The role of psychological ownership’s dimensions in deterring the effects of toxic leadership: Analytical research in some companies at the Ministry of Industry and Minerals in Iraq

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Abstract:
The research aims to clarify the role that psychological ownership, through its dimensions, plays in deterring the effects of toxic leadership, through its dimensions, in the Ministry of Industry and Minerals. The research started with a basic problem represented by the following question: "Using psychological ownership and its application in deterring the negative effects of toxic leadership." The research used the descriptive-analytical method. The sample was randomly selected from workers in some selected companies affiliated with the Ministry of Industry and Minerals in Baghdad, and the sample size reached 124 individuals. One of the most important results is that there is an effect of the psychological ownership variable, based on the four dimensions, on deterring toxic leadership behaviors in its five dimensions. Psychological ownership, stemming from individuals' feelings of ownership and connection, affects attitudes and behaviors in various contexts, including toxic leadership. The consequences of these behaviors can be harmful to individuals and organizations if left unaddressed.

Keywords: psychological ownership, toxic leadership, Ministry of Industry and Minerals.

1. Introduction
Psychological ownership and toxic leadership are two concepts that have received a lot of attention in the field of organizational behavior. Psychological ownership refers to an individual's feeling of ownership and attachment towards something, such as an employee's knowledge. On the other hand, toxic leadership is characterized by leaders who engage in destructive behaviors that harm individuals and organizations. This research aims to explore the role of psychological ownership in toxic leadership and to study how these two phenomena interact and impact individuals and organizations. Psychological ownership refers to an individual's sense of ownership and control over a target, whether physical or psychological. In the context of organizations, it is about employees' feelings of ownership, control, and responsibility for their work, their team, or their organization as a whole. Psychological ownership has been shown to have significant impacts on employee motivation, engagement, and dedication in the workplace. On the other hand, toxic leadership is characterized by leaders who display destructive behaviors toward their subordinates. These leaders often engage in abusive or manipulative tactics that negatively impact employee well-being and organizational performance. Psychological ownership refers to a personal feeling of connection and identification with an object, idea, or organization. It involves feelings of control, belonging, and responsibility. Psychological ownership has received great attention as a psychological concept that affects individuals' attitudes and behavior in various fields. In the workplace, this feeling of ownership and connection to the work environment has been linked to many positive outcomes, such as increased commitment, motivation, and engagement (Pierce and
The primary research goal is to explore the relationship between psychological ownership and toxic leadership by studying how psychological ownership undermines toxic leadership within the organization and how psychological ownership can help individuals respond constructively to toxic leadership.

1.1. Literature review

Some previous studies have reviewed the concept of psychological ownership in different administrative contexts. One of the main theories related to psychological ownership is self-determination theory (SDT), which indicates that individuals have innate psychological needs for independence, competence, and attachment. When these needs are met through a sense of ownership, individuals are more likely to be motivated and engaged in their work. Empirical evidence has shown that psychological ownership has significant effects on organizational outcomes. For example, research has found that employees who have a stronger sense of ownership are more committed to their organizations and show higher levels of job satisfaction; this increased commitment can lead to increased effort exerted by employees, which positively impacts overall organizational performance (Kuo, et al 2021). As for Nordberg (2021), he emphasized the possibility of benefiting from psychological ownership in effective management practices by enhancing employee satisfaction, commitment, innovation, and organizational success. Managers who understand the importance of this concept will be better equipped to create an environment in which employees feel valued and invested in the organization's goals. Regarding toxic leadership, Akca (2017) studied the relationship between the employee’s perception of toxic leadership and the intention to leave work. The results of the analysis found that there is a positive relationship between the employee’s perception of toxic leadership and the intention to leave work, meaning that toxic leadership reduces the employee’s motivation to work and his ability to be creative and productive. Health problems and stress add to psychological burnout. As for Wirawan (2023), he concluded that the consequences of toxic leadership are far-reaching, as the organizational culture suffers from the erosion of trust among employees due to the constant fear and hostility resulting from the leader, and the employee’s well-being is at risk with increased levels of stress from working under the rule of the toxic leader, and this ultimately leads to negative results. Such as decreased productivity, low morale among employees, increased employee turnover rates, and difficulty attracting new talent.

