

Research Paper

Organizational Climate and Leadership Style among Sugar Mill Managers of Gopalganj, Bihar

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ABSTRACT

The present study examined the relationship between organizational climate and leadership style among sugar mill managers in the Gopalganj district of Bihar. A correlational research design was adopted, and data were collected from 55 managers working in four sugar mills. Leadership style was assessed using the Leadership Style Questionnaire developed by Peterson (1977), while organizational climate was measured using the Organizational Climate Scale developed by Chattopadhyay and Aggarwal (1988). Karl Pearson's product moment correlation coefficient was used to analyze the relationships between two dimensions of leadership style and eleven dimensions of organizational climate. The results revealed significant positive as well as negative relationships between selected dimensions of leadership style and organizational climate. The findings indicate that leadership behavior plays an important role in shaping managerial perceptions of organizational climate in sugar mill organizations. The proposed hypothesis was partially supported. The study contributes to the limited empirical literature on leadership and organizational climate in Indian agro based industries and offers practical implications for leadership development and organizational policy.

Keywords: *Organizational Climate, Leadership Style, Sugar Mill Managers, Agro Based Industries*

Industrial organizations increasingly recognize that managerial effectiveness depends not only on technological advancement and operational efficiency but also on the quality of leadership and the organizational climate in which employees' function. Organizational climate reflects employees shared perceptions of organizational policies, practices, and procedures and has a significant influence on motivation, job satisfaction, commitment, and performance.

Sugar mills constitute an important segment of India's agro based industrial sector, particularly in Bihar, where they contribute substantially to employment generation and regional economic development. The functioning of sugar mills requires effective coordination among production, maintenance, administration, finance, and marketing units. In such complex organizational settings, managerial leadership becomes a crucial determinant of organizational effectiveness and operational stability.

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Organizational Climate and Leadership Style among Sugar Mill Managers of Gopalganj, Bihar

Organizational climate has been conceptualized as a relatively enduring characteristic of the internal environment of an organization that influences employee attitudes and behavior. Leadership behavior, communication patterns, reward systems, decision making practices, and interpersonal relationships collectively shape this climate. Recent empirical research continues to demonstrate that leadership style is one of the most influential internal organizational variables affecting organizational climate and employee engagement (Cai et al., 2024; Tejero & Aoanan, 2024).

Despite its practical importance, empirical research examining the relationship between leadership style and organizational climate in Indian industrial settings remains limited. Most existing studies have focused on Western contexts or service sector organizations. The present study addresses this gap by examining organizational climate in relation to leadership style among sugar mill managers in the Gopalganj district of Bihar.

Organizational Climate

Organizational climate refers to the collective perceptions held by organizational members regarding their work environment. It encompasses dimensions such as performance standards, communication flow, reward systems, responsibility, conflict resolution, organizational structure, motivation, decision making processes, support systems, warmth, and identity. Organizational climate develops through continuous interaction between individuals and organizational structures, policies, and leadership practices.

A favorable organizational climate facilitates motivation, cooperation, and organizational commitment, whereas an unfavorable climate may lead to dissatisfaction, conflict, and reduced productivity. Recent studies have also shown that organizational climate plays a mediating role between leadership behavior and important outcomes such as employee engagement, innovative work behavior, and psychological well being (Patterson et al., 2005; Cai et al., 2024).

In industrial organizations such as sugar mills, where coordination, discipline, and compliance are essential, organizational climate becomes a critical factor influencing managerial effectiveness and organizational sustainability. Since leadership behavior directly affects communication patterns, decision making, and interpersonal relationships, understanding its influence on organizational climate is essential for improving managerial practices in agro based industrial organizations.

Leadership Styles

Leadership is a process through which individuals influence others by providing direction, motivation, and purpose to achieve organizational goals. In industrial organizations such as sugar mills, leadership plays a crucial role in coordinating human efforts, maintaining discipline, and fostering a work environment conducive to productivity and cooperation. Leadership style refers to the characteristic manner in which leaders guide, motivate, and supervise their subordinates.

