

Employee Engagement as a Moderator of the Relationship Between Individual Counselling and Employee Productivity: Evidence from a Kenyan Manufacturing Organisation

Leah Mburu^{1*}, Zipporah Kaaria¹, Evans Kaberia²

¹*Kenya Methodist University P.O. Box 45240–00100, Nairobi, Kenya*

²*Presbyterian University of East Africa, Kenya - P.O. Box 387–00902, Kikuyu, Kenya*

Corresponding author email: leahbidan@yahoo.com

Abstract

Employee productivity is a critical organisational outcome, particularly in manufacturing settings where work behaviour is closely linked to production efficiency, quality, attendance, and target attainment. Workplace counselling may help employees manage personal and occupational challenges, but the extent to which counselling is associated with employee productivity may depend on employee engagement. This study examined whether employee engagement moderates the relationship between individual counselling and employee productivity at General Plastics Limited, Nairobi, Kenya. A quantitative, quasi-experimental post-test-only control-group design was used. The target population comprised 556 employees, from which 150 respondents (75 counselling-group and 75 control-group participants) were selected using proportionate stratified random sampling. Data were collected using structured questionnaires and verified organisational records. The overall instrument demonstrated high internal consistency ($\alpha = .851$). Moderation was tested using Hayes' PROCESS macro Model 1 with 5,000 bootstrap resamples. The overall model was statistically significant, $F(3, 146) = 21.60$, $p < .001$, $R^2 = .3074$, explaining 30.74% of the variance in the coded employee productivity outcome. The counselling $\times$ engagement interaction was statistically significant, $\beta = .1777$, $SE = .0863$, $t = 2.06$, $p = .0412$, 95% CI [.0071, .3483]. Conditional effects were statistically significant at low, moderate, and high engagement levels: $\beta = .2983$, .4168, and .4958, respectively. Because the employee productivity outcome was reverse-coded, with higher coded values representing greater operational deficiency (lower substantive productivity), the positive coefficients should not be interpreted as evidence of increased productivity. Instead, the results indicate that the association between individual counselling and the coded productivity outcome varied significantly across levels of employee engagement. The findings highlight the importance of considering employee engagement when interpreting and evaluating workplace counselling and productivity measures in manufacturing setting.

Keywords: *Employee engagement, individual counselling, employee productivity, workplace counselling, Kenya*

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Mburu, Kaaria & Kaberia

1.0 Introduction

Employee productivity is a central indicator of organisational effectiveness because it reflects how efficiently employees use their time, skills, knowledge, and other organisational resources to achieve operational goals. In manufacturing, productivity is particularly important because organisational performance depends on task completion, product quality, safe work practices, attendance, and the consistent attainment of production targets. Understanding factors associated with employee productivity is therefore important for both organisational management and workplace psychological practice.

Manufacturing work can expose employees to demanding schedules, repetitive tasks, performance pressures, role ambiguity, and work–family conflict. Psychological strain may affect concentration, motivation, and adaptive work behaviour. Workplace counselling provides a structured avenue through which employees can address personal and occupational difficulties, develop coping strategies, and consider constructive responses to work-related challenges. Individual counselling is particularly relevant because it permits

Support to be tailored to an employee's specific circumstances.

The present study was anchored in Self-Efficacy Theory and Reality Therapy Theory. Self-Efficacy Theory proposes that beliefs about one's capabilities influence effort, persistence, and responses to difficulty (Bandura, 1977, 1997). Reality Therapy emphasises personal responsibility, self-evaluation, and action-oriented decision-making (Glasser, 1998). From these perspectives, counselling may support employees in managing difficulties and making behavioural adjustments; however, the translation of such psychological gains into observable work outcomes may depend on the employee's engagement with the work role.

Employee engagement refers to the investment of physical, emotional, and cognitive energy in work

roles (Rich et al., 2010). In moderation analysis, a moderator changes the strength or direction of the relationship between a predictor and an outcome (Hayes, 2022). Accordingly, employee engagement was conceptualised in this study as a boundary condition that may alter the relationship between individual counselling and the coded employee productivity outcome.