When it comes to understanding the relationship between psychological ownership and toxic leadership, many studies have explored this topic. Dirks and Ferrin (2001) examined the role of trust in organizations and its impact on various outcomes, including psychological ownership. It also discusses how toxic leadership behaviors erode trust and hinder the development of psychological ownership among employees. The study (Rafferty and Griffin 2004) focused primarily on transformational leadership as it highlights how transformational leaders can foster positive psychological ownership among employees, as opposed to senior leaders who undermine that ownership. The study (Mayer and Gavin, 2005) revealed the effect of trust in management on employee performance and the mediating role of psychological ownership and provided insight into how toxic leadership behaviors can undermine trust and hinder employees’ psychological ownership.

Although a large amount of research has been done on psychological ownership and toxic leadership independently, little of it has been done to explicitly look at how psychological ownership can lessen or even reverse the effects of toxic leadership. This discrepancy emphasizes the need for more research to determine whether psychological ownership can act as a protective barrier against the detrimental effects of toxic leadership.
2. Material and Methods

In order to understand and explain the relationship between psychological ownership and toxic leadership, the research used the descriptive analysis approach, which is usually used to understand various behavioural phenomena. This approach includes conducting a realistic analysis of the phenomena, using data and information collected through a sample to understand the facts, draw conclusions, and identify the factors influencing the phenomena to find solutions and exit. A set of suggestions and recommendations that serve the researched community. And used various statistical tools in the statistical program (SPSS V.23) to analyse the relationship between the main research variables, answer the main question, and verify the hypotheses. These methods include (arithmetic mean, standard deviations, regression coefficients, correlation coefficients, averages, variances, and the T test).

2.1 Research importance

This research is important because it shows how psychological ownership can deter the negative effects of toxic leadership in the public industrial sector. Designing a questionnaire with the research variables and their constituent parts and distributing it to a sample of employees in some chosen public companies connected to the Ministry of Industry and Minerals in Baghdad in order to test theories and get findings demonstrates the practical significance of the study. Using a fieldwork method at the Ministry of Industry and Minerals in Baghdad and data collection via questionnaires, this research will take a descriptive analytical approach. Testing these hypotheses is the research’s primary significance because it involves both independent and dependent variables. In addition to filling a theoretical vacuum by uniting two previously unrelated fields of study, this work offers organizations useful information about how to deal with toxic leadership. Organizations can create interventions and policies that support a healthier and more productive work environment for their employees by developing an understanding of the role that psychological ownership plays in deterring the effects of toxic leadership.

2.2. The hypothetical diagram

Figure 1 shows the correlation and influence relationship between the two research variables. Psychological ownership represents the independent variable and includes the four dimensions (self-efficacy, accountability, belonging, and self-identity) (Avey et al, 2009), while the dependent variable represents toxic leadership with its five dimensions (bad supervision, narcissism, self-promotion, difficulty predicting, and Authoritarian leader) (Schmidt, 2014), as explained below:

**Psychological ownership**
- Self efficacy
- Accountability
- Belongingness
- Self-identity

**Toxic leadership**
- Abusive supervision
- Narcissism
- Self-promotion
- Unpredictability
- Authoritarian leader

![Figure 1: The hypothetical scheme of the research](image)

2.3. Research hypotheses

The research hypotheses consisted of two basic hypotheses, as shown:

The first main hypothesis (there is a significant correlation between personal
ownership and its dimensions and toxic leadership and its dimensions).

The second main hypothesis (there is a statistically significant effect between personal ownership and its dimensions on toxic leadership and its dimensions).

### 2.4. Community and Research Sample

The current research community was represented by three public companies selected from the Ministry of Industry and Minerals in Baghdad. As for the research sample, it was represented by a random sample of managers at the operational level and employees in the three chosen companies, and their number reached 130 individuals.

