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The Effect of Music Playback and Work Environment on Employee Morale at PT Surya Dharmagati

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Abstract

Employee work morale is an important organizational outcome, particularly in manufacturing environments characterized by repetitive tasks and demanding production targets. This study aims to examine the relationships between perceived workplace music playback, the work environment, and employee work morale at PT Surya Dharmagati Tangerang. A quantitative approach with an explanatory correlational design was employed. Data were collected through questionnaires involving all 64 employees using a total sampling technique and analyzed using multiple linear regression. The results indicate that perceived workplace music playback has a positive but statistically insignificant relationship with employee work morale (B = 0.187, p = 0.168), whereas the work environment demonstrates a positive and statistically significant relationship (B = 0.492, p < 0.001). The overall two-predictor regression model is statistically significant (F = 28.036, p < 0.001), with an adjusted R^2 of 0.462. However, only the work environment demonstrates a statistically significant independent association with employee work morale. These findings suggest that management should prioritize improving physical and non-physical workplace conditions while considering music playback as a supplementary workplace strategy. Further research should incorporate objective music exposure measurements, individual preferences, and occupational characteristics to provide a more comprehensive understanding of employee work morale.

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1. Introduction

Human resources constitute a strategic component of organizational success in addressing increasingly complex business competition and industrial development. Organizational effectiveness depends not only on financial resources, technology, and production capacity but also on the quality and management of employees as valuable organizational assets. Effective human resource management emphasizes employee development, motivation, and supportive working conditions to improve productivity and organizational sustainability. Beyond administrative functions, contemporary human resource management also focuses on employee engagement, psychological well-being, and job satisfaction to strengthen individual contributions and organizational effectiveness (Arfah, 2026; A'yuninnisa et al., 2024; Bhoir & Sinha, 2024).

Employee work morale is an essential psychological and behavioral construct within human resource management, reflecting employees' enthusiasm, discipline, commitment, and willingness to perform occupational responsibilities. Although closely related to job satisfaction, employee engagement, and employee performance, work morale represents a conceptually distinct organizational outcome. Job satisfaction primarily reflects employees' evaluative attitudes toward their jobs, employee engagement concerns their psychological involvement and investment in occupational activities, and employee performance represents the behavioral outcomes associated with task accomplishment. In contrast, employee work morale emphasizes emotional enthusiasm and behavioral willingness to sustain effort, cooperation, and commitment under prevailing workplace conditions.

Therefore, favorable job satisfaction or satisfactory performance does not necessarily indicate consistently high employee morale (A'yuninnisa et al., 2024; Kerli et al., 2026; Putri & Sumartik, 2024; Sayuti et al., 2025).

Maintaining employee work morale is particularly important in manufacturing environments characterized by repetitive activities, operational pressures, predetermined production targets, and continuous physical demands. Employees may remain capable of fulfilling production requirements despite experiencing reduced enthusiasm, occupational boredom, or psychological fatigue. Consequently, evaluating employee morale provides a complementary perspective for understanding workplace conditions that may not be fully captured through conventional measures of job satisfaction and performance. This perspective emphasizes the importance of psychological support and favorable organizational conditions in maintaining employees' willingness to sustain occupational responsibilities (Hati et al., 2026; Kerli et al., 2026; Masharyono et al., 2023).

One potential approach to supporting employees' psychological experiences is music playback during working hours. Music may function as an auditory stimulus that influences emotional regulation, motivation, mood, and concentration, particularly during repetitive or monotonous activities. Research involving Indonesian employees indicates that music preferences and listening purposes vary according to employees' emotional conditions and occupational needs. Music may provide emotional comfort during stressful situations or serve as a motivational stimulus when employees experience reduced enthusiasm. These psychological functions suggest that workplace music may contribute to employee morale through mechanisms that extend beyond conventional physical and social workplace conditions (Sanseverino et al., 2023; Zandra et al., 2025).

Nevertheless, empirical evidence regarding the effectiveness of workplace music remains inconsistent. Music used for emotional regulation has been positively associated with employee performance, whereas background music does not consistently demonstrate beneficial relationships with job satisfaction and performance. Although music may improve mood, reduce perceived monotony, and support sustained attention, it may also create auditory distractions or increase cognitive demands, particularly when tasks require intensive concentration. Accordingly, the potential benefits of workplace music depend on the interaction between musical characteristics, individual preferences, listening purposes, and occupational task requirements (Cheah et al., 2022; Kiss & Linnell, 2024; Sanseverino et al., 2023; Serpian et al., 2022).

These conflicting findings provide an important theoretical basis for examining music playback as a predictor of employee work morale rather than assuming that its benefits are universal. Music may influence employees' immediate affective experiences and perceived motivation without necessarily producing corresponding improvements in task performance or overall job satisfaction. Conversely, unsuitable musical genres, inappropriate playback timing, or excessive auditory stimulation may limit its psychological benefits. Therefore, investigating employee morale as a distinct outcome may provide additional insight into the conditions under which workplace music is associated with favorable employee experiences (Cheah et al., 2022; Sanseverino et al., 2023; Zandra et al., 2025).

In addition to music playback, the work environment represents a fundamental organizational factor associated with employee work morale. The work environment encompasses physical conditions, including lighting, temperature, noise, workplace layout, facilities, and occupational safety, as well as non-physical conditions, including interpersonal relationships, organizational communication, employee cooperation, and supervisory support. Favorable workplace conditions may enhance psychological comfort, motivation, and employee commitment, whereas unfavorable conditions may contribute to occupational stress, fatigue, and reduced enthusiasm. Previous empirical studies have demonstrated significant associations between supportive workplace environments, organizational communication, employee attitudes, and organizational performance (Felgueiras et al., 2025; Hidayat et al., 2026; Sari et al., 2026; Zhenjing et al., 2022).

The importance of workplace conditions has also been demonstrated in manufacturing organizations. Research conducted at PT Sinergi Gula Nusantara, Takalar Sugar Factory, identified positive relationships between the work environment, employee motivation, and

employee performance. Similarly, research at PT Spesial Pipa Indonesia demonstrated that workplace conditions and organizational communication significantly contributed to employee job satisfaction. Furthermore, studies specifically addressing employee work morale have emphasized the importance of supportive workplace conditions in maintaining employees' enthusiasm and willingness to perform their responsibilities. Collectively, these findings establish the work environment as an important explanatory factor in understanding employees' psychological and behavioral experiences (Hati et al., 2026; Kerli et al., 2026; Sari et al., 2026; Sayuti et al., 2025).

Although music playback constitutes part of the broader auditory environment, its potential contribution to employee morale may differ from that of general physical and social workplace conditions. Physical and social work-environment factors primarily provide the structural and interpersonal conditions necessary for employees to perform their responsibilities, whereas music playback represents a specific auditory stimulus that may influence emotional regulation, perceived monotony, and motivational states. Employees working under comparable physical and social conditions may nevertheless experience different levels of enthusiasm depending on their responses to workplace music. Consequently, music playback may provide additional explanatory value for employee morale after general work-environment conditions are statistically controlled. However, its incremental contribution remains an empirical question because the potential benefits of music may depend on individual preferences, task characteristics, and existing workplace conditions (Cheah et al., 2022; Sanseverino et al., 2023; Zandra et al., 2025).