International evidence suggests that workplace psychological interventions can produce beneficial work-related outcomes, although the magnitude and certainty of effects vary across interventions and populations. Zieringer and Zapf (2024) reported improved work-related productivity and other work outcomes among employees who used an employee assistance programme. Miguel et al. (2023), in an umbrella review of workplace mental health interventions, found promising evidence across several intervention categories but also noted that the certainty of evidence was often low or very low. In Africa, Hoosain et al. (2023) identified limited workplace-based mental health intervention research and recommended greater attention to context-specific and multimodal approaches. Anyamesem-Poku and Parmar (2024) similarly reported a relationship between effective workplace counselling, psychological wellbeing, and work output among teachers in Ghana.

Kenyan studies provide additional contextual evidence. Mtana and Ombui (2022) reported a positive relationship between personal counselling and employee productivity in the hotel industry in Nairobi. Onsare and Ng'eno (2022) examined employee counselling in the Kenya Ports Authority, while Mwalili and K'Okul (2024) found a statistically significant relationship between individual therapy and employee performance at the Kenya Airports Authority. More recently, Cheruiyot and Otiso (2026) reported a statistically significant relationship between workplace counselling and employee productivity among selected commercial banks in Eldoret City. These studies, however, were conducted mainly in service, public-sector,

aviation, and banking environments rather than manufacturing.

“Employee engagement is a statistically significant boundary condition in the observed counselling-productivity relationship”

Within Kenyan manufacturing, Keino et al. (2025) reported a significant positive association between employee engagement and employee performance in selected manufacturing firms in Nairobi City County. Mutegi et al. (2023) also documented employee productivity concerns in Kenyan manufacturing firms and showed that workplace safety and employee safety attitudes were associated with productivity. Despite this evidence, limited attention has been given to whether employee engagement changes the relationship between individual counselling and employee productivity in a manufacturing setting. The present study addressed this gap at General Plastics Limited (GPL), Nairobi.

Administrative records available to the organisation indicated persistent productivity challenges, including missed production targets, absenteeism, and quality inconsistencies despite existing administrative and disciplinary measures (General Plastics Limited, 2022). The organisation introduced an employee assistance and counselling programme in 2022. The objective of the present study was therefore to determine whether employee engagement moderates the relationship between individual counselling and employee productivity at GPL.

2.0 Materials and Methods

Research Design and Setting

The study employed a quantitative, quasi-experimental post-test-only control-group design. A quasi-experimental approach was appropriate

because participation in counselling was based on naturally existing organisational arrangements rather than random assignment (Creswell & Creswell, 2023; Saunders et al., 2023). Participants were drawn from pre-existing groups according to counselling participation. The counselling group comprised employees who voluntarily participated in the organisation's individual workplace counselling programme, whereas the control group comprised employees who had not participated in the programme during the observation period.

Population and Sampling Strategy

The target population comprised 556 full-time employees across four operational departments at GPL, Nairobi: Production (n = 308, 55.4%), Maintenance (n = 93, 16.7%), Sales and Marketing (n = 60, 10.8%), and Administration (n = 95, 17.1%). Using Yamane's (1967) formula for a finite population, $n = N / [1 + N(e^2)]$, with $N = 556$ and $e = .07$, the estimated sample size was approximately 150 employees. Proportionate stratified random sampling was used to select the respondents. The final sample comprised 150 employees, with 75 in the counselling group and 75 in the control group. Because the groups were not randomly assigned, potential selection bias was addressed through inclusion criteria and comparison of demographic characteristics across groups.

Individual Counselling Intervention

The intervention consisted of individual, one-to-one workplace counselling delivered by accredited psychological counsellors. Participants attended 4 to 6 sessions of approximately 45 to 60 minutes each, conducted biweekly over a 12-week period. The counselling approach integrated cognitive-behavioural and Reality Therapy principles and focused on coping strategies, practical problem-solving, and self-regulation. Intervention fidelity was supported through counsellor supervision records, session attendance records, and consultation procedures.

Measurement Instrumentation

Data were collected using structured questionnaires and verified human resource and production records during a six-month post-intervention monitoring period. Individual counselling was measured with eight structured items assessing session utility, adoption of coping mechanisms, and emotional support on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Employee engagement was measured using 12 items adapted from Rich et al. (2010), covering physical, emotional, and cognitive engagement. Employee productivity was assessed using a composite measure comprising self-reported items relating to task completion and work quality together with verified organisational indicators such as attendance and target-achievement records. For statistical analysis, the productivity outcome was reverse-coded; higher numerical values therefore represented greater operational deficiency, that is, lower substantive productivity.