The justification for choosing managers within the sample was to establish the reliability of the answers. The measurement tool (questionnaire) was distributed to them, and 124 questionnaires were valid for statistical analysis from the research sample’s responses.

### 2.5. The concept of psychological ownership

Psychological ownership is a concept that has received much attention in the field of management. It refers to an individual's personal sense of ownership over a goal, which could be an object, an idea, or even an organization. This psychological connection goes beyond legal ownership and involves a deep emotional connection and investment in purpose (Nordberg, 2021).

Psychological ownership is affected by several factors: First, autonomy participation, and a sense of control over one's work contribute to the development of feelings of ownership (Pierce et al., 2001). Second, organizational support, such as participative decision making and employee empowerment, enhances a sense of ownership (Van Dyne & Pierce, 2004). Third, shared vision and organizational identity lead to a stronger sense of ownership (Ashforth & Mael, 1989).

In the same context, psychological ownership has significant effects on individuals and organizations. First, individuals with a strong sense of ownership show a higher level of job satisfaction, motivation, and engagement (Morrison, 2011). Second, they are more likely to exhibit proactive behaviors, such as creativity, innovation, and initiative (Pierce et al., 2001). Third, psychological ownership positively affects organizational performance, organizational commitment, and loyalty (Brown & Leigh, 1996; Van Dyne & Pierce, 2004).

Psychological ownership not only benefits individuals, but also has broader implications for organizations. First, it fosters a positive organizational culture, characterized by a sense of shared responsibility, trust and accountability (Dirks et al., 2016). Second, it enhances employee retention and reduces employee turnover by creating a sense of belonging and investment (Van Dyne & Pierce, 2004). Third, it contributes to organizational innovation and adaptability by encouraging employees to take initiative and be proactive (Pierce et al., 2001).

### 2.5.1. Dimensions of psychological ownership

In order to achieve the goal of the current research and analyze it in the best possible way, the scale presented by (Avey et al., 2009) was adopted, because it is the main source on which most of the research that investigated psychological ownership was based, which consists of four dimensions: self-efficacy, accountability, self-identity, and belonging.

Below is an explanation of each of these dimensions:

#### 2.5.1.1. Self-efficacy

Self-efficacy refers to beliefs about an individual’s ability to successfully achieve a specific goal, that is, individuals’ judgment of their abilities to organize and implement courses of action required to achieve specific types of performance (Saada, et al, 2020). In the world of management, self-efficacy plays a crucial role in ensuring effective leadership practices, decision-making processes, and motivating employees. Self-efficacy has significant impacts on the effectiveness of leadership and decision-making processes in management. Leaders with high levels of self-efficacy are more likely to take on difficult tasks and persevere in the face of obstacles, and instilling trust among their subordinates. Additionally, individuals with strong self-efficacy beliefs tend to make more informed
decisions by carefully evaluating available information and weighing potential outcomes (Sumarsono and Mbato, 2021).

2.5.1.3 Self-identity

Self-identity is an essential aspect of personal and professional development as it refers to the beliefs, values, traits, and characteristics that individuals use to define themselves. Therefore, understanding an individual’s self-identity is crucial because it affects how individuals perceive themselves and interact with others. In the field of management, a strong sense of self-identity can contribute significantly to effective leadership and decision-making (Villalobos, et al, 2019). Self-identity and social identity are recognized as key parts of the self-concept. Researchers have noted that individuals use possessions to function as symbols through which people identify themselves. Specifically, it has been observed that individuals create, maintain, reproduce, and transform their self-identity through interactions with possessions. Tangibles and intangibles (Avey, et al, 2009).

2.5.1.4. Belongingness

Belonging is a basic human need that plays a crucial role in management as it refers to a feeling of connection, acceptance, and appreciation within a group or in a specific organization. In the administrative context, fostering a strong sense of belonging among employees is essential to creating a positive work environment and promoting organizational success. This is evident in Maslow’s hierarchy of needs. Individuals have different needs that must be met in order to belong, and social connections and relationships include an important place in this hierarchy. Therefore, in the organizational setting, satisfying these needs becomes vital for employee satisfaction and motivation (Gusminarti, et al, 2022). This means that an employee who invests time and effort in building something within his knowledge gives him psychological and physical security (van Zyl, et al, 2017).

