

The Relationship between Leadership Behaviors and Job Burnout at the Mascara Electricity and Gas Distribution Directorate

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Abstract:

This study aimed to examine the relationship between leadership behaviors and the dimensions of job burnout (emotional exhaustion, work disengagement, and personal accomplishment) among a sample of employees of the Mascara Electricity and Gas Distribution Directorate. The study adopted a descriptive-correlational approach and administered the Mayo Clinic Leadership Qualities Scale and the Maslach Burnout Inventory to a sample of 111 employees. The data were analyzed using Spearman's correlation coefficient through SPSS (Version 27). The results showed a statistically significant inverse relationship between leadership behaviors and both emotional exhaustion and work disengagement, whereas no statistically significant relationship was established between leadership behaviors and personal accomplishment.

Keywords: Leadership behaviors, job burnout, emotional exhaustion, work disengagement, personal accomplishment, Mascara Electricity and Gas Distribution Directorate.

1- Introduction:

Contemporary work environments are witnessing an accelerating pace of change, increasing uncertainty, and ambiguity surrounding events, alongside the dynamic development of modern technology (Mikołajczyk, 2022, p. 544). This change is reflected not only in modifications to work methods, but also extends to the restructuring of organizations, directing them toward new strategic paths, and providing their members with a different future-oriented vision (Brauns, 2015, p. 38), thereby producing radical transformations in organizational structures, work systems, and the nature of tasks.

These transformations translate into increasing organizational pressures and growing expectations of job performance, since continuous change in organizations has a significant negative impact on employees and may lead to emotional and physical exhaustion (Rumbles & Rees, 2012, pp. 3-4). This constitutes a major precursor to job burnout as one of the most serious challenges threatening the sustainability of organizational performance and the efficiency of human resources. In this context, a McKinsey study conducted in 2022 across 15 countries indicated that one in every four employees suffers from symptoms of burnout, with the proportion reaching 38% in India and 36% in Egypt, confirming that this phenomenon represents a global challenge that transcends geographical boundaries (McKinsey Health Institute, 2022, p. 5).

This topic has received increasing attention in the human resource management literature. Job burnout is no longer addressed as an individual issue, but rather as an organizational phenomenon associated with the quality of the work environment and prevailing administrative practices. Recent studies have shown that effective leadership behaviors, such as enhancing employee autonomy, empowering individuals, and improving the work environment, can alleviate many of the factors causing job burnout (Moss, 2024, p. 27). In this context, the role of the immediate supervisor emerges as a crucial element in mitigating its effects and reducing feelings of exhaustion and disengagement, making the study of leadership behaviors a vital area for research and development in human resource management.

Despite the theoretical consensus regarding the importance of leadership in reducing job burnout, most previous studies have focused on particular leadership styles in specific sectoral contexts, such as health and education, without delving deeply into everyday leadership behaviors. In addition, the knowledge available in this field has remained confined to certain cultural and organizational contexts and has not sufficiently addressed the relationship between leadership behaviors and burnout dimensions in energy institutions, which are characterized by particular organizational structures and work dynamics that differ from those of the health and education sectors.

In light of this, the Mascara Electricity and Gas Distribution Directorate (Sonelgaz-Distribution/DD de Mascara), as a branch of Sonelgaz, was selected as a case study representing this sector, as it had not previously been studied from the perspective of the relationship between leadership behaviors and the dimensions of job burnout. Accordingly, the research problem of this paper is formulated in the following question: What is the nature of the relationship between leadership behaviors and the three dimensions of job burnout—emotional exhaustion, work disengagement, and personal accomplishment—among a sample of employees of Sonelgaz - Mascara?

Based on the problem stated above, it became clear that answering it faces a clear empirical gap. While studies have examined this relationship in other contexts, such as Spain (Mariano, Molero, Laguía, Mikulincer, & Shaver, 2021) and Germany (Hildenbrank, Sacramento, & Binnewies, 2018), and although the researchers in these two studies recommended further testing and warned against the limited generalizability of findings derived from a single company or one country, the Algerian public energy sector has not examined this aspect.

In addition to the aforementioned knowledge gap, a methodological gap emerges in that the Mayo Clinic Leadership Score, which this research paper relies on to measure leadership behaviors, has not previously been used in the Algerian context. Although it has documented psychometric properties in its original context (the United States of America), its validity and reliability have not previously been tested in an Algerian work environment. Accordingly, this research paper seeks to address both the knowledge and methodological gaps simultaneously.

Based on the research problem, this study seeks to achieve the following objectives:

- Determine the nature of the relationship between leadership behaviors and emotional exhaustion among a sample of employees of the Mascara Electricity and Gas Distribution Directorate.