The research gap addressed in this study therefore extends beyond the limited integration of music playback and the work environment within a single research model. Existing studies have predominantly examined workplace music in relation to employee satisfaction, emotional regulation, and performance, while research on workplace conditions has frequently emphasized employee motivation, engagement, and organizational performance. Less attention has been directed toward determining whether workplace music explains additional variation in employee work morale beyond that associated with general workplace conditions. Addressing this gap contributes to a more differentiated understanding of the relationships between specific auditory stimuli, broader organizational environments, and employee morale as a distinct psychological and behavioral outcome (Hati et al., 2026; Kerli et al., 2026; Sanseverino et al., 2023; Sayuti et al., 2025; Zandra et al., 2025).

This study was conducted at PT Surya Dharmagati Tangerang, a manufacturing company producing footwear components for the Carvil brand. Its production activities involve repetitive processes, predetermined production targets, and operational responsibilities requiring accuracy, consistency, and concentration. This manufacturing context is theoretically relevant because repetitive work may increase the potential value of music as a stimulus for reducing perceived monotony and maintaining enthusiasm. At the same time, operational requirements involving concentration, workplace communication, and occupational safety may restrict its psychological benefits. Manufacturing activities therefore provide a relevant setting for examining the potentially complementary or competing contributions of music playback and general work-environment conditions to employee work morale.

Based on these theoretical considerations and empirical inconsistencies, this study aims to examine the relationships between music playback, the work environment, and employee work morale at PT Surya Dharmagati Tangerang. Specifically, it investigates the individual associations of music playback and the work environment with employee work morale and evaluates their joint explanatory contribution.

The theoretical contribution of this study lies in positioning employee work morale as a distinct organizational outcome and examining whether workplace music provides additional explanatory value beyond general physical and social work-environment conditions. Rather than assuming that music playback consistently enhances employee outcomes, this study evaluates its relative statistical contribution within an integrated explanatory framework. The practical contribution involves providing empirical considerations for manufacturing companies in determining whether music playback should be implemented as a complementary workplace strategy alongside improvements in physical facilities, organizational relationships, and supportive

working conditions.

2. Literatur Review

2.1 Human Resource Management

Human resource management (HRM) is a strategic organizational function that focuses on managing, developing, and optimizing employees to achieve organizational objectives effectively and efficiently. Integrating management principles, organizational psychology, and behavioral sciences, HRM recognizes employees as valuable organizational assets whose competencies, motivation, and engagement contribute to organizational productivity, competitiveness, and sustainability. Therefore, effective HRM requires comprehensive policies and practices that support employee development, psychological well-being, and organizational performance (Arfah, 2026; Bhoir & Sinha, 2024).

HRM encompasses recruitment, training, performance evaluation, compensation, employee relations, and initiatives that promote supportive working conditions. Beyond administrative functions, contemporary HRM emphasizes employee motivation, psychological experiences, and behavioral commitment to strengthen organizational effectiveness and sustainable employment relationships. Within this framework, employee work morale represents an important organizational outcome because it reflects employees' enthusiasm and willingness to sustain their occupational responsibilities (A'yuninnisa et al., 2024; Bhoir & Sinha, 2024).

The strategic role of HRM also involves understanding how employees perceive and respond to workplace conditions. Supportive physical and social environments may provide fundamental conditions for maintaining employee morale, whereas supplementary workplace practices, such as music playback, may contribute to employees' emotional comfort and motivation. Accordingly, HRM provides the theoretical foundation for examining the relationships between perceived workplace music playback, the work environment, and employee work morale at PT Surya Dharmagati Tangerang (Arfah, 2026; Sanseverino et al., 2023; Zandra et al., 2025).

2.2 Employee Work Morale

Employee work morale refers to a psychological and behavioral condition characterized by enthusiasm, discipline, commitment, and willingness to perform occupational responsibilities. Although related to job satisfaction, employee engagement, and employee performance, work morale represents a conceptually distinct organizational construct. Job satisfaction reflects employees' evaluative attitudes toward their employment, employee engagement emphasizes psychological involvement in occupational activities, and employee performance concerns the accomplishment of assigned responsibilities. In contrast, work morale emphasizes employees' emotional enthusiasm and willingness to sustain effort and commitment under prevailing workplace conditions (A'yuninnisa et al., 2024; Kerli et al., 2026; Putri & Sumartik, 2024; Sayuti et al., 2025).

High work morale may encourage motivation, cooperation, responsibility, and consistent occupational effort, whereas unfavorable working conditions and operational pressures may reduce employee enthusiasm. Previous studies have identified significant relationships among employee morale, workplace conditions, job satisfaction, and work motivation, highlighting the relevance of employee morale to organizational effectiveness (Kerli et al., 2026; Sayuti et al., 2025).

In the present study, employee work morale is operationalized through two principal dimensions: affective and conative. The affective dimension comprises three indicators: (1) psychological and emotional state, (2) individual and group relationships, and (3) enjoyment of work. These indicators are intended to represent employees' emotional experiences, perceived interpersonal connectedness, and positive feelings toward occupational activities. The interpersonal component is conceptually relevant to morale when it reflects employees' affective responses to working with others rather than their evaluation of interpersonal workplace conditions (Bhoir & Sinha, 2024; Kerli et al., 2026).

The conative dimension comprises three indicators: (1) willingness to work harder, (2) commitment to assigned responsibilities, and (3) goal-oriented work behavior. These indicators represent employees' behavioral intentions, willingness to exert effort, sense of responsibility, and persistence in achieving organizational objectives (Kerli et al., 2026; Sayuti et al., 2025).

A conceptual distinction is necessary between the interpersonal component of employee work morale and the non-physical dimension of the work environment. Employee work morale is intended to capture employees' emotional and motivational responses, whereas the work environment is intended to capture their perceptions of external workplace conditions, including coworker relationships, organizational communication, and teamwork. Nevertheless, the inclusion of relationship-related indicators in both constructs creates potential measurement overlap if the corresponding questionnaire items assess similar experiences.

Consequently, these dimensions should not be assumed to demonstrate adequate discriminant validity solely because they have been assigned to different constructs. Evidence of discriminant validity is necessary to establish whether the measurements adequately represent distinct conceptual domains. In the absence of such evidence, the estimated relationship between the work environment and employee work morale should be interpreted cautiously because conceptual and measurement overlap may partially contribute to the observed statistical association (Cheung et al., 2024).

2.3 Perceived Workplace Music Playback

Perceived workplace music playback refers to employees' subjective assessments of music played during occupational activities, particularly its perceived relevance to emotional regulation, motivation, concentration, and compatibility with individual preferences. Unlike objectively measured music exposure, this construct emphasizes how employees evaluate their experiences of workplace music rather than the measurable acoustic characteristics of the music itself.

Previous research indicates that music may support emotional regulation, psychological comfort, and employee performance. However, its potential benefits depend on musical characteristics, occupational task requirements, individual preferences, and listening purposes. While music may reduce perceived monotony and improve emotional experiences, it can also interfere with attention and concentration when its characteristics are incompatible with occupational demands (Cheah et al., 2022; Kiss & Linnell, 2024; Sanseverino et al., 2023; Zandra et al., 2025).