2.6. Concept of toxic leadership

Toxic leadership refers to a specific style of leadership characterized by abusive behaviors, manipulation, and a lack of transparency. In this section, we will explore the hallmarks of toxic leadership, and illustrate its harmful effects on organizational culture and employee well-being (Dinh et al., 2014). Toxic leadership refers to a leadership style characterized by abusive or destructive behavior toward subordinates. It is an issue that has received increasing attention in the field of management, as its negative impact on individuals and organizations cannot be overestimated. The causes and characteristics of toxic leadership can vary. But there are some common factors that contribute to this behavior, one such factor is the leader's personal insecurity or incompetence, which prompts him to resort to oppressive methods in order to maintain control. In addition, organizational factors such as a lack of accountability or a culture that tolerates and even encourages toxic behavior can contribute to the development of toxic leaders (Wirawan, 2023). In contrast to ethical leadership, it is leadership that is guided by respect for moral beliefs and values and the dignity and rights of others, and therefore it is linked to concepts such as trust, integrity, honesty, consideration, and equal treatment (Waheed & Jabbouri, 2023). Similar to spiritual leadership, leaders here realize the impact of their practices and behavior through their understanding of their subordinates and meeting their needs and aspirations, and this in turn is reflected in their social relationships that connect them with “the family - the group - the organization - and society,” as a whole” and leads to the flourishing of the social relations movement in general (Atheeb & MUSEHIBE, 2020). Many factors contribute to the development of toxic leadership. First, narcissistic tendencies and inflated egos among leaders can lead to a toxic work environment (Avolio & Gibbons, 1988). These leaders prioritize personal gain over the well-being and growth of their subordinates. Second, insufficient organizational support, which fails to hold leaders accountable for their actions, can reinforce toxic behaviors (Einarsen, et al, 2007). Third, organizational culture and climate play a vital role in shaping leadership behavior. If an organization
promotes fierce competition, it can produce toxic leaders who prioritize personal success at the expense of others (Kelloway & Barling, 2010).

So toxic leadership has a profound impact on individuals, teams, and organizations. First of all, it negatively affects employee well-being, leading to increased levels of stress, anxiety, and burnout (Tepper, 2007). Toxic leaders create an atmosphere of fear and intimidation, which undermines employee morale and job satisfaction. Second, toxic leadership reduces team cohesion, cooperation, and trust, which negatively impacts overall team performance (Schyns & Schilling, 2013). Finally, toxic leadership is detrimental to organizational effectiveness and productivity, leading to increased employee turnover, decreased creativity, and a toxic work culture (Sutcliffe & Vogus, 2003).

2.6.1. Dimensions of toxic leadership

Most previous research and studies dealt with toxic leadership through five dimensions, so the current research relied on the model presented by (Schmidt, 2014) to study and measure toxic leadership through the following variables (bad supervision, narcissism, self-promotion, inability to predict, and authoritarian leadership). The paragraphs below explain each of these dimensions:

2.6.1.1. Abusive supervision

Bad supervision refers to the actions of superiors who engage in harmful behaviors toward their subordinates, which can include verbal, physical, or psychological abuse. It also creates a toxic work environment that negatively affects employee well-being and organizational outcomes. Therefore, studying poor supervision is essential in the field of management because it highlights the harmful effects of this behavior on employees and the organization as a whole (Iqbal and Asghar, 2022).

2.6.1.2. Narcissism

Narcissism represents a personal trait that involves self-love, a sense of greatness, and a constant desire to be present, as the leader here often seeks attention and appreciation and at the same time works to ignore other points of view, as the leader here claims talent, ability, and knowledge, and therefore they seek absolute obedience from the workers, as it represents pride. The leader himself, underestimating the abilities of others, contempt for other points of view, while neglecting to empathize with subordinates (Hitchcock, 2015).