- Identify the nature of the relationship between leadership behaviors and work disengagement among the studied sample.
- Examine the nature of the relationship between leadership behaviors and personal accomplishment among the studied sample.
- Provide practical recommendations for public institutions, particularly in the energy sector, to strengthen supportive leadership behaviors aimed at reducing job burnout.

This research paper is significant because it is one of the field studies addressing the relationship between these two variables in the Mascara branch of Sonelgaz, an issue that previous studies have not addressed at the same level of detail, given their previous focus on particular leadership styles and their relationship with organizational variables such as job performance and job satisfaction.

To achieve this purpose, this paper was divided into a theoretical framework reviewing the basic concepts, followed by a hypothetical framework addressing the study hypotheses and the theories explaining them, and then an applied framework covering the methodology. The study adopted a descriptive-correlational approach and collected data through questionnaires distributed to a sample of 111 employees at the Mascara Electricity and Gas Distribution Directorate. The data were analyzed using Spearman's correlation coefficient. The paper then presents and discusses the results and concludes with the main findings and recommendations for researchers and practitioners in human resource management.

2- Theoretical Framework of the Study

The theoretical framework addresses the conceptual aspects of leadership behaviors and job burnout in light of the literature of management and organizational psychology. The focus will be placed on two main axes: the first concerns the concept of leadership behaviors and their behavioral and relational dimensions, while the second concerns the concept of job burnout and its three dimensions.

2-1- Concept of Leadership Behaviors:

The concept of leadership behaviors is one of the central concepts in management literature, as it refers to the actions and interactions performed by a leader in the context of daily work. The following definitions are presented:

Fiedler defines leadership behaviors as a set of actions performed by a leader while directing and coordinating the work of group members. They include task behaviors, such as organizing work, and relationship behaviors, such as appreciation and attention to feelings (Grant, 2010, p. 43).

It can be observed from the above definition that leadership behaviors are tangible and observable actions performed by the leader and are divided into two categories: behaviors focused on task performance and others focused on relationship building. However, this definition is limited to only two dimensions. Accordingly, it constitutes a useful foundational definition and an entry point for understanding leadership behaviors, but it does not encompass all behaviors that a leader may practice in the workplace.

Yukl and Van Fleet (1992) indicated that leadership behaviors are a set of specific practices exercised by a leader to influence and motivate subordinates. They include eleven major behaviors: planning and organizing, problem solving, clarifying roles, informing, monitoring, motivating, consulting,

recognizing, supporting, conflict management and team building, communicating, delegating, and coaching and mentoring (Yukl & Van Fleet, 1992, p. 156).

This definition is characterized by comprehensiveness, as it covers a wide range of leadership behaviors—eleven behaviors—which reflects the diversity of the leader's roles in the workplace. It balances task behaviors, such as planning and monitoring, relationship behaviors, such as support and recognition, and developmental behaviors, such as coaching and mentoring. However, this definition may involve some complexity in application, as it may be difficult for a leader to practice all these behaviors simultaneously, making it more theoretical than practically applicable.

By comparing the two definitions, it becomes clear that both agree that leadership behaviors are tangible actions aimed at directing work and influencing others, but they differ in their degree of comprehensiveness and detail. Fiedler's definition is a simple foundational definition limited to two dimensions, whereas Yukl and Van Fleet's definition is more detailed and more suitable for the nature of this study, which aims to measure multiple leadership behaviors.

Job burnout, meanwhile, is considered one of the main outcomes of an employee's interaction with the work environment and its demands, which may be related to the nature of the prevailing leadership behaviors in the organization. It will be addressed in the following section by defining it and its three dimensions.

2-2- Concept of Job Burnout:

Job burnout represents one of the most prominent challenges facing contemporary organizations and reflects an employee's response to chronic work-related stress. Numerous definitions have addressed this concept, beginning with literary uses and extending to scientific models that have identified its dimensions.

The term burnout was first used by novelist Graham Greene in his novel "A Burnt-Out Case" to describe the condition of an architect who found neither meaning in his profession nor pleasure in life (Edú-Valsania, Laguía, & Moriano, 2022, p. 02), before the term was later adopted scientifically in management literature.

Herbert Freudenberger described it as: "the depletion of energy, strength, and resources resulting from excessive demands in the workplace." It is characterized by physical symptoms such as exhaustion, fatigue, recurrent headaches, gastrointestinal disorders, insomnia, and shortness of breath. Associated behavioral signs include frustration, anger, suspicion, arrogance, excessive use of sedatives, pessimism, and signs of depression, among others (Heinemann & Heinemann, 2017, p. 02).