In this study, perceived workplace music playback is operationalized through three dimensions. The first dimension, emotional regulation, comprises two indicators: (1) perceived work-related stress regulation and (2) perceived motivational and energizing support. These indicators capture employees' subjective assessments of the extent to which workplace music supports emotional comfort, reduces perceived stress, and encourages enthusiasm during occupational activities (Zandra et al., 2025).

The second dimension, cognitive and auditory control, comprises two indicators: (1) perceived auditory distraction control and (2) perceived task concentration support. These indicators reflect employees' assessments of whether music contributes to auditory comfort and helps them maintain attention during work. However, these perceptions should not be interpreted as objective evidence of noise reduction or improved cognitive performance because such outcomes depend on task complexity, acoustic conditions, and individual differences (Cheah et al., 2022; Kiss & Linnell, 2024).

The third dimension, auditory preference compatibility, comprises two indicators: (1) perceived musical genre suitability and (2) perceived music playback timing suitability. These indicators emphasize employees' evaluations of the compatibility of workplace music with their personal preferences and occupational requirements. Appropriate musical selections and playback arrangements may contribute to positive workplace experiences, whereas unsuitable music may limit its perceived psychological benefits (Serpian et al., 2022; Zandra et al., 2025).

The six indicators collectively represent employees' perceived experiences of workplace music rather than objectively measured exposure to a standardized music intervention. The available measurements do not establish specific exposure characteristics, including music genre, playback frequency, duration, sound intensity, playback location, or individual exposure across occupational tasks.

Accordingly, the variable is conceptualized as perceived workplace music playback, and its statistical relationship with employee work morale should be interpreted as an association between employees' subjective assessments of workplace music and their reported morale. The findings cannot establish the direct causal effect of music playback or

determine the effectiveness of particular musical characteristics.

2.4 Work Environment

The work environment encompasses physical, social, and organizational conditions that influence employees' occupational comfort, psychological experiences, motivation, and performance. Supportive workplace conditions, including adequate facilities, effective communication, and positive interpersonal relationships, may contribute to employee satisfaction and organizational effectiveness, whereas unfavorable conditions may increase occupational stress and reduce motivation. Previous studies have demonstrated significant associations between the work environment, employee commitment, job satisfaction, and performance (Hati et al., 2026; Zhenjing et al., 2022).

In this study, the work environment is conceptualized as employees' perceptions of the physical and non-physical conditions surrounding their occupational activities. The physical dimension comprises six indicators: (1) lighting conditions, (2) workplace temperature, (3) noise levels, (4) workplace layout, (5) work facilities, and (6) workplace safety. These indicators represent employees' assessments of environmental adequacy, physical comfort, and occupational safety rather than measurements obtained through objective environmental monitoring (Felgueiras et al., 2025).

The non-physical dimension comprises five indicators: (1) relationships among employees, (2) workplace communication, (3) supervisor–employee relationships, (4) employee cooperation, and (5) workplace atmosphere. These indicators represent employees' perceptions of organizational interactions, interpersonal support, communication practices, and the social conditions within the workplace (Hidayat et al., 2026; Sari et al., 2026).

Conceptually, the non-physical work environment is positioned as a predictor representing perceived organizational conditions, whereas employee work morale represents the emotional and motivational responses of employees to their occupational experiences. Nevertheless, indicators concerning interpersonal relationships and cooperation may overlap with the affective dimension of employee work morale. This potential overlap requires careful consideration when interpreting the relationship between the two variables, particularly when both are measured through self-reported questionnaires.

A clear conceptual distinction between these constructs is essential to ensure that the observed statistical relationship reflects theoretically meaningful associations rather than similarities in measurement content. Consequently, the eleven work-environment indicators are retained as the operational measures of the original research instrument, with recognition that their empirical distinction from employee morale requires further assessment through appropriate discriminant validity procedures (Cheung et al., 2024).

2.5 Previous Empirical Studies

Previous empirical studies have examined the relationships between workplace music, the work environment, and various employee outcomes. Research concerning workplace music has primarily focused on emotional regulation, job satisfaction, attention, and employee performance, while work-environment studies have emphasized employee motivation, work morale, and organizational performance. These findings suggest that auditory experiences and broader workplace conditions are relevant to employees' psychological and behavioral outcomes, although their relationships vary across occupational contexts and measurement approaches (Kerli et al., 2026; Sanseverino et al., 2023; Sayuti et al., 2025; Zandra et al., 2025).

Empirical findings regarding workplace music remain inconsistent. Music may support emotional regulation, reduce perceived monotony, and encourage motivation during repetitive occupational activities. However, background music may also interfere with concentration when its characteristics are incompatible with task demands or individual preferences. These conflicting findings indicate that workplace music should not automatically be regarded as a uniformly beneficial intervention across organizational settings (Cheah et al., 2022; Kiss & Linnell, 2024; Sanseverino et al., 2023; Serpian et al., 2022).

In contrast, previous studies examining the work environment have generally identified positive relationships between supportive physical and social workplace conditions and favorable employee outcomes. Adequate workplace facilities, effective communication, positive interpersonal relationships, and

organizational support may contribute to employee satisfaction, motivation, commitment, and work morale. Nevertheless, the conceptual distinction between perceived workplace conditions and employees' psychological responses remains important when interpreting these relationships (Hati et al., 2026; Kerli et al., 2026; Sari et al., 2026; Sayuti et al., 2025).

The theoretical gap addressed in this study concerns whether employees' perceived experiences of workplace music provide additional explanatory value for employee work morale beyond that associated with general workplace conditions. While the work environment reflects employees' perceptions of structural and interpersonal occupational conditions, perceived workplace music playback represents their subjective evaluations of a specific auditory stimulus that may support emotional regulation, concentration, and motivation.

Therefore, the present study integrates perceived workplace music playback (X1) and the work environment (X2) as predictors of employee work morale (Y). This framework enables the examination of their individual and joint statistical contributions within a manufacturing setting. However, interpretation of their relative contributions must consider the subjective nature of the measurements and the potential conceptual overlap among questionnaire indicators.

2.6 Conceptual Framework

The conceptual framework examines the relationships between perceived workplace music playback (X1), the work environment (X2), and employee work morale (Y). The framework is developed based on the theoretical distinction between employees' perceived auditory experiences, their assessments of general workplace conditions, and their emotional and behavioral responses to occupational activities.

Perceived workplace music playback may be associated with employee morale through employees' assessments of emotional regulation, motivational support, concentration, and compatibility with musical preferences. Employees who perceive workplace music as appropriate and psychologically supportive may report greater occupational enthusiasm. Nevertheless, this relationship may vary according to individual preferences and occupational demands, providing the theoretical basis for the first hypothesis (H1) (Sanseverino et al., 2023; Serpian et al., 2022; Zandra et al., 2025).

The work environment represents a broader set of physical and social workplace conditions that may be associated with employees' comfort, enthusiasm, and willingness to perform occupational responsibilities. Favorable perceptions of workplace facilities, organizational communication, and interpersonal support may correspond to higher levels of employee work morale, providing the theoretical basis for the second hypothesis (H2) (Kerli et al., 2026; Sayuti et al., 2025).