2.6.1.3. Self-promotion

It indicates that the leader acts in a way that promotes the achievement of his personal interests at the expense of the interests of his subordinates and the interests of the organizational units that he leads. He is also constantly threatening and belittling his distinguished subordinates who possess talents and skills for fear of competing with him. He seeks to control and dominate them instead of providing appropriate training that supports the development of these skills and talents. The purpose of this is to create a positive impression and image of him, maintain and enhance this image at higher leadership levels, and establish in them a belief that he is the only person who possesses the necessary skills for leadership (Maxwell, 2015).

2.6.1.4. Unpredictability

This dimension shows that the toxic leader gets angry with his subordinates for unknown reasons, and has frequent bouts of fluctuations and anger, which affects his mood, which is reflected in the prevailing climate in the organization, and unexpected behavioral changes that cannot be predicted by the subordinates, and they must be on alert. And always ready to deal with these fluctuations, this type of leadership depletes employee resources, so this dimension has a more destructive and negative impact than other dimensions of toxic leadership on employees and the organization as a whole (Schmidt, 2014).

2.6.1.5. Authoritarian leader

Authoritarian leadership is represented by the behaviors that leaders adopt that restrict the independence of subordinates, limit their freedom of choice, frustrate any individual creativity or new ideas presented on their part, and force them to fully comply with the leaders’ policies, ideas, and procedures at
work. These are the behaviors through which leaders seek to possess absolute authority to work and control. Completely on the subordinates and emphasizing their obedience and implementation of all orders and instructions issued through them without any discussion, controversy or opposition by the subordinates (Schmidt, 2008).

2.7. Analysis and interpretation of indicators for the variable of psychological ownership.

2.7.1. Validity test

A five-point Likert scale was selected to gauge the sample's level of agreement (5 = completely agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = completely disagree). The questionnaire served as the primary research tool, consisting of 45 items totaling five questions for each dimension. Kaiser-Meyer-Olkin (KMO) and Bartlett tests were employed in this study to assess the goodness of measurement and sample adequacy. The results were obtained using SPSS V.23 and are displayed in Table 1.

Table (1) KMO and Bartlett’s tests

<table>
<thead>
<tr>
<th>Variables</th>
<th>KMO test</th>
<th>Bartlett’s test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Chi-Square</td>
</tr>
<tr>
<td>Psychological ownership</td>
<td>0.897</td>
<td>2637.504</td>
</tr>
<tr>
<td>toxic leadership</td>
<td>0.955</td>
<td>3019.389</td>
</tr>
</tbody>
</table>

As all of the sample adequacy test results for the variables, sub-dimensions, or full resolution were greater than 0.5, Table 1 shows that the fundamental requirements for the Bartlett's and KMO tests are satisfied.

2.7.2. Reliability Tests

Table 2 displays the results of the stability tests (Cronbach's alpha), which all exceeded the acceptable limit of (0.7) and were near (1.00). This suggests that the scale is stable and internally consistent across its various paragraphs and sub-dimensions, and that it yields similar results when repeated, applied to the same sample, and under similar conditions.

### Table (2) Reliability test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Statements questionnaire</th>
<th>Alpha-Cronbach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological ownership</td>
<td>(1-20)</td>
<td>0.893</td>
</tr>
<tr>
<td>toxic leadership</td>
<td>(21-45)</td>
<td>0.931</td>
</tr>
</tbody>
</table>

2.7.3. Analysis of the dimensions of psychological ownership variable.

The independent variable psychological ownership was measured in a sample of Ministry of Industry and Minerals companies through four dimensions: (self-efficacy, accountability, belonging, and self-identity). Overall, psychological ownership obtained an arithmetic mean of (3.40), which is a moderate level, with a relative coefficient of variation (24.3)%, with a standard deviation of (0.895), which indicates agreement, homogeneity, and relative interest amounting to (66.9) for the companies studied. Table (3) shows the arrangement of the dimensions according to the relative difference coefficient, which arranges them according to the priority of the sample’s agreement on that availability, interest, and adoption:

We find that the accountability dimension came in first place with a relative coefficient of variation (22.3%), a standard deviation of (0.893) and an arithmetic mean of (3.59) degrees to indicate agreement, homogeneity, and convergence in the level of the sample’s answers to the companies’ relatively good interest (68%).