This means that excessive demands imposed by the organization on employees through their immediate leaders, manifested in work pressures, lead to the depletion of their energy, strength, and resources. This appears through physical effects such as exhaustion and fatigue, as well as behavioral effects such as frustration, anger, and suspicion.

Despite its importance, this definition remained descriptive and did not specify the nature of the demands that lead to burnout: Is it the unequal distribution of tasks among employees? Is it the failure to respect the role assigned to each employee? Or are there other demands that may lead to it?

Moreover, it emphasized its physical and behavioral manifestations and consequences without precisely identifying its causes.

Based on the foregoing, Maslach and colleagues contributed a more specific model, developing the definition of job burnout as a psychological syndrome consisting of three main dimensions:

- Emotional exhaustion: defined as an employee's feeling that their emotional and physical resources have been depleted as a result of continuous work pressures, leading to severe fatigue and loss of energy.

- Work disengagement: refers to a negative orientation toward service recipients, colleagues, or the work itself, manifested in dehumanized treatment, cynicism, and pessimism.

- Reduced personal accomplishment: defined as a decrease in an employee's sense of competence and accomplishment at work, whereby the employee feels that they are not achieving valuable results or that their efforts do not make a difference in the organization, generating a sense of professional failure and low self-satisfaction (Maslach, Schaufeli, & Leiter, 2001, pp. 402-403).

Maslach's definition is among the most widely used definitions in the literature of human resource management and organizational behavior, although its origins lie in psychology. Its broad use in managerial and organizational disciplines is attributable to the fact that the three dimensions mentioned above constitute organizational indicators of work-environment quality.

A criticism of this definition is that it does not mention the causes of job burnout, nor does it address its organizational consequences for the organization as a whole, such as declining performance, increased turnover rates, and reduced organizational commitment. This study seeks to fill this gap by linking leadership behaviors as a potential organizational cause to job burnout.

Thus, job burnout consists of three interrelated dimensions, which calls for examining the relationship between leadership behaviors and its three dimensions. This will be undertaken in the following section through the construction of a hypothetical framework testing these relationships.

3- Construction of the Study Hypothetical Framework:

After presenting the theoretical definitions of leadership behaviors and job burnout, this section proceeds to construct the study's hypothetical framework by formulating hypotheses that test the correlational relationships between the independent variable (leadership behaviors) and each dimension of the dependent variable (job burnout) separately, based on explanatory theories and previous literature linking supportive leadership behaviors to job burnout.

3-1- The Inverse Relationship between Leadership Behaviors and Emotional Exhaustion:

Hobfoll (1989) developed the Conservation of Resources Theory, which is based on the fundamental principle that individuals seek to preserve their valuable resources, such as mastery, self-esteem, acquired ability to manage resources, and work, and to protect them from perceived or actual loss or from failure to obtain gains as a result of investing in them (Hobfoll, 1989, pp. 516-521). Under this theory, social support received by individuals through leadership behaviors such as empowerment and effective communication can be considered an important job resource that helps employees cope with work pressures and limits the depletion of their emotional energy, thereby reducing their levels of emotional exhaustion. Accordingly, the first hypothesis is formulated as follows:

First hypothesis (H₁): There is an inverse relationship between leadership behaviors and emotional exhaustion.

3-2- The Inverse Relationship between Leadership Behaviors and Work Disengagement:

According to Buunk and Schaufeli (1993), an imbalance in the social exchange relationship is one of the main causes of work disengagement in the workplace. The researchers explain this phenomenon by arguing that when an employee exerts substantial effort without adequate reward or recognition, they seek to restore the lost balance in the exchange relationship through defensive mechanisms such as indifference and psychological disengagement from service recipients and the work itself. This disengagement reduces emotional investment in the work role (Schaufeli, 2005, p. 18), which explains why an inverse relationship is expected between leadership behaviors that make employees feel appreciated and treated fairly and lower levels of work disengagement. The availability of these behaviors enhances the sense of balance in the exchange and reduces the employee's need to adopt defensive mechanisms. Accordingly, the second hypothesis is formulated as follows:

Second hypothesis (H₂): There is an inverse relationship between leadership behaviors and work disengagement.

3-3- The Direct Relationship between Leadership Behaviors and Personal Accomplishment:

House's (1971) Path-Goal Theory is considered one of the classical frameworks in organizational leadership literature. It is based on the assumption that leadership effectiveness is determined by the leader's ability to select the leadership style most appropriate to the needs of team members and the nature of the tasks assigned to them. According to this theory, the leader is responsible for clarifying the path to goal achievement, providing the necessary support, and removing obstacles confronting employees, thereby increasing their chances of success and enhancing their self-confidence (Dare & Saleem, 2022, p. 4).