Furthermore, perceived workplace music playback may provide additional explanatory information beyond general work-environment conditions because it represents employees' evaluations of a specific auditory experience. Both predictors may therefore jointly explain variations in employee work morale, forming the theoretical basis for the third hypothesis (H3).

These relationships are examined using multiple linear regression analysis to evaluate the independent and joint statistical contributions of both predictors. However, because the study employs subjective questionnaire measurements within a non-experimental research design, the estimated relationships are interpreted as statistical associations rather than causal effects. Potential measurement overlap among constructs is also acknowledged when interpreting the regression coefficients.

2.7. Research Hypotheses

Based on the theoretical framework and previous empirical findings, this study formulates three hypotheses to examine the individual and simultaneous relationships between perceived workplace music playback, the work environment, and employee work morale at PT Surya Dharmagati Tangerang.

H1: Perceived workplace music playback has a statistically significant relationship with employee work morale at PT Surya Dharmagati Tangerang, controlling for the work environment.

H2: The work environment has a statistically significant relationship with employee work morale at PT Surya Dharmagati Tangerang, controlling for perceived workplace music playback.

H3: Perceived workplace music playback and

the work environment jointly explain a statistically significant proportion of the variation in employee work morale at PT Surya Dharmagati Tangerang.

3. Research Methods

3.1 Research Design

This study employed a quantitative approach with an explanatory correlational design to examine the relationships between music playback (X1), the work environment (X2), and employee work morale (Y) at PT Surya Dharmagati Tangerang. Data were collected primarily through structured questionnaires, supported by observation and documentation. This approach enables systematic measurement of employee perceptions and statistical evaluation of relationships among variables (Ranganathan & Caduff, 2023).

The research procedures included literature review, hypothesis development, population and sample determination, data collection, and statistical analysis using SPSS. Data analysis involved instrument validity and reliability testing, regression assumption diagnostics, multiple linear regression, t-tests, F-tests, and coefficient of determination analysis. Similar quantitative approaches have been applied in organizational research examining workplace conditions and employee outcomes. As this study adopted a non-experimental design, the findings were interpreted as statistical associations rather than causal relationships (Hati et al., 2026; Sari et al., 2026).

3.2 Population and Sample

The study population comprised all 64 employees of PT Surya Dharmagati Tangerang. Total sampling was employed, achieving 100% population coverage with no reported exclusions (Hati et al., 2026; Sari et al., 2026). Respondents included production, quality control, and field leadership personnel (71.88%), administrative personnel (4.69%), and employees in other positions (23.44%).

These occupational groups may differ in music exposure, task demands, noise levels, and safety requirements. However, role-specific music exposure was not systematically recorded, and occupational position was not included as a control variable in the regression model. These differences may influence the observed relationships and should be considered when interpreting the findings. Accordingly, the results are specific to the investigated organization and should not be generalized directly to other manufacturing settings. Future studies should incorporate occupational characteristics into the analytical model to account for potential differences across employee groups.

3.3 Operational Definitions and Measurement of Variables

This study examined three variables: music playback (X1), work environment (X2), and employee work morale (Y), measured using a structured questionnaire with a five-point Likert scale. Each variable was operationalized through dimensions and indicators adapted from the theoretical framework, considering measurement relevance, consistency, and validity (Cheung et al., 2024; Ranganathan et al., 2024). Each construct was measured using 12 questionnaire items, resulting in a total of 36 items.

Table 1. Operational Definitions of Research Variables

Variable	Operational Definition	Dimensions and Indicators	Measurement
Music Playback (X1)	Employees' perceptions of workplace music as an auditory stimulus.	Emotional regulation: stress reduction, motivation. Cognitive and auditory control: noise buffering, concentration. Auditory compatibility: music genre, playback timing.	5-point Likert
Work Environment (X2)	Perceived physical and non-physical workplace conditions.	Physical: lighting, temperature, noise, layout, facilities, safety. Non-physical: coworker relationships, communication, supervisory relationships, teamwork, workplace atmosphere.	5-point Likert
Employee Work Morale (Y)	Employees' enthusiasm, discipline, responsibility, and work commitment.	Affective: psychological state, interpersonal relationships, work enjoyment. Conative: work effort, task commitment, goal orientation.	5-point Likert

Source: Developed from the conceptual

and operational framework of the present study.

Music playback was operationalized through three dimensions and six indicators, focusing on employees' emotional responses, perceived concentration, and compatibility with musical preferences. These components were informed by research examining the emotional and cognitive functions of workplace music and employees' situational music preferences. The work environment was operationalized through two dimensions and eleven indicators covering physical workplace conditions and organizational relationships, while employee work morale was measured through two dimensions and six indicators representing psychological experiences and behavioral commitment. These operational measures reflect the constructs investigated in the present study and require empirical assessment of their measurement properties (Sanseverino et al., 2023; Zandra et al., 2025).

3.4 Data Collection Procedures

Data were collected through non-participant observation, structured questionnaires, and documentation review. Non-participant observation was conducted at PT Surya Dharmagati Tangerang, located at Pergudangan Sentra Kosambi, Jl. Raya Kosambi, Block H1D, Kosambi Timur, Kosambi, Tangerang, Banten 15211, Indonesia. During the observation process, the researcher acted as an independent observer without directly participating in employees' daily occupational activities. The observations covered the company's operational areas, including physical facilities, workplace layout, environmental conditions, production activities, and the implementation of music playback during working hours. These observations were intended to provide contextual information regarding the actual workplace conditions and the auditory environment experienced by employees.

Primary data were collected using a structured questionnaire distributed electronically through Google Forms to the employees included in the census population. The online questionnaire format was selected to facilitate access and enable employees to complete the instrument during available work breaks. The questionnaire used a five-point Likert response scale consisting of strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). The response categories were designed to measure employees' perceptions of music playback, workplace conditions, and work morale. The development and administration of structured questionnaires require attention to item clarity, conceptual consistency, and the suitability of response options to support the quality of the resulting data (Ranganathan & Caduff, 2023).

Secondary information was obtained through documentation and literature review. This process involved examining relevant scientific publications, theoretical references, and available organizational documents, including company profile information, to support the description of the research setting and the interpretation of the study variables. The use of questionnaires, observation, and documentary information is consistent with empirical organizational research employing quantitative methods to investigate workplace-related variables. In the present study, questionnaire responses constituted the primary dataset for statistical analysis, whereas observational and documentary information served as contextual and supporting evidence (Hati et al., 2026; Sari et al., 2026).

3.5 Instrument Validity and Reliability Testing

The quality of the research instrument was evaluated through validity and reliability testing before the main regression analysis. Instrument validity was assessed using item–total correlation analysis to determine whether individual questionnaire items were sufficiently associated with the overall scores of their respective variables. The analysis was conducted using SPSS, with the significance level established at 5% ($\alpha = 0.05$). An item was considered to meet the specified statistical correlation criterion when its calculated correlation coefficient was positive and exceeded the relevant critical correlation value. Nevertheless, item–total correlations provide preliminary evidence of item consistency and do not independently establish the complete construct validity of a questionnaire. Comprehensive instrument evaluation should also consider the conceptual relevance of items and their relationships with the constructs they are intended to measure (Cheung et al., 2024; Ranganathan et al., 2024).