Reliability and Validity

Content and face validity were assessed by a panel of organisational psychologists and senior human resource practitioners. Pre-testing was conducted with 15 respondents outside the final study sample to assess clarity and suitability of the instrument. Internal consistency was assessed using Cronbach's alpha. All scales exceeded the conventional .70 threshold, and the overall instrument reliability was $\alpha = .851$.

Table 1

Reliability of the Study Measures

Construct/Subscale	Number of items	Cronbach's alpha
Individual Counselling	8	.834
Employee Engagement	12	.862
Employee Productivity	10	.819
Overall Instrument	30	.851

Data Analysis and Ethical Considerations

Data were analysed using IBM SPSS Statistics Version 32 and Hayes' PROCESS macro (Version 4.2), Model 1. Moderation analysis was conducted using 5,000 bootstrap resamples. Continuous variables were mean-centred before the interaction term was constructed. Missing data were less than 1.5% and were addressed using mean imputation. Diagnostic checks included assessment of normality, multicollinearity, and homoscedasticity. Shapiro-Wilk results were non-significant ($p > .05$), absolute skewness and kurtosis values were below 1.0, variance inflation factors were below 2.1, and visual inspection of standardised residual plots indicated acceptable homoscedasticity.

Ethical approval was obtained from the relevant institutional review body and the National Commission for Science, Technology and Innovation (NACOSTI). Participation was voluntary, written informed consent was obtained from respondents, and confidentiality was maintained through alphanumeric coding. Counselling records were kept separate from routine human resource administrative files.

3.0 Results and Discussion

Participant Characteristics and Group Comparability

The final sample comprised 150 participants, evenly divided between the counselling group ($n = 75$) and the control group ($n = 75$). Demographic distributions and group-comparability tests are presented in Table 2. There were no statistically significant differences between the two groups in gender, age, department, or tenure (all $p > .05$).

Table 2

Demographic Characteristics and Group Comparability Tests (N = 150)

Characteristic	Counselling group (n = 75)	Control group (n = 75)	Test statistic	p
Gender				
Male	46 (61.3%)	48 (64.0%)	chi-square = 0.118	.731
Female	29 (38.7%)	27 (36.0%)		
Age (years)				
18-30	22 (29.3%)	25 (33.3%)	chi-square = 0.324	.850
31-45	41 (54.7%)	38 (50.7%)		
46+	12 (16.0%)	12 (16.0%)		
Department				
Production	42 (56.0%)	41 (54.7%)	chi-square = 0.082	.994
Maintenance	12 (16.0%)	13 (17.3%)		
Administration/Sales	21 (28.0%)	21 (28.0%)		
Tenure (years)				
Mean (SD)	4.82 (2.1)	4.65 (2.3)	t = 0.473	.637

Note. All p-values exceeded .05, indicating no statistically significant demographic differences between the two groups.

Moderation Analysis

Employee engagement was tested as a moderator of the relationship between individual counselling and the coded employee productivity outcome using Hayes' (2022) PROCESS macro, Model 1. The overall moderation model was statistically significant, $F(3, 146) = 21.60$, $p < .001$, R-squared = .3074, accounting for 30.74% of the variance in coded productivity scores.

The interaction between individual counselling and employee engagement was statistically significant, $\beta = .1777$, $SE = .0863$, $t = 2.06$, $p =$

.0412, 95% CI [.0071, .3483]. This result indicates that the strength of the association between individual counselling and the coded productivity outcome varied across levels of employee engagement.

Conditional effects were estimated at low (-1 SD), moderate (mean), and high (+1 SD) levels of employee engagement. As shown in Table 3, the conditional coefficient increased in magnitude from low to moderate to high engagement. The coefficients were statistically significant at all three levels.

Table 3

Conditional Effects of Individual Counselling on the Coded Productivity Outcome at Levels of Employee Engagement

Engagement level	Mean value	Conditional effect (β)	SE	t	p; 95% CI
Low (-1 SD)	2.84	.2983	.0892	3.3442	.0011; [.1220, .4746]
Moderate (Mean)	3.65	.4168	.0842	4.9498	< .001; [.2504, .5832]
High (+1 SD)	4.46	.4958	.0911	5.4424	< .001; [.3157, .6759]

Note. The employee productivity outcome was reverse-coded, such that higher coded values represented greater operational deficiency (lower substantive productivity). Therefore, the positive conditional coefficients indicate stronger positive associations with the coded outcome and should not be interpreted as increases in substantive productivity.