Contemporary applications of the theory have confirmed that leaders who adopt an achievement-oriented style—those who raise expectations, encourage subordinates to strive for excellence, express confidence in their abilities, and empower them (Laschinger, Finegan, Shamian, & Wilk, 2003, p. 1)—make a tangible difference in employees' self-appraisals and level of self-motivation. This leadership style makes employees feel that their hard work will yield results and that their efforts are appreciated, which positively affects their perceived competence and personal accomplishment, consistent with the essence of the theory. Accordingly, achievement-oriented leadership behaviors are expected to be positively associated with employees' level of personal accomplishment. Based on this argument, the third hypothesis is formulated as follows:

Third hypothesis (H₃): There is a direct relationship between leadership behaviors and personal accomplishment.

4- Applied Framework of the Study:

After completing the theoretical framework of the study, which included a presentation of the basic concepts and construction of the hypothetical framework based on explanatory theories, this part moves to the applied framework, where the proposed hypotheses will be tested empirically. This framework includes the study methodology, population and sample, data-collection instruments and

distribution procedures, demographic characteristics of the sample, and finally hypothesis testing and presentation of the statistical results.

4-1- Study Method:

This study adopted the descriptive-correlational method, which aims to describe relationships between variables and measure the strength of their associations without assuming a causal relationship between them (Clarete, Mondejar, Quimba, & Gaygay, 2023, p. 4462). This method was selected because it is appropriate to the objectives of the study, which seeks to test correlational relationships between leadership behaviors and the dimensions of job burnout.

Achieving this objective required a research design consistent with the nature of this method, namely a cross-sectional survey design, which is a type of observational research design involving data collection from a population or a representative sample at a single point in time and is often described as a "snapshot" of the population. This design is generally used to assess the prevalence of a particular outcome, describe population characteristics, or explore relationships between variables without intervention (Chong & Lee, 2026, p. 02).

4-2- Study Population and Sample:

Sonelgaz (Sonelgaz) is the Algerian national electricity and gas company, established in 1969 to undertake the production, transmission, and distribution of energy in the country. It is classified as a public company managed by the state and oversees a network of specialized subsidiaries operating in production, transmission, distribution, and engineering, while the group retains most of the shares of these subsidiaries to ensure administrative and financial control (Sonelgaz, 2023).

This population includes a number of local distribution agencies, including the Electricity and Gas Distribution Company in Mascara Province, which had 151 employees according to data available from its human resources department. To determine the sample size, the Yamane (1967) formula was used, a simplified formula employed to determine sample size from a known statistical population, expressed by the following mathematical relationship (Mekonnen, Mulugeta, & Benti, 2025, p. 7):

$$n = N \div (1 + N \times e^2)$$

where n is the sample size, N is the population size, and e is the standard margin of error (0.05). Substituting the population value $N = 151$ and the margin of error ($e = 0.05$), the optimal sample size becomes:

$$n = 151 \div (1 + 151 \times 0.05^2) \approx 110$$

The sample size was determined as 110 employees and then increased by 10% to compensate for the possibility of non-response, resulting in an intended distribution size of 121 employees. A total of 131 questionnaires were actually distributed to cover this number with an additional margin.

3-3- Data-Collection Instruments:

This study relied on two main instruments for data collection, selected based on their suitability for the research objectives and their psychometric properties documented in the scientific literature. We translated both instruments from English into Arabic through a translator specialized in academic translation and adapted them to the Algerian context.

For measuring leadership behaviors, this research paper relied on the Leadership Qualities Scale, consisting of 12 items, which measures leadership behaviors represented by performance development, empowerment, feedback, and communication. It was developed and its psychometric properties were validated in a study published in Mayo Clinic Proceedings (Shanafelt, et al., 2015, p. 434). Participants' responses were measured using a five-point Likert scale ranging from "1 = strongly disagree" to "5 = strongly agree".

The study also relied on the short version of the Maslach Burnout Inventory - General Survey, consisting of 15 items. The scale is distributed across three dimensions: emotional exhaustion (5 items), work disengagement (4 items), and personal accomplishment (6 items). Participants' responses were measured on a seven-point frequency scale ranging from "0 = never" to "6 = daily" (Oluwadiya, Adeoti, Ogidan, Bamisi, & Akintoye, 2023, pp. 739-740).

3-4- Procedures for Distributing and Collecting the Questionnaires:

After completing the procedures for obtaining official approval from the management of the Electricity and Gas Distribution Company in Mascara Province, we visited the company headquarters and distributed the questionnaires directly to employees. The distribution process was accompanied by our field presence, during which individual and group explanations were provided to clarify any items that might have been unclear to respondents, with the aim of ensuring accurate understanding and high-quality responses without affecting the wording of the original items.