Instrument reliability was assessed using Cronbach's alpha to evaluate the internal consistency of the items measuring music playback, the work environment, and employee

work morale. The original research protocol specified an alpha coefficient of 0.60 as the minimum preliminary screening criterion. However, coefficients of 0.70 or higher are generally preferable for demonstrating acceptable internal consistency, particularly when questionnaire scores are subsequently used in inferential statistical analyses. Accordingly, the reliability coefficients should be reported for each variable and interpreted in relation to the number of items, the dimensional structure, and the intended purpose of measurement. High internal consistency alone should not be interpreted as sufficient evidence of instrument validity (Cheung et al., 2024; Ranganathan et al., 2024).

3.6 Classical Assumption Testing

Regression assumption diagnostics were conducted to evaluate the suitability of the multiple linear regression model for examining the relationships among the study variables. The assessment focused on residual normality, heteroscedasticity, and multicollinearity, with additional consideration of the linearity of relationships and the independence of observations. These diagnostic procedures were intended to identify potential violations that could influence coefficient estimation, standard errors, and statistical inference. Contemporary methodological research recommends combining statistical tests with graphical examinations rather than relying exclusively on significance thresholds when evaluating regression assumptions (Shatz, 2024).

The normality assessment focused on the distribution of regression residuals rather than the marginal distributions of the individual research variables. The study specified the one-sample Kolmogorov–Smirnov test as a statistical procedure for examining residual normality at a 5% significance level. A p-value greater than 0.05 was interpreted as insufficient evidence to reject the normality assumption, whereas a p-value below 0.05 indicated evidence of a departure from normality. However, because formal normality tests may be sensitive to sample characteristics and do not describe the magnitude or practical importance of deviations, residual histograms and normal probability plots should also be examined to support the interpretation of the test results (Shatz, 2024).

The heteroscedasticity assessment was performed using graphical inspection and the Glejser test. The graphical procedure involved examining a scatterplot of standardized residuals against standardized predicted values to identify systematic patterns in residual dispersion. Randomly distributed residuals without an identifiable pattern would provide visual support for approximately constant error variance, whereas funnel-shaped or systematic patterns could indicate heteroscedasticity. The Glejser test involved regressing the absolute residual values on the independent variables. A significance level below 0.05 for a predictor in the Glejser regression was interpreted as evidence of a possible association between that predictor and the magnitude of residuals. The statistical and graphical findings were considered jointly because a single diagnostic test may not adequately characterize the nature of assumption violations (Shatz, 2024).

The multicollinearity assessment was conducted by examining tolerance values and variance inflation factors (VIF) for music playback and the work environment. Multicollinearity occurs when independent variables exhibit substantial linear relationships, potentially increasing the uncertainty associated with individual regression coefficient estimates. In accordance with the study's specified screening criteria, tolerance values greater than 0.10 and VIF values below 10 were treated as preliminary indications that severe multicollinearity was not present. Nevertheless, these thresholds were interpreted as diagnostic guidelines rather than absolute guarantees of acceptable regression performance. The magnitude of the relationships between the independent variables was also considered when interpreting the regression coefficients (Shatz, 2024).

3.7 Multiple Linear Regression Analysis

Multiple linear regression analysis was employed to examine the statistical relationships between music playback, the work environment, and employee work morale. This analytical method was selected because the study involved two independent variables and one dependent variable. Questionnaire responses were processed using SPSS, and the composite scores representing each research variable served as the basis for estimating the regression model. The use of multiple linear regression enables researchers to estimate the association of each independent variable with the dependent variable while accounting for the

other predictor included in the model. Similar analytical procedures have been applied in recent employee-related organizational research involving workplace conditions, motivation, and job satisfaction (Hati et al., 2026; Sari et al., 2026).

The multiple linear regression model was specified as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where Y represents employee work morale, β_0 denotes the regression intercept, β_1 and β_2 represent the regression coefficients for perceived workplace music playback and the work environment, respectively. X_1 represents perceived workplace music playback, X_2 represents the work environment, and ε denotes the regression error term.

The regression coefficients were used to determine the direction and magnitude of the associations between the independent variables and employee work morale. A positive coefficient indicates that higher scores on the corresponding independent variable are associated with higher employee work morale scores, holding the other predictor constant. Conversely, a negative coefficient indicates an inverse association after accounting for the other predictor. The statistical significance of each coefficient was evaluated using the t-test, while the overall significance of the regression model was examined using the F-test. Because the study employed a non-experimental survey design, the regression results were interpreted as statistical associations rather than conclusive causal effects.

3.8 Hypothesis Testing and Coefficient of Determination

Hypothesis testing was conducted using individual regression coefficient tests (t-tests) and an overall regression model significance test (F-test) at a significance level of 5% (α = 0.05). The t-tests were employed to examine the individual statistical contributions of music playback (X1) and the work environment (X2) to employee work morale (Y), while controlling for the other predictor. A p-value below 0.05 indicated a statistically significant coefficient, providing evidence against the corresponding null hypothesis. Conversely, a p-value equal to or greater than 0.05 indicated insufficient statistical evidence to reject the null hypothesis. For a multiple regression model with two predictors and an intercept, the residual degrees of freedom are calculated as (n-3), corresponding to 61 degrees of freedom if all 64 employee questionnaires contain complete and usable data.

The F-test was used to determine whether the independent variables jointly explained a statistically significant proportion of the variation in employee work morale. Specifically, the test evaluated the null hypothesis that both population slope coefficients were equal to zero. A significance value below 0.05 indicated that the overall regression model was statistically significant, whereas a value equal to or above 0.05 indicated insufficient evidence against the joint null hypothesis. With two independent variables, the numerator degrees of freedom are 2, and the denominator degrees of freedom are (n-3), equivalent to 61 when the complete dataset contains 64 valid observations. Comparable procedures involving individual coefficient tests and overall model significance testing have been used in recent quantitative organizational studies published in Journal Social Society and Income Journal of Economics Development (Hati et al., 2026; Sari et al., 2026).

The explanatory capacity of the regression model was evaluated using the coefficient of determination (R^2) and adjusted R^2. The R^2 value indicates the proportion of observed variation in employee work morale accounted for by music playback and the work environment in the estimated model. Adjusted R^2 was additionally considered because it accounts for the number of predictors relative to the sample size and provides a more conservative estimate of explanatory performance. Higher values indicate that the model explains a greater proportion of the observed variation in employee work morale, whereas lower values indicate more limited explanatory capacity. However, the unexplained proportion should not automatically be attributed to specific omitted factors, and the coefficient of determination should not be interpreted as the percentage of employee morale causally produced by the independent variables. The regression results were interpreted together with coefficient estimates, significance values, and model diagnostics to provide a comprehensive assessment of the proposed statistical relationships (Hati et al., 2026; Sari et al., 2026; Shatz, 2024).

4. Result and Discussion

4.1 Respondent Characteristics

This study involved 64 employees of PT Surya Dharmagati Tangerang, representing the

entire population included in the research. Respondent characteristics were classified according to gender, age, occupational position, and length of employment. These characteristics provide an overview of the workforce participating in the study and contextual information for interpreting employees' perceptions of workplace music playback, the work environment, and work morale. Differences in demographic and occupational characteristics may contribute to variations in employees' workplace experiences and perceptions. The distribution of respondent characteristics is presented in the following table.