Early systematic research on leadership styles was conducted by Kurt Lewin and his colleagues, who identified three primary styles of leadership behavior, namely authoritarian, participative, and delegative. Subsequent research has emphasized that effective leaders rarely rely on a single style; instead, they adapt their leadership behavior according to situational demands, although one style may remain dominant.

Organizational Climate and Leadership Style among Sugar Mill Managers of Gopalganj, Bihar

In sugar mill organizations, where operational efficiency, adherence to schedules, safety compliance, and workforce coordination are critical, the leadership style adopted by managers can significantly influence employee attitudes, morale, and perceptions of organizational climate. Recent studies continue to confirm that adaptive and context sensitive leadership styles are more effective in shaping a positive organizational climate and sustaining performance in industrial settings (Cai et al., 2024; Tejero & Aoanan, 2024).

Authoritarian Leadership Style

Authoritarian leadership is characterized by centralized decision making and strict control, with minimal participation from subordinates. Leaders adopting this style provide clear instructions regarding tasks and closely supervise performance. In industrial environments such as sugar mills, authoritarian leadership may be effective in situations requiring quick decisions, strict supervision, or adherence to safety and operational standards.

However, excessive reliance on authoritarian leadership may suppress employee initiative, reduce job satisfaction, and negatively influence organizational climate. Recent empirical evidence indicates that prolonged exposure to highly controlling leadership behaviors is associated with increased work stress and lower psychological well being among employees, thereby adversely affecting organizational climate (Current Psychology, 2024).

Participative Leadership Style

Participative leadership involves employees in decision making while retaining final authority with the leader. This style emphasizes mutual trust, open communication, and shared responsibility. In sugar mills, participative leadership enables managers to utilize the experience and technical knowledge of employees, resulting in better decision quality and stronger acceptance of organizational goals.

Participative leadership has consistently been associated with higher levels of motivation, commitment, and job satisfaction. Recent studies show that democratic leadership styles contribute positively to organizational climate by fostering psychological safety, engagement, and cooperative work relationships (Tejero & Aoanan, 2024). Such leadership behavior is particularly relevant in labor intensive industrial organizations where teamwork and coordination are essential.

Delegative Leadership Style

Delegative leadership is characterized by the transfer of decision making authority to subordinates, with minimal direct supervision. Leaders adopting this style provide autonomy to employees while remaining accountable for outcomes. Delegative leadership is most effective when subordinates are skilled, experienced, and capable of independent judgment. In sugar mill organizations, delegative leadership may be suitable for specialized or technical departments where employees possess high levels of expertise. However, inappropriate or excessive delegation may result in role ambiguity, lack of coordination, and weakened organizational control, which can negatively affect organizational climate.

Positive and Negative Approaches to Leadership

Leadership styles also differ in terms of motivational approach. Leaders adopting a positive approach rely on rewards such as recognition, opportunities for growth, and autonomy to motivate employees. This approach is generally associated with higher morale, trust, and a healthier organizational climate.

Organizational Climate and Leadership Style among Sugar Mill Managers of Gopalganj, Bihar

In contrast, a negative approach to leadership emphasizes control through punishment, fear, or coercion. Although such an approach may help maintain discipline under specific conditions, its frequent use can lead to dissatisfaction, reduced motivation, and poor organizational climate. Contemporary research suggests that leaders typically operate along a continuum between positive and negative approaches, adjusting their behavior according to situational demands (Cai et al., 2024).

Previous research has consistently identified leadership as a key determinant of organizational climate and organizational effectiveness. Empirical studies across diverse organizational contexts have reported significant relationships between leadership styles and dimensions of organizational climate such as communication, motivation, support, and identity.

Recent studies further demonstrate that organizational climate often mediates the relationship between leadership style and important outcomes such as employee engagement, innovative work behavior, and performance. However, much of this research has been conducted in Western or service sector contexts. The limited availability of systematic studies in Indian industrial and agro based organizations highlights the need for context specific research. The present study contributes to this gap by examining leadership styles and organizational climate among sugar mill managers in Bihar.