As for the dimension of belonging, it came in second place on the level of dimensions of psychological ownership with a relative coefficient of variation (22.5%), an arithmetic means of (3.47) degrees, and a standard deviation of (0.824), indicating the convergence of the answers and their agreement on the directorate’s relatively good interest (66.8%).

In third place was the self-identity dimension, with a relative coefficient of variation (25%), a standard deviation (0.887), and an arithmetic mean (3.28), moderate in degree at the general level, indicating agreement and homogeneity regarding the directorate’s relative interest (average 65.6%). Which leaves the fourth rank for the self-efficacy dimension, with a
relative coefficient of variation (26%), a relative interest (65.2%), an average and arithmetic mean (3.26) degree, moderate availability, and a standard deviation (0.850) indicating harmony and agreement about its availability?

Table (3): Presentation and analysis of psychological ownership data

<table>
<thead>
<tr>
<th>Dimensions and variables</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>Materiality %</th>
<th>Coefficient of variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy</td>
<td>3.26</td>
<td>0.850</td>
<td>65.2</td>
<td>26</td>
</tr>
<tr>
<td>Accountability</td>
<td>3.59</td>
<td>0.893</td>
<td>68</td>
<td>3.22</td>
</tr>
<tr>
<td>Belonging</td>
<td>3.47</td>
<td>0.824</td>
<td>66.8</td>
<td>5.22</td>
</tr>
<tr>
<td>Self-identity</td>
<td>3.28</td>
<td>0.887</td>
<td>65.6</td>
<td>25</td>
</tr>
<tr>
<td>Psychological ownership</td>
<td>3.40</td>
<td>0.895</td>
<td>66.9</td>
<td>3.24</td>
</tr>
</tbody>
</table>

2.7.4. Analysing the dimensions of the toxic leadership variable

The dependent variable measured toxic leadership in the surveyed companies through its five dimensions (Abusive supervision, narcissism, self-promotion, Unpredictability, and authoritarian leadership). The results of the descriptive analysis of the primary data led to:

Overall, toxic leadership obtained an arithmetic mean of (3.11), with a relatively average level, with relative interest (81.9%), good, with a standard deviation of (0.445), and a relative coefficient of variation (11.2%). The results of Table (4) showed the ranking of the dimensions of toxic leadership among the most contributing. In terms of availability, there is the least agreement, and the researchers rely on the relative difference coefficient, according to the following:

We find that after the Unpredictability, it came in first place with a relative coefficient of variation (11.2%), and good relative interest in the companies surveyed (84.3%). This means that it is one of the most difficult dimensions of toxic leadership and the most dangerous for employees in particular and the work environment in general, with an arithmetic mean of (3.01), with a moderate average in the degree of its availability, and agreement and consistency with the responses of the sample members as a whole on the dimension, with a standard deviation of (0.538).

It came second after self-promotion with a relative coefficient of variation (11.7%) and a standard deviation of (0.488), which indicates agreement, convergence and harmony in the sample’s opinions about the availability of the dimension with an arithmetic mean of (3.30), which is at an above average level, and with relative interest (83.8%).

While the authoritarian leadership dimension came in third place, with a relative coefficient of variation (12.5%), and a standard deviation (0.490) indicating agreement and harmony in the level of answers about its availability with an arithmetic mean (3.14), and practice and adoption with its relative importance (81.7%).

As for the dimension of narcissism among the dimensions of toxic leadership, it came in fourth place with a relative coefficient of variation (14.3%) at the general level. Overall, it obtained a mean score of (3.08), available and practiced with relative interest (75.7%) at a good level.