Questionnaire collection continued during July 2026. A total of 121 questionnaires were retrieved out of 131 distributed, representing a response rate of 92.37%. After examining the retrieved questionnaires, 10 questionnaires were excluded because the responses were incomplete, leaving 111 valid questionnaires for statistical analysis, equivalent to 84.73% of the total questionnaires distributed.

3-5- Reliability of the Adopted Scales:

After verifying the psychometric properties of the scales in previous studies (Ashmore, et al., 2024, p. 315) and the study by (Oluwadiya et al., 2023), Cronbach's Alpha was calculated for each of the adopted scales. It is one of the most common indicators used to assess the internal consistency of measurement instruments in scientific research. Cronbach's Alpha indicates good and acceptable internal reliability when its value is equal to or greater than (0.70), and the measurement instrument is considered reliable and suitable for use in scientific research (Li, Xu, Liang, Luo, & Zhang, 2023). Table (1) presents the reliability coefficients for the study scales.

Variable	Cronbach's Alpha	Dimension
Leadership Behaviors	0.934	
	0.877	Emotional Exhaustion
	0.911	Work Disengagement

	0.930	Personal Accomplishment
Job Burnout	0.895	

Table (1): Cronbach's Alpha Coefficients for the Study Scales

Source: Prepared by the researcher based on SPSS (V27).

The results presented in Table (1) show that all Cronbach's Alpha coefficients exceeded the acceptable threshold (0.70), confirming that all study scales possess a high level of internal consistency and reliability.

The reliability coefficient for the Leadership Qualities Scale reached 0.934, indicating strong consistency among the twelve items of the scale in measuring the concept of leadership behaviors in the Algerian context.

Regarding the dimensions of the job burnout scale, the reliability coefficients ranged between 0.877 and 0.930. The personal accomplishment dimension recorded the highest reliability coefficient, 0.930, followed by work disengagement at 0.911 and emotional exhaustion at 0.877. These values provide a strong indication of the homogeneity of the items of each dimension and their ability to accurately measure the concept assigned to them.

The overall reliability coefficient of the job burnout scale also reached 0.895, confirming that the three dimensions function together consistently in measuring the general concept of job burnout.

These results strengthen the validity and reliability of the instruments used in this study and confirm their suitability for the Algerian context, thereby increasing confidence in its results.

3-6- Descriptive Statistics of the Demographic Characteristics of the Study Sample:

The study population consisted of employees of the Electricity and Gas Distribution Company in Mascara Province - Sonelgaz, numbering 151 employees. The study sample was selected using convenience sampling, which is often justified in scientific studies by its cost and effort effectiveness (Savickas, 2020, pp. 80-81). However, the fundamental reason for choosing it in this research paper relates to the nature of the company's fieldwork, as some employees were engaged in field assignments during the period of questionnaire distribution and collection, making it impossible to reach and include them. The final sample size was 111 employees, representing 73.5% of the total study population, a high representative proportion that strengthens the richness of the data and the robustness of the statistical indicators.

Table (2) presents the demographic characteristics of the sample in terms of gender, age, educational qualification, years of experience, and the socio-professional classification of jobs.

(%)	Num ber	Category	Variable	(%)	Num ber	Category	Variabl e
20.7%	23	Senior technician or less	Educational qualification	80.2%	89	Male	Gender
18%	20	Applied Studies Certificate		19.8%	22	Female	

18%	20	Bachelor's degree	0.9%	01	Less than 30 years	Age
19.8%	22	Engineer	25.2%	28	From 30 to 40 years	
21.6%	24	Master's degree	73.9%	82	More than 40 years	
1.8%	02	PhD	4.5%	05	Less than 10 years	Years of experience
64.9%	72	Managerial staff	67.6%	75	From 10 to 20 years	
24.3%	27	Control agent	27.9%	31	More than 20 years	
10.8%	12	Execution agent				

Table (2): Descriptive Statistics of the Demographic Characteristics of the Study Sample

Source: Prepared by the researcher based on SPSS (V27).

The study sample consisted of 111 employees from the Mascara Electricity and Gas Distribution Directorate – Sonelgaz. The results showed that 80.2% of the sample members were male, compared with 19.8% female. The age group over 40 years was the most represented at 73.9%, followed by the 30-to-40 age group at 25.2%, while the proportion of those under 30 did not exceed 0.9%.