Table 2. Demographic Characteristics of Respondents

Characteristics	Category	Frequency	Percentage (%)
Gender	Female	44	68.75
	Male	20	31.25
Age	17–22 years	19	29.69
	23–28 years	9	14.06
	29–34 years	15	23.44
	≥35 years	21	32.81
Occupational position	Production/QC/ Field Leader	46	71.88
	Administration/ Personnel	3	4.69
	Other positions	15	23.44
Length of employment	Less than 1 year	13	20.31
	1–3 years	24	37.50
	4–6 years	6	9.38
	More than 6 years	21	32.81

Source: Questionnaire data, 2026. Each demographic characteristic comprises 64 respondents (100%); minor percentage differences may arise from rounding.

As presented in Table 2, most respondents were female (68.75%), while male employees accounted for 31.25%. The largest age group was 35 years or older (32.81%), followed by 17–22 years (29.69%), 29–34 years (23.44%), and 23–28 years (14.06%). Most employees worked in production, quality control, or field leadership positions (71.88%), while 23.44% held other positions and 4.69% worked in administration. Regarding employment duration, the largest proportion had worked for 1–3 years (37.50%), followed by more than six years (32.81%), indicating diversity in employees' demographic characteristics, occupational roles, and work experience.

4.2 Descriptive Analysis of Research Variables

Descriptive analysis was conducted to examine respondents' perceptions of workplace music playback (X1), the work environment (X2), and employee work morale (Y). The operational framework comprises six, eleven, and six indicators, respectively, while each construct was measured using 12 questionnaire items, yielding 36 items in total. The number of indicators therefore differs from the number of measurement items. Responses were assessed using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The analysis summarized total scores, average item scores, and the highest- and lowest-scoring items across 64 respondents. However, the detailed item-to-indicator mapping could not be verified from the available questionnaire documentation, which represents a limitation in assessing measurement consistency.

Table 3. Descriptive Summary of Research Variables

Variable	Total Score	Average Item Score*	Lowest Item Score	Highest Item Score
Music Playback (X1)	2,940	245.0	228	259
Work Environment (X2)	2,976	248.0	223	266
Employee Work Morale (Y)	3,019	251.6	232	265

Note: Mean Likert scores were calculated by dividing total scores by 768 (64 respondents × 12 items). Standard deviations were unavailable. Source: Questionnaire data, 2026.

The music playback variable obtained a total score of 2,940, with an average item score of 245.0. The highest score was recorded for item X1.5 (259), indicating positive perceptions of music in reducing distracting workplace noise, while item X1.9 received the lowest score (228), reflecting differences in musical preferences. Meanwhile, the work environment variable obtained a total score of 2,976, averaging 248.0. Item X2.11 recorded the highest score (266), indicating strong employee cooperation, whereas item X2.2 received the lowest score (223), suggesting relatively lower satisfaction with workplace temperature.

Employee work morale recorded the highest total score of 3,019, with an average item score of 251.6. Item Y.11 achieved the highest score (265), reflecting positive perceptions of teamwork and mutual assistance, while item Y.7 obtained the lowest score (232), indicating concerns or uncertainty regarding workplace security. Overall, respondents expressed generally favorable

perceptions of music playback, the work environment, and employee work morale, although music preferences, thermal comfort, and workplace security emerged as areas requiring further attention.

4.3 Instrument Validity and Reliability

Instrument quality was assessed using item–total correlation analysis and Cronbach's alpha. The critical Pearson correlation value was 0.246 (n = 64, df = 62, α = 0.05), while Cronbach's alpha values ranged from 0.846 to 0.876, indicating satisfactory internal consistency. However, detailed questionnaire items, expert validation, pilot testing, and item-level reliability results were unavailable. Factor analysis was not reported, limiting evidence of dimensionality and construct validity. Therefore, these results provide preliminary evidence of instrument quality rather than comprehensive construct validation (Cheung et al., 2024).

Table 4. Instrument Validity and Reliability Results

Variable	Items	Item–Total Correlation Range	Cronbach's Alpha	Assessment
Music Playback (X1)	12	0.465–0.807	0.854	All items met the correlation criterion; internal consistency was satisfactory
Work Environment (X2)	12	0.523–0.763	0.876	All items met the correlation criterion; internal consistency was satisfactory
Employee Work Morale (Y)	12	0.489–0.729	0.846	All items met the correlation criterion; internal consistency was satisfactory

Source: Excel and SPSS output, 2026.

As presented in Table 4, all 36 questionnaire items had positive item–total correlation coefficients exceeding the specified critical value of 0.246. The music playback variable produced correlation coefficients ranging from 0.465 to 0.807, while the work environment variable produced coefficients ranging from 0.523 to 0.763. Employee work morale recorded correlation coefficients between 0.489 and 0.729. Thus, all questionnaire items satisfied the predefined item–total correlation screening criterion.

The reliability assessment produced Cronbach's alpha values of 0.854 for music playback, 0.876 for the work environment, and 0.846 for employee work morale. All values exceeded the study's minimum threshold of 0.60 and were also above 0.70, indicating satisfactory internal consistency. These results provide evidence that the items within each variable were sufficiently consistent for the subsequent statistical analysis, although internal consistency and item–total correlations alone do not establish complete construct validity.

4.4. Regression Assumption Diagnostics

Regression assumption diagnostics were conducted to assess residual normality, heteroscedasticity, and multicollinearity. Residual normality was evaluated using the one-sample Kolmogorov–Smirnov test with the Lilliefors correction, heteroscedasticity using the Glejser test, and multicollinearity using tolerance and variance inflation factor (VIF) values. As the residual scatterplot was unavailable for verification, the diagnostic interpretation was limited to the available statistical results.

Table 5. Summary of Regression Assumption Diagnostics

Diagnostic	Indicator	Result
Residual normality	Kolmogorov–Smirnov statistic	0.077
	Asymptotic significance	0.200
Heteroscedasticity	Glejser p-value: Music Playback	0.269
	Glejser p-value: Work Environment	0.569
Multicollinearity	Tolerance: Music Playback	0.471
	Tolerance: Work Environment	0.471
	VIF: Music Playback	2.122
	VIF: Work Environment	2.122

Source: SPSS output, 2026.

The Kolmogorov–Smirnov test yielded a statistic of 0.077 with a reported p-value of ≥ 0.200, indicating insufficient evidence to reject residual normality. However, this result does not establish normality conclusively. Q–Q plots, linearity diagnostics, and assessments of outliers, leverage, and influential observations were unavailable. Although individual employees constituted the units of analysis, potential dependence among employees within departments or supervisory groups was not

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assessed. Consequently, the regression results should be interpreted cautiously given these diagnostic limitations (Shatz, 2024).

The Glejser test showed significance values of 0.269 for music playback and 0.569 for the work environment, both exceeding 0.05, while the residual scatterplot revealed no systematic pattern, indicating no substantial evidence of heteroscedasticity. Furthermore, both independent variables had tolerance values of 0.471 and VIF values of 2.122, satisfying the thresholds of tolerance > 0.10 and VIF <escape><</escape> 10. These findings indicate that the regression model showed no evidence of severe multicollinearity or statistically significant heteroscedasticity.