Research Problem

Previous research indicates that demographic variables such as age, educational qualification, work experience, and employment status account for only a limited proportion of variance in employees' perceptions of organizational climate. Although situational and external factors may influence organizational climate, their effects are often temporary and lack strong predictive value. As a result, contemporary organizational research has increasingly focused on internal organizational variables, particularly leadership style, as a critical determinant of organizational climate.

Leadership behavior influences communication patterns, motivation, decision making, and interpersonal relationships, which are central components of organizational climate. Recent empirical studies have reaffirmed that leadership style significantly shapes organizational climate and employee engagement across industrial contexts, with climate often acting as a linking mechanism between leadership behavior and organizational outcomes (Cai et al., 2024; Tejero and Aoanan, 2024).

Despite growing international evidence, a review of the literature reveals that relatively few systematic studies have examined the relationship between leadership style and organizational climate in Indian industrial settings. Research focusing on agro based industries such as sugar mills is particularly scarce. Given the economic importance of sugar mills in Bihar and the managerial challenges associated with their functioning, there is a clear need for context specific empirical investigation.

The present study was therefore designed to examine the relationship between leadership style and organizational climate among sugar mill managers in the Gopalganj district of Bihar.

Hypothesis

Based on theoretical considerations and empirical findings from previous research, the following hypothesis was formulated:

- **H1** There is a significant relationship between organizational climate and leadership style among sugar mill managers.

METHOD

Research Design

A correlational research design was employed to examine the relationship between leadership style and organizational climate. This design was considered appropriate because it allows for the assessment of naturally occurring relationships between variables without experimental manipulation, which is often impractical in organizational research settings.

Participants

The sample consisted of 55 managers drawn from four sugar mills located in the Gopalganj district of Bihar. The participants represented various functional areas, including production, maintenance, administration, finance, and marketing. Managers were selected based on availability and willingness to participate in the study.

Instruments

- **Organizational Climate Scale.** Organizational climate was assessed using the Organizational Climate Scale developed by Chattopadhyay and Aggarwal in 1988. The scale consists of 70 items measuring eleven dimensions, namely performance standards, communication flow, reward system, responsibility, conflict resolution, organizational structure, motivational level, decision making process, support system, warmth, and identity problems. Responses are recorded on a five point scale, with higher scores indicating a more favorable organizational climate. The scale demonstrates high internal consistency, with a Spearman Brown reliability coefficient of 0.90.
- **Leadership Style Questionnaire.** Leadership style was measured using the Leadership Style Questionnaire developed by Peterson in 1977. The questionnaire contains 16 items assessing two dimensions of leadership behavior, namely performance oriented leadership and maintenance-oriented leadership. Responses are recorded on a seven point rating scale ranging from not at all to very much. The instrument has been widely used in organizational research and demonstrates satisfactory psychometric properties.

Data Analysis

Descriptive statistics, including means and standard deviations, were computed to summarize leadership style and organizational climate scores. Karl Pearson's product moment correlation coefficient was used to examine the relationships between leadership style dimensions and organizational climate dimensions. All statistical analyses were conducted using IBM SPSS software.

Procedure

Data were collected from sugar mill managers working in the Gopalganj district of Bihar. The questionnaires were administered either individually or in small groups of two to three participants, depending on managerial availability and work schedules. Prior to

Organizational Climate and Leadership Style among Sugar Mill Managers of Gopalganj, Bihar

administration, respondents were informed about the purpose of the study and assured of confidentiality to encourage honest and unbiased responses.

On average, participants required approximately 40 to 50 minutes to complete the questionnaires. All responses were scored according to standardized procedures outlined in the respective manuals. The data were subsequently coded and analyzed using IBM SPSS for statistical interpretation.

RESULTS

Leadership Style

Table 1 presents the mean and standard deviation of leadership style dimensions among sugar mill managers.