Regarding years of experience, the 10-to-20-year category was the most frequent at 67.6%, followed by the more-than-20-year category at 27.9%, and then the less-than-10-year category at 4.5%. With respect to educational qualification, the percentages were relatively close, ranging from bachelor's degree holders at 18%, engineers at 19.8%, and master's degree holders at 21.6%, with almost no representation of PhD holders at 1.8%. Regarding socio-professional classification, managerial staff constituted the largest category at 64.9%, followed by control agents at 24.3% and execution agents at 10.8%.

3-7- Hypothesis Testing:

This study seeks to test the validity of the correlational relationships between leadership behaviors and the dimensions of job burnout through the following hypotheses:

- First hypothesis (H₁): There is a statistically significant inverse relationship at the significance level (0.01) between leadership behaviors and emotional exhaustion among the studied sample.
- Second hypothesis (H₂): There is a statistically significant inverse relationship at the significance level (0.01) between leadership behaviors and work disengagement among the studied sample.
- Third hypothesis (H₃): There is a statistically significant direct relationship at the significance level (0.01) between leadership behaviors and personal accomplishment among the studied sample.

To test these hypotheses, Spearman's Rank Correlation Coefficient was used for the following reasons:

a- Nature of the data: The data in this research paper are based on Likert scales, which are classified as ordinal data, as they express the ordering of respondents' answers rather than absolute numerical values. Therefore, Spearman's rank correlation coefficient is appropriate because it does not depend on the raw numerical values of observations but on their ranks, making it the most appropriate representative measure for testing correlational relationships in this context (Hanke & Kossowski, 2011, p. 88).

b- Robustness of the test: Spearman's coefficient is highly robust to outliers and is less sensitive to differences in marginal distributions between variables (Yu & Hutson, 2024, p. 2144), making it more reliable for analyzing social and administrative data, which often exhibit distributional deviations.

Based on the foregoing justifications for using Spearman's rank correlation coefficient in this study, and given its suitability for ordinal data (Likert scales) and its robustness to outliers, Table (3) presents the correlation coefficient matrix between leadership behaviors and the dimensions of job burnout to test the strength and direction of the correlations between these variables and identify the statistical significance of each relationship as a basis for deciding the validity of the proposed hypotheses.

Variables	1	2	3	4
1. Mean Leadership Behaviors	1.000	-0.321**	-0.293**	-0.106
2. Mean Emotional Exhaustion	-0.321**	1.000	0.618**	-0.260**
3. Mean Work Disengagement	-0.293**	0.618**	1.000	0.077
4. Mean Personal Accomplishment	-0.106	-0.260**	0.077	1.000

Table (3): Spearman's Correlation Matrix Between Leadership Behaviors and Burnout Dimensions

** Correlation is significant at the 0.01 level (2-tailed).

Source: Prepared by the researcher using SPSS (Version 27).

The validity of the three proposed hypotheses can be tested by referring to the correlation coefficients and statistical significance levels presented in Table (3), as follows:

The hypothesis tests begin with an examination of the first hypothesis (H_1), which states that there is a statistically significant inverse relationship at the significance level (0.01) between leadership behaviors and emotional exhaustion among the studied sample. Spearman's correlation coefficient reached ($r_s = -0.321^{**}$). The negative sign indicates an inverse direction; that is, the more positively respondents evaluate the leadership behaviors of their leaders, the lower their feeling of emotional exhaustion. Accordingly, the first hypothesis is accepted.

This result is consistent with the findings of several previous studies. A study conducted among employees of an Indonesian company found a negative relationship between transformational

leadership and emotional exhaustion (Amin, Noviekayati, & Rania, 2024, p. 219). Another study in the Colombian electricity sector concluded that ethical leadership and an ethical-principles climate are negatively associated with emotional exhaustion (Santiago-Torner, 2024).

Testing the second hypothesis (H_2), which states that there is a statistically significant inverse relationship at the significance level (0.01) between leadership behaviors and work disengagement, yielded a Spearman correlation coefficient of ($r_s = -0.293^{**}$). The negative sign indicates an inverse direction, meaning that the more positively the studied sample evaluates their leaders' behaviors, the lower their level of work disengagement. Accordingly, the second hypothesis is accepted.

This result is consistent with a study conducted on a large sample of 3751 teachers from eight provinces in China, which confirmed a strong negative relationship between servant leadership and emotional exhaustion, with a mediating role for work disengagement in this relationship. This indicates that this type of leadership not only directly reduces exhaustion but also operates through a mediating pathway represented by reducing work disengagement, which is consistent with the essence of the second hypothesis (Wu, Zhao, Qiu, & Li, 2024, p. 12).