Discussion and Theoretical Integration

The moderation analysis indicates that employee engagement significantly altered the relationship between individual counselling and the coded productivity outcome. The conditional coefficient was .2983 at low engagement, .4168 at moderate engagement, and .4958 at high engagement. The magnitude of the association therefore increased as engagement increased.

The direction of these coefficients requires careful interpretation because the employee productivity outcome was reverse-coded. A positive coefficient corresponds to a higher numerical value on the coded deficiency scale and therefore should not be described as an increase in substantive productivity. The principal finding is consequently the presence of moderation: the counselling-outcome association differed significantly across levels of employee engagement. This interpretation is more consistent with the measurement direction and avoids treating a positive coefficient on a reverse-coded outcome as evidence of improved productivity.

The finding extends prior Kenyan evidence that has generally examined counselling as a direct predictor of performance or productivity. Mtana and Ombui (2022), Onsare and Ng'eno (2022), Mwalili and K'Okul (2024), and Cheruiyot and Otiso (2026) reported statistically significant relationships between counselling-related interventions and employee performance or productivity in non-manufacturing settings. The present study adds a conditional perspective by examining whether employee engagement changes the strength of the observed relationship within manufacturing. This is also consistent with evidence that engagement is associated with performance in Nairobi manufacturing firms (Keino et al., 2025) and that productivity remains an important organisational concern in Kenyan manufacturing (Mutegi et al., 2023).

The findings can also be considered in relation to the study's theoretical anchors. Self-Efficacy Theory suggests that employees' beliefs about their capabilities influence persistence and effort

(Bandura, 1977, 1997), while Reality Therapy emphasises personal responsibility, self-evaluation, and action planning (Glasser, 1998). These perspectives provide a rationale for examining counselling and engagement together rather than treating counselling as an isolated organisational intervention. The empirical result, however, establishes moderation of the coded outcome; it does not by itself establish a causal increase in substantive productivity.

Study Limitations

Three limitations should be considered when interpreting the findings. First, counselling participation was not randomly assigned, so the design cannot fully exclude selection effects or support strong causal claims. Second, the study was conducted in one manufacturing organisation, which limits the extent to which the findings can be generalised to other sectors or organisations. Third, the reverse-coded productivity outcome requires directional caution when interpreting positive coefficients. Future studies should report both the original and recoded scoring directions and, where feasible, incorporate objective productivity measures with clearly documented coding rules.

4.0 Conclusion

This study examined whether employee engagement moderated the relationship between individual counselling and employee productivity at General Plastics Limited, Nairobi. The overall moderation model was statistically significant, and the interaction between individual counselling and employee engagement was also statistically significant. The conditional association increased in magnitude across low, moderate, and high engagement levels. Because the employee productivity measure was reverse-coded, these positive coefficients indicate stronger associations with the coded deficiency outcome rather than evidence of increased substantive productivity. The study therefore concludes that employee engagement is a statistically significant boundary condition in the observed counselling-productivity relationship and should be

considered when counselling programmes and productivity outcomes are evaluated in manufacturing settings.

5.0 Recommendations

Recommendations for Organisational Practice

Manufacturing organisations should consider integrating workplace counselling with broader employee-engagement practices, including supportive supervision, recognition, communication, and opportunities for development. Such integration should be evaluated using clearly defined outcome measures so that psychological, behavioural, attendance, quality, and productivity indicators can be distinguished and interpreted correctly.

Human resource units should monitor counselling outcomes using both psychosocial measures and objective organisational records, including attendance, target attainment, work quality, and other operational indicators. Importantly, the coding direction of each productivity measure should be documented before analysis and reporting.

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Recommendations for HR and Counselling Practitioners

Counselling practitioners and HR professionals should maintain clear confidentiality boundaries between clinical counselling records and routine performance-management records. Organisations should also avoid presenting counselling as a standalone explanation for productivity challenges and should consider organisational, supervisory, and work-design factors alongside individual-level interventions.

Recommendations for Future Research

Future research should examine multiple manufacturing organisations and use longitudinal designs to assess whether the observed relationships are sustained over time. Where ethical and operational conditions permit, stronger experimental or randomised designs could improve causal inference. Qualitative or mixed-methods studies could also help explain how employee engagement shapes the way employees apply counselling-related coping strategies to their work behaviour. Future studies should additionally retain transparent scoring documentation for reverse-coded productivity measures.

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