When the researchers return to the results of Table (4), we find the dimension of bad supervision in fifth place with a relative coefficient of variation (15.6%), and the tendency to practice it with an arithmetic mean (3.08), a moderate degree of availability as well, and in consistency and agreement of the answers with a standard deviation (0.622), regarding the companies’ relative interest (73.5%) good.
Table 4: Presentation and analysis of toxic driving data

<table>
<thead>
<tr>
<th>Dimensions and variables</th>
<th>Arithmetic mean</th>
<th>standard deviation</th>
<th>Materiality %</th>
<th>Coefficient of % variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abusive supervision</td>
<td>3.07</td>
<td>0.622</td>
<td>73.5</td>
<td>15.6</td>
</tr>
<tr>
<td>Narcissism</td>
<td>3.08</td>
<td>0.565</td>
<td>75.7</td>
<td>14.3</td>
</tr>
<tr>
<td>Self-promotion</td>
<td>3.30</td>
<td>0.488</td>
<td>83.8</td>
<td>11.7</td>
</tr>
<tr>
<td>Unpredictability</td>
<td>3.01</td>
<td>0.538</td>
<td>84.3</td>
<td>11.2</td>
</tr>
<tr>
<td>Authoritarian leadership</td>
<td>3.14</td>
<td>0.490</td>
<td>81.7</td>
<td>12.5</td>
</tr>
<tr>
<td>Toxic leadership</td>
<td>3.11</td>
<td>0.445</td>
<td>81.9</td>
<td>11.2</td>
</tr>
</tbody>
</table>

From reviewing tables 3 and 4, it is clear that toxic leadership obtained a relative coefficient of variation (11.2%), while psychological ownership obtained a relative coefficient of variation (24.3%). This is what puts toxic leadership in first place in terms of agreement, in addition to the level of availability with a mean score of (3.11) and psychological ownership (3.40). The researchers believe that the dimensions of psychological ownership are the most available and need to be improved in terms of priority of agreement, at the expense of the dimensions of toxic leadership, as the answers focused on the availability of toxic leadership behaviors at a moderate level, which confirms the problem of the research. While psychological ownership has been given good attention, the researchers are focusing on the importance of adopting this variable in order to deter the risks of toxic leadership behaviors, according to what was stated in the responses of the sample of companies sampled in the research.

2.7.5. Analyses the effect relationships between the research variables (psychological ownership, toxic leadership)

By reviewing the results of Table (5), the researchers concluded that the independent variable represented by psychological ownership fulfilled all the relationships, and all of them were less than a significance level of less than 0.5, so they were as follows: (100%), positive Strong correlations with Abusive supervision (0.538**), with overall toxic leadership (0.522**), with narcissism (0.480**), with self-promotion (0.434**), and somewhat lower correlations with unpredictability (0.390**) And with authoritarian leadership (0.320*), it means that the independent variable has a lesser effect on the last two dimensions compared to the rest of the dimensions. It is also noted that the relationship between psychological ownership and toxic leadership was positive and strong, exceeding (0.5), and all relationships were at the significance level (0.000-0.014). this means that when companies in the research sample increase their attention to psychological ownership in general, they will automatically significantly reduce toxic leadership and its dimensions, and vice versa. From all of these results, the first main hypothesis is accepted (there is a significant correlation between personal ownership and its dimensions and toxic leadership and its dimensions).

Table (5): Correlation coefficient of the two research variables and their dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Abusive supervision</th>
<th>Narcissism</th>
<th>Self-promotion</th>
<th>Unpredictability</th>
<th>Authoritarian leadership</th>
<th>Toxic leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological ownership</td>
<td>0.538**</td>
<td>0.320*</td>
<td>0.308**</td>
<td>0.390**</td>
<td>0.480**</td>
<td>0.522**</td>
</tr>
<tr>
<td>0.000</td>
<td>0.014</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>
2.7.6. Analyse the effect between the research variables (psychological ownership, toxic leadership)

Based on the aforementioned existence of a direct positive correlation between the two research variables, the researchers decided to test the validity of the second main hypothesis, as Table (6) shows an effect model for the main independent variable (psychological ownership) on the dependent variable (toxic leadership). Below the significance level (sig=0.000), which is less than the significance value (0.01), and in terms of the calculated (F) value (123.773), which is greater than the tabulated (F) value (5.382) at the significance level (0.001), and the calculated (T) value (12.058). which is greater than the tabular (T) value (2.32), The value of the coefficient of determination (R² = 0.580), which indicates that the independent variable can explain (58%) of the changes that occur in the toxic leadership, while the remaining percentage (42%) is due to other factors that were not taken into account in this model.