Examining the third hypothesis (H_3), which states that there is a statistically significant direct relationship at the significance level (0.01) between leadership behaviors and personal accomplishment, showed no statistically significant correlation, as Spearman's coefficient was ($r_s = -0.106$), with a probability level exceeding the significance threshold (0.01). Accordingly, the third hypothesis is rejected.

This result is consistent with a study conducted in the secondary education context in the state of Texas, which found no statistically significant correlations between transformational leadership qualities and personal accomplishment among teachers (De La Rosa, 2023).

Thus, the applied framework of the study has completed all methodological steps necessary to test the hypotheses, beginning with identifying the method, describing the sample and instruments, and ending with presenting the statistical results. The following section discusses these results in light of the theoretical framework and previous literature in order to reach deeper interpretations of the relationships tested.

4- Discussion of the Results:

After reviewing the statistical results produced by testing the hypotheses, a fundamental question emerges regarding the interpretive implications underlying these figures, as interpretation reveals the mechanisms that produce them. From this point, this discussion seeks to provide an in-depth analytical reading of the correlational relationships identified by the study by linking the statistical outputs to the theoretical literature and the reality of leadership behaviors at the Mascara Electricity and Gas Distribution Directorate.

The interpretation begins with the first result, following the sequence of the hypotheses previously tested, concerning the inverse relationship between leadership behaviors and emotional exhaustion. The inverse relationship identified by the study between positive evaluations of leadership behaviors and lower emotional exhaustion among employees of Sonelgaz Mascara can be interpreted in light of the Conservation of Resources Theory presented above by Hobfoll (1989), which assumes that

leadership support constitutes a protective resource that safeguards employees against the depletion of their emotional energy.

This result reinforces findings from previous field studies conducted in other branches of Sonelgaz. In the Biskra branch, a study (Hassini & Hamdi Bacha, 2023, p. 372) demonstrated the existence of effective communication among a sample of employees. Another study (Saker & Ben Warith, 2022, p. 549) revealed the presence of participatory decision-making practices in the Skikda branch. Regarding empowerment, a study (Hadhfani & Benguesmi, 2025, p. 325) confirmed that it reflects a work environment characterized by autonomy and trust.

These leadership behaviors, such as communication, participation in decision-making, and empowerment, provide employees with additional resources such as a sense of psychological safety (Zhou & Chen, 2021, p. 04) and confidence in their own abilities, enabling them to protect their emotional energy from depletion when facing work pressures.

Turning to the interpretation of the second hypothesis, concerning the inverse relationship between leadership behaviors and work disengagement in the context of the Mascara Electricity and Gas Distribution Directorate, this relationship can be interpreted by linking the content of the leadership behaviors measured by the adopted scale—described in the data-collection instruments section—to the directorate's field reality. Leadership behavior items such as inspiration, empowerment, attention to opinions, and recognition represent developmental and relational resources that provide employees with a sense of control, meaning, and belonging, which are direct opposites of disengagement from work.

This perspective is strengthened when considering the various administrative practices within Sonelgaz, as some field studies indicate the existence of organizational characteristics such as hierarchy and centralization that may limit employee autonomy. Participation in decision-making is one of the fundamental manifestations of autonomy, and any restriction of it may weaken employees' sense of control over their work and reduce their motivation to participate effectively in organizational decisions. A study (Douida & Belkheir, 2026, p. 338) conducted at the Electricity and Gas Distribution Directorate of Tamanrasset revealed a relative weakness in employee participation in decision-making, attributed to the continued administrative centralization and dominance of the hierarchical structure there, which contributes to reinforcing feelings of work disengagement in the absence of leadership practices that compensate for these structural constraints.

Within this context, the immediate leader becomes a crucial link, compensating, through discretionary authority in evaluation, guidance, and motivation, for some structural constraints. This explains the association between positive evaluations of these leadership behaviors and lower feelings of disengagement, as these practices constitute a resource that enhances meaning and belonging and limits the employee's need to create psychological distance from work tasks. This is consistent with Social Exchange Theory—referred to earlier—in explaining the relationship between leadership support and the reduction of disengagement as a defensive mechanism (Buunk and Schaufeli, 1993). Turning to the interpretation of the third and final result according to the sequence of hypotheses, concerning the relationship between leadership behaviors and personal accomplishment, the absence

of a statistically significant correlation between the two variables raises fundamental questions about the nature of personal accomplishment as a component of burnout and the extent to which it is affected by leadership factors compared with other determinants.