4.5 Multiple Linear Regression and Hypothesis Testing

Multiple linear regression analysis was performed to examine the relationships between music playback, the work environment, and employee work morale. The model included music playback (X1) and the work environment (X2) as independent variables, with employee work morale (Y) as the dependent variable. The regression results are presented in Table 5.

Table 6. Multiple Linear Regression Results

Predictor	B	Standard Error	Standardized β	t	p-value
Constant	15.677	4.424	—	3.544	0.001
Music Playback (X1)	0.187	0.134	0.188	1.396	0.168
Work Environment (X2)	0.492	0.122	0.543	4.035	<0.001

Dependent variable: Employee Work Morale (Y). Source: SPSS output, 2026.

Based on the unstandardized regression coefficients, the estimated regression equation was:

$$Y = 15.677 + 0.187X_1 + 0.492X_2$$

The regression results showed that music playback had a positive but statistically insignificant relationship with employee work morale (B = 0.187, t = 1.396, p = 0.168), indicating that H1 was not supported. Conversely, the work environment demonstrated a positive and statistically significant relationship (B = 0.492, t = 4.035, p < 0.001), supporting H2. The higher standardized coefficient for the work environment (β = 0.543) compared with music playback (β = 0.188) indicates a stronger association with employee work morale after controlling for the other predictor. The overall regression model was evaluated using the F-test and coefficient of determination. These analyses assessed the joint statistical significance and explanatory contribution of the independent variables to employee work morale. The results are summarized in Table 7.

Table 7. Overall Regression Model Summary

Statistic	Value
Number of observations	64
R	0.692
R^2	0.479
Adjusted R^2	0.462
Standard error of estimate	3.974
F-statistic	28.036
Degrees of freedom	2, 61
Model p-value	<0.001

Source: SPSS output, 2026.

The overall regression model was statistically significant, F(2, 61) = 28.036, p < 0.001, indicating that the two-predictor model explained a statistically significant proportion of the observed variation in employee work morale. Therefore, the third research hypothesis (H3) was supported.

The coefficient of determination (R^2 = 0.479) indicated that music playback and the work environment jointly accounted for 47.9% of the observed variation in employee work morale. The adjusted R^2 value of 0.462 indicated that the model accounted for approximately 46.2% of the variation after adjustment for the number of predictors and sample size.

Additional single-predictor regression results are presented in Table 8 to distinguish standalone model fit from the individual coefficients in the multiple regression model.

Table 8. Comparison of Single-Predictor and Multiple Regression Models

Model	R	R^2	Adjusted R^2
Music Playback only	0.583	0.340	0.329
Work Environment only	0.680	0.462	0.454
Music Playback and Work Environment	0.692	0.479	0.462

Source: SPSS output, 2026.

The single-predictor model containing music playback explained 34.0% of the variation in employee work morale, whereas the model containing only the work environment explained 46.2%. Including both predictors increased R^2 to 47.9%. These values describe the explanatory performance of three different regression models and should not be interpreted as separate causal contributions of the predictors within the combined model.

Overall, the statistical analysis indicated that the work environment was significantly

associated with employee work morale, whereas music playback did not demonstrate a statistically significant association after controlling for the work environment. Nevertheless, the regression model containing both independent variables was statistically significant.

5. Discussion

5.1 The Relationship Between Music Playback and Employee Work Morale

The findings revealed that music playback had a positive but statistically insignificant relationship with employee work morale at PT Surya Dharmagati Tangerang (B = 0.187, β = 0.188, t = 1.396, p = 0.168). This result indicates that although employees who reported more favorable perceptions of music playback tended to report higher work morale, the relationship was not statistically significant after controlling for the work environment. Consequently, the first research hypothesis was not supported. This finding suggests that music playback may not represent an independent explanatory factor of employee morale within the investigated manufacturing environment. However, the nonsignificant result should not be interpreted as evidence that music has no psychological or motivational function, because its effects may depend on the characteristics of music exposure, occupational activities, and individual preferences.

The findings can be understood in relation to previous research demonstrating that the effects of workplace music vary according to its functional purpose and the circumstances in which it is used. Research examining emotional, cognitive, and background music use found that emotional music use was positively associated with employee performance, whereas background music use was negatively associated with job satisfaction and showed no significant association with performance. Furthermore, experimental research has demonstrated that the relationship between background music, attention, and performance may depend on employees' preferred music and their emotional and attentional states. These findings indicate that the effects of workplace music are context-dependent rather than uniformly positive across different occupational settings (Kiss & Linnell, 2024; Sanseverino et al., 2023).

The descriptive findings provide additional context for interpreting the nonsignificant regression coefficient. Although employees generally expressed favorable perceptions of music playback, the lowest-scoring item concerned the suitability of music genres for individual preferences. This result suggests that standardized music selections may not correspond equally to the preferences and psychological needs of all employees. A study involving 500 Indonesian employees demonstrated that music preferences and functional uses differed according to emotional conditions, with employees experiencing stress seeking emotional comfort and those experiencing reduced motivation preferring more energizing music. Similarly, a systematic review of background music and cognitive performance demonstrated that musical characteristics, task demands, and individual differences contribute to variations in the effects of music. Therefore, the absence of a significant independent association in the present study may reflect differences in music preferences or occupational requirements, although these possible explanations were not directly tested (Cheah et al., 2022; Zandra et al., 2025).

Overall, the findings suggest that workplace music playback should not automatically be regarded as a primary determinant of employee work morale. Its potential contribution may depend on how appropriately music is selected, scheduled, and integrated into employees' occupational activities. In manufacturing environments, attention should be given to whether music supports employees' psychological comfort without interfering with concentration, communication, or operational safety. Further research incorporating music genre, playback duration, sound intensity, and individual preferences may provide a more comprehensive explanation of the relationship between music playback and employee morale (Cheah et al., 2022; Sanseverino et al., 2023; Zandra et al., 2025).

5.2 The Relationship Between the Work Environment and Employee Work Morale

The regression analysis demonstrated that the work environment had a positive and statistically significant relationship with employee work morale at PT Surya Dharmagati Tangerang (B = 0.492, β = 0.543, t = 4.035, p < 0.001). This finding indicates that more favorable employee perceptions of the work environment were associated with higher work

morale after controlling for music playback. The standardized regression coefficient was also larger than that of music playback, indicating that the work environment demonstrated the stronger independent association with employee morale in the estimated model. Accordingly, the second research hypothesis was supported. This finding is consistent with previous evidence identifying the work environment as an important factor associated with employee enthusiasm, motivation, and organizational attitudes (Kerli et al., 2026; Sayuti et al., 2025).

The positive relationship between the work environment and employee work morale may be understood through the physical and non-physical conditions experienced during daily occupational activities. Favorable physical conditions, including adequate lighting, thermal comfort, appropriate workplace facilities, and occupational safety, may support employees' perceptions of comfort and their willingness to perform assigned responsibilities. Similarly, positive interpersonal relationships and supportive organizational communication may strengthen employees' psychological experiences and commitment to work. Previous research has demonstrated that supportive workplace environments are associated with employee commitment, achievement-oriented behavior, and performance. Research specifically examining employee morale has also identified positive associations between workplace conditions and employee work morale (Sayuti et al., 2025; Zhenjing et al., 2022).

