, 2020).

For future research, the weak but statistically significant relationship between work engagement and productivity underscores the need to examine additional contextual variables such as leadership style, compensation systems, workplace environment, and organizational culture. Expanding the analytical framework beyond engagement alone may provide a more comprehensive explanation of productivity variation in manufacturing settings, consistent with multidimensional performance models in organizational behavior research.

Overall, this study reinforces the view that while work engagement is an important psychological driver of performance, it functions alongside broader organizational systems that ultimately shape productivity outcomes. A balanced approach that integrates employee engagement with supportive structural conditions is essential for achieving sustainable performance in production based organizations.

The proposed Strategic Intervention Plan is directly grounded in these findings. Physical engagement recorded the highest mean score (4.29), while emotional engagement was the lowest (4.12), indicating a clear developmental gap in the emotional dimension of engagement. This serves as the primary justification for interventions aimed at strengthening emotional engagement within the workforce. In addition, the weak correlation between work engagement and productivity ($r = 0.17$) suggests that improving engagement alone may not significantly increase productivity unless accompanied by improvements in organizational systems and work conditions. Therefore, the proposed strategies are designed not only to enhance emotional engagement but also to complement existing operational structures such as the quota based system to promote more sustainable and balanced employee performance.

OUTPUT OF THE STUDY

Table 2

Strategic Intervention Plan

Objectives	Activities / Strategies	Persons Responsible	Time Frame	Expected Outcomes
Improve employees' emotional well-being	Conduct emotional wellness seminars and stress management workshops	HR Manager, External Speaker	Monthly	Employees become more aware of their emotions and how to manage stress
Strengthen employee-supervisor relationships	Implement regular one-on-one meetings and open communication sessions	Supervisors, Team Leaders	Weekly / Monthly	Improved trust and communication between workers and supervisors
Increase motivation and job satisfaction	Launch rewards and recognition programs	HR Department, Management	Monthly / Quarterly	Higher motivation, increased morale, and job satisfaction

Objectives	Activities / Strategies	Persons Responsible	Time Frame	Expected Outcomes
	(Employee of the Month, incentives)			
Provide emotional support systems	Offer counseling and mentoring programs	HR Personnel, Guidance Counselor	Ongoing	Employees feel supported and valued in the workplace
Reduce workplace stress	Introduce team-building activities and recreational events	HR Department	Quarterly	Reduced stress and improved teamwork
Enhance leadership effectiveness	Conduct leadership training focused on emotional intelligence	Management, HR	Semi-annual	Supervisors become more supportive and empathetic leaders

The Strategic Intervention Plan outlines the key programs and activities designed to enhance employees' emotional engagement and overall workplace well-being. It focuses on addressing identified gaps such as low emotional engagement by implementing targeted interventions led by HR personnel, supervisors, and management.

The plan includes regular emotional wellness seminars, stress management workshops, and counseling services to improve employees' emotional well-being and help them manage workplace stress effectively. It also promotes stronger employee-supervisor relationships through consistent communication and one-on-one sessions to build trust and improve coordination within the workplace.

In addition, the plan introduces rewards and recognition programs to increase employee motivation and job satisfaction, while team-building activities aim to reduce stress and strengthen teamwork among workers. Leadership training focused on emotional intelligence is also included to enhance supervisors' ability to support and understand employee needs.

Overall, the intervention plan is designed to create a more supportive, motivated, and emotionally balanced workforce, which is expected to lead to improved employee satisfaction, stronger workplace relationships, and better organizational performance.

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Declaration of Generative AI

The researcher affirms that artificial intelligence ChatGPT were used in a limited capacity during the development of this research, particularly for improving clarity of expression, grammar, and formatting. All substantive components of the study, including the research design, data collection, analysis, and interpretation, were independently conducted by the researcher. The researcher takes full responsibility for the content and conclusions presented in this paper.

Funding

This research was funded by the student researchers, who assumed full financial responsibility for the conduct of the study. Expenses related to the presentation and publication of the research were supported by the faculty researchers.

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