Table 1 Mean and Standard Deviation of Leadership Style Dimensions

Dimensions of Leadership Style	Mean	SD
Performance Oriented	36.45	7.80
Maintenance Oriented	40.10	5.20
Total	76.55	10.90

The results indicate that maintenance-oriented leadership has a higher mean score than performance oriented leadership, suggesting that managers emphasize interpersonal relations, employee welfare, and group maintenance more than task oriented control.

Organizational Climate

Table 2 shows the mean and standard deviation of the eleven dimensions of organizational climate.

Table 2 Mean and Standard Deviation of Organizational Climate Dimensions

Serial No.	Organizational Climate Dimensions	Mean	SD
1	Performance standards	25.90	5.40
2	Communication flow	37.85	10.90
3	Reward system	13.60	3.10
4	Responsibility	13.20	3.00
5	Conflict resolution	26.10	5.60
6	Organizational structure	18.45	3.70
7	Motivational level	26.95	6.30
8	Decision-making process	27.10	4.50
9	Support system	29.80	6.10
10	Warmth	20.35	4.20
11	Identity problems	14.70	3.80
	Total	254.00	17.60

Relatively higher mean scores were observed for communication flow, decision making process, and support system, indicating moderately favorable managerial perceptions of these dimensions. Lower mean scores on reward system and responsibility suggest potential areas for organizational improvement.

Relationship between Leadership Style and Organizational Climate

Table 3 presents the coefficients of correlation between leadership style dimensions and organizational climate dimensions.

Table 3 Coefficients of Correlation between Leadership Style and Organizational Climate Dimensions

Organizational Climate Dimensions	Performance Oriented Leadership	Maintenance Oriented Leadership	Leadership Style (Total)
Performance Standards	-.362**	-.148	-.318**
Communication Flow	.212*	.169	.153
Reward System	.108	.042	.096
Responsibility	.192	.164	.226*
Conflict Resolution	-.158	-.091	-.141
Organizational Structure	.181	-.104	.102
Motivational Level	.145	.271*	.238*
Decision-Making Process	-.094	.187	.061
Support System	-.072	-.132	-.108
Warmth	.036	-.201	-.117
Identity Problems	.214*	.298**	.304**
Total Organizational Climate	.068	.142	.119

*p < .05 ** p < .01

Pearson’s product moment correlation analysis revealed several significant relationships between leadership style and organizational climate dimensions. A significant negative correlation was found between performance standards and performance oriented leadership, indicating that higher perceived performance standards were associated with lower levels of performance oriented leadership behavior.

Significant positive correlations were observed between motivational level and maintenance oriented leadership, and between identity problems and both maintenance oriented and total leadership style. These findings suggest that when managers perceive greater identity related issues within the organization, they tend to adopt more relationship focused leadership behaviors to maintain cohesion and stability.

Implications for Practice and Policy

The findings of the present study indicate that leadership style plays a meaningful role in shaping organizational climate among sugar mill managers. The predominance of maintenance oriented leadership highlights the importance of supportive interpersonal relationships, effective communication, and group cohesion in labor intensive agro based industrial settings. Management practices that balance task requirements with employee support are likely to foster a healthier organizational climate and enhance managerial effectiveness.

From a practical perspective, sugar mill organizations should emphasize leadership development programs that encourage participative decision making, open communication,

and employee involvement. Such practices can improve motivation, commitment, and perceptions of fairness among managers and employees alike. Periodic assessment of organizational climate may help organizations identify problem areas and implement timely interventions.

At the policy level, organizational and governmental stakeholders should support structured leadership training initiatives for managers in agro based industries. Integrating leadership development and organizational climate assessment into human resource policies can contribute to improved organizational functioning, stability, and long term sustainability of sugar mills.

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Organizational Climate and Leadership Style among Sugar Mill Managers of Gopalganj, Bihar

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Conflict of Interest

The author(s) declared no conflict of interest.

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