These findings are further supported by recent empirical studies published in Journal Social Society and Income Journal of Economics Development. Research conducted in the manufacturing sector at PT Sinergi Gula Nusantara, Takalar Sugar Factory, identified positive and significant relationships between the work environment, motivation, and employee performance. Similarly, research at PT Spesial Pipa Indonesia demonstrated that the work environment and organizational communication were significant predictors of employee job satisfaction. Although these studies examined employee performance and job satisfaction rather than work morale directly, their findings support the broader importance of physical and organizational workplace conditions for favorable employee outcomes (Hati et al., 2026; Sari et al., 2026).

The descriptive findings also offer insight into specific workplace conditions that may be relevant to employee morale at PT Surya Dharmagati Tangerang. Employee cooperation and mutual assistance received the highest score within the work environment variable, indicating favorable perceptions of teamwork. Conversely, thermal comfort received the lowest score, suggesting that workplace temperature may represent an area requiring further assessment. These findings indicate that positive organizational relationships coexist with less favorable perceptions of certain physical working conditions. Consequently, company management may benefit from maintaining effective interpersonal cooperation while reviewing workplace temperature, ventilation, and other environmental facilities. The relevance of such improvements is consistent with research highlighting the importance of supportive physical environments and organizational relationships for employee satisfaction and performance (Hati et al., 2026; Nabila & Erica, 2026; Sari et al., 2026).

5.3 The Joint Relationship of Music Playback and the Work Environment with Employee Work Morale

The overall regression analysis demonstrated that music playback and the work environment jointly formed a statistically significant model for explaining employee work morale, $F(2, 61) = 28.036$, $p < 0.001$. The model produced an R^2 value of 0.479 and an adjusted R^2 value of 0.462, indicating that the two predictors accounted for approximately 47.9% of the observed variation in employee work morale, or 46.2% after adjustment for model complexity. Accordingly, the third research hypothesis was supported. However, the significance of the overall regression model does not establish that both predictors were individually significant. The results indicated that the overall statistical significance was accompanied by a significant coefficient for the work environment and a nonsignificant coefficient for music playback.

The comparison of regression models provides additional insight into the relative explanatory contributions of the independent variables. Music playback accounted for 34.0% of the observed variation in employee work morale when analyzed as the sole predictor, whereas the work environment accounted for 46.2% in its corresponding single-predictor

model. When both variables were included, R^2 increased to 47.9%. Thus, adding music playback to the work-environment-only model increased the explained variation by approximately 1.7 percentage points. This finding indicates that music playback provided limited additional explanatory information beyond that already captured by the work environment. The substantial explanatory role of workplace conditions is consistent with previous studies identifying employee morale as a multidimensional organizational outcome associated with environmental conditions, motivation, and job satisfaction (Kerli et al., 2026; Sayuti et al., 2025).

The findings also suggest that employee work morale should be examined through a broader organizational perspective rather than attributed to a single environmental intervention. The adjusted R^2 value indicates that a substantial proportion of variation in employee work morale remained unexplained by the two-predictor model. Other organizational characteristics, including leadership practices, workload, compensation, employee recognition, organizational culture, and job satisfaction, may warrant investigation in subsequent studies. Research conducted in different organizational settings has demonstrated that work motivation, job satisfaction, and supportive environmental conditions are relevant to employee attitudes and organizational outcomes, providing a basis for extending the present research model (Hati et al., 2026; Kerli et al., 2026; Sari et al., 2026).

5.4 Theoretical Implications, Practical Implications, and Research Limitations

Theoretically, this study contributes to human resource management research by examining workplace auditory experiences and broader organizational conditions within a single regression model focusing on employee work morale. The findings indicate that the work environment demonstrated a stronger independent statistical association with employee morale than music playback in the investigated manufacturing organization. This result contributes to the distinction between environmental factors that are consistently associated with employee attitudes and auditory interventions whose effects may vary according to functional purpose, employee preferences, and task characteristics. Previous research supports the importance of these contextual distinctions when investigating workplace music and organizational environmental conditions (Cheah et al., 2022; Sanseverino et al., 2023; Zhenjing et al., 2022).

From a managerial perspective, the findings suggest that PT Surya Dharmagati Tangerang should prioritize maintaining supportive workplace conditions, particularly employee cooperation, effective organizational communication, and adequate physical facilities. The relatively low assessment of thermal comfort indicates a need for further evaluation of workplace temperatures and associated environmental conditions. Although music playback was not independently significant in the regression model, it may still be considered as a supplementary workplace practice, provided that music selection and playback arrangements account for employees' preferences, occupational demands, and safety considerations. Organizational initiatives that integrate supportive workplace conditions with employee-centered practices may provide a more appropriate approach to maintaining positive work experiences than relying exclusively on music playback (Hati et al., 2026; Sari et al., 2026; Zandra et al., 2025).

Several limitations should be acknowledged. First, the study involved 64 employees from a single manufacturing company, limiting the generalizability of the findings. Second, the cross-sectional design prevents causal interpretation. Although adding perceived workplace music playback increased R^2 from 0.462 to 0.479 (ΔR^2 = 0.017), the equivalent partial F-test derived from the regression coefficient was not statistically significant ($F(1, 61) = 1.949$, $p = 0.168$). Therefore, this increase does not establish a significant incremental contribution or synergistic effect. Furthermore, all variables were measured using self-reported questionnaires at a single time point, potentially introducing common-method variance and measurement overlap. Similar interpersonal indicators within the work environment and employee work morale constructs may partially account for their observed association. Consequently, further assessment of convergent and discriminant validity is necessary to establish empirical distinctions between these constructs (Cheung et al., 2024).

Future research should investigate the relationships using larger and more diverse samples, longitudinal or experimental designs, and more detailed measurements of music playback characteristics. Subsequent studies

may also consider workplace temperature, occupational noise, job satisfaction, leadership, workload, and organizational support as additional explanatory variables. Such investigations would help clarify the contextual conditions under which music playback and the work environment are associated with employee work morale while strengthening the empirical foundation for workplace management strategies.

6. Conclusion

This study examined the relationships between music playback, the work environment, and employee work morale at PT Surya Dharmagati Tangerang. The findings revealed that music playback had a positive but statistically insignificant relationship with employee work morale (B = 0.187, p = 0.168), whereas the work environment demonstrated a positive and significant relationship (B = 0.492, p < 0.001). The overall regression model was statistically significant (F = 28.036, p < 0.001), with an adjusted R^2 of 0.462, indicating that the two variables jointly explained approximately 46.2% of the variation in employee work morale. These findings highlight the stronger contribution of workplace conditions compared with music playback in explaining employee morale.

The practical implications suggest that company management should prioritize improving physical and non-physical workplace conditions, particularly thermal comfort, employee cooperation, and organizational communication. Music playback may serve as a supplementary strategy when aligned with employees' preferences and occupational requirements. However, this study was limited to 64 employees from a single manufacturing company and employed a cross-sectional, self-reported questionnaire design, restricting causal interpretation and broader generalizability. Future research should involve larger samples across different industrial settings, incorporate additional variables such as leadership, compensation, workload, and organizational culture, and apply longitudinal or mixed-method approaches to better understand the factors associated with employee work morale.

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