The absence of a relationship between leadership behaviors and personal accomplishment can be interpreted in light of Self-Determination Theory developed by Ryan and Deci (2000), which explains the nature of intrinsic motivation. According to this theory, the feeling of personal accomplishment arises from the satisfaction of three basic and innate psychological needs in the individual: competence, autonomy, and relatedness. This satisfaction is influenced by the organizational and social context (Legault, 2017, p. 02) and is not limited to the direct relationship with the leader.

This is consistent with a previous study indicating that personal accomplishment is influenced by an individual's personal values, such as ambition, self-control, and a sense of achievement, making it more closely associated with internal employee factors than with leadership relationships. In a work environment that may not always fully satisfy basic psychological needs, personal accomplishment remains largely associated with fundamental determinants such as personal values and self-efficacy, which explains the absence of a significant relationship between it and leadership qualities (Mahmoudi, 2013, p. 269), rather than necessarily with direct leadership relationships.

Thus, these findings collectively provide a multidimensional picture of the role of leadership behaviors in job burnout within the Mascara Electricity and Gas Distribution Directorate. While the inverse relationship with exhaustion and disengagement confirms the protective role of leadership behaviors, the absence of a relationship with personal accomplishment reveals the limits of this role and returns us to the broader question of the factors that actually shape employees' sense of accomplishment. Although these findings provide important answers, they simultaneously raise new questions about how to strengthen the impact of leadership behaviors in different organizational contexts and open the door to a broader discussion of the role of contextual and personal factors in shaping the relationship between leadership and job burnout.

Conclusion:

The true value of this research paper lies in the qualitative contribution it makes to knowledge in the Algerian context, as it is among the rare field studies examining the relationship between leadership behaviors and the dimensions of job burnout at the Mascara Electricity and Gas Distribution Directorate, relying on a new measurement instrument, the Mayo Clinic Scale, which had not previously been used in the Algerian context. It also contributes to strengthening theoretical understanding by revealing differences in the nature of the relationship between leadership behaviors and the various dimensions of burnout: an inverse relationship was found with exhaustion and disengagement, whereas no relationship was established with personal accomplishment. This opens the door to new questions about the nature of this dimension and its determinants. From a practical perspective, the paper provides preliminary indicators that public institutions, particularly in the energy sector, may use in designing leadership development programs aimed at strengthening supportive employee behaviors such as communication, empowerment, recognition, and attention to opinions, which were found to be associated with lower levels of exhaustion and disengagement.

While these contributions represent the paper's knowledge addition, they also constitute an answer to the research gap from which the study originated, namely the absence of studies testing these relationships in the Algerian context, particularly in the public energy sector, together with the absence of testing of the Mayo Clinic instrument in this context. The study addressed this gap through three integrated paths: empirical testing of correlational relationships at the Mascara Electricity and Gas Distribution Directorate, use of a new measurement instrument in the Algerian environment, and a theoretical interpretation of the results in light of different theories. The results led to the acceptance of the first and second hypotheses, confirming the protective role of leadership behaviors against exhaustion and disengagement, whereas the third hypothesis was rejected, thereby reformulating the theoretical understanding of personal accomplishment as a component determined by sources other than leadership behaviors.

In light of these findings, the study recommends that the Mascara Electricity and Gas Distribution Directorate consider a range of administrative practices that strengthen supportive leadership behaviors and reduce job burnout. Within this framework, it is proposed that training programs for leaders be designed to focus on developing effective communication skills, active listening, and constructive feedback, alongside strengthening a culture of appreciation and recognition of employees' efforts.

The study also recommends activating mechanisms for participation in decision-making and granting employees greater authority in performing their tasks, thereby enhancing their sense of autonomy and belonging and reducing feelings of work disengagement. In addition, it is proposed that a periodic system be established to measure levels of job burnout and satisfaction with leadership, in order to identify the occupational groups most vulnerable to it and take early preventive measures, alongside providing psychological and social support programs for employees to reduce emotional exhaustion and promote mental health in the workplace.

However, despite their scientific value, these findings remain subject to methodological limitations that call for caution when generalizing them. The main limitations include reliance on a cross-sectional design that does not allow causal relationships to be inferred, restriction of the sample to employees of one Sonelgaz branch (Mascara), which may not reflect the diversity of experiences in other branches or different sectoral institutions, and the fact that the measurement instrument did not undergo a fully developed cultural adaptation process in the Algerian context.

In light of these limitations, a longitudinal study is proposed that follows the same sample over multiple periods in order to identify the temporal direction of the relationship between leadership behaviors and burnout dimensions and determine whether leadership causes changes in burnout or whether the relationship is reversed. It is also recommended that the sample be expanded to include other Sonelgaz branches and that variables such as organizational support, organizational commitment, and employee satisfaction with the work environment be added to test the mechanisms through which leadership behaviors reduce job burnout.

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