While the value of the marginal slope (β = 0.828), meaning that a single unit change in psychological ownership was of interest to the companies studied, would cause a change in reducing toxic leadership by (82.8%), which constitutes an effect of the dimensions of psychological ownership combined that is better than their individual effect. This result provides sufficient support to accept the second main hypothesis (there is a statistically significant effect between personal ownership and its dimensions on toxic leadership and its dimensions).

| Table (6) Indicators of the influence of psychological ownership and its dimensions on toxic leadership |
|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| R | 0.690 | 0.685 | 0.770 | 0.750 | 0.819 |
| R² | 0.488 | 0.520 | 0.490 | 0.598 | 0.580 |
| F | 34.462 | 66.769 | 67.847 | 59.174 | 123.773 |
| Sig | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| A | 0.982 | 0.593 | 0.790 | 1.722 | 0.182 |
| B | 0.601 | 0.727 | 0.690 | 0.729 | 0.828 |

3. Discussion of results

In this section, the most important conclusions that emerged from the research are reviewed and discussed based on the results obtained above:

a. The research sample companies showed interest in psychological ownership to a moderate degree, in terms of their leaders being subject to formal bureaucratic rules and regulations that limit personal and individual decisions, and adopting formal rules and organizational structure as a source of influence on the behaviors of their employees. The reasons for this are due to emphasizing the importance of adhering to the rules and mechanisms of work in public organizations in order to achieve organizational success, and this is similar to what was stated in the study Nordberg (2021), in which he emphasized the possibility of benefiting from psychological ownership in effective administrative practices by enhancing employee satisfaction, commitment, innovation and success Organizational. Managers who understand the importance of this concept will be better equipped to create an environment in which employees feel valued and invested in the organization's goals.

b. Companies have shown a relatively high interest in achieving accountability as a dimension of psychological ownership, which means that company leaders should not hesitate to admit mistakes when they are convinced that the decisions and actions taken by them are incorrect and try to modify and correct them, according to
what was stated in the study (Kuo, et al 2021). When these needs are met through a sense of ownership, individuals are more likely to be motivated and engaged in their work, and research has found that employees with a stronger sense of ownership are more committed to their organizations and show higher levels of job satisfaction. This increased commitment can lead to increased effort exerted by employees, which positively impacts overall organizational performance.

c. The sample responses in the surveyed companies showed an average level of toxic leadership behavior, especially with regard to the self-promotion dimension, despite the need to reduce it more to leave room for employees to participate and express themselves, which is similar to what was found in a study (Akca, 2017). The results of the analysis found that there is a positive relationship between the employee’s perception of toxic leadership and the intention to leave work, meaning that toxic leadership reduces the employee’s motivation to work and his ability to be creative and productive, and health problems and stress are in addition to psychological burnout.

d. Th. It came after authoritarian leadership as the second most influential dimension of toxic leadership, even though it was ranked between weak to moderate, but this does not mean ignoring it and neglecting its negative effects on employees and the organization as a whole. This was confirmed by a study (Wirawan, 2023) that found that the consequences of toxic leadership are far-reaching at the individual level. Employees who work under the leadership of a toxic leader may suffer from increased levels of stress, decreased job satisfaction, and even mental health problems such as anxiety or depression. Either at the level Team Toxicity breeds mistrust among team members and hinders collaboration and synergy, which in turn can lead to decreased productivity and hinder innovation within the organization.

4. Recommendations

In this aspect, the researchers focus on coming up with and presenting a number of the most important recommendations that serve the researched companies in particular and the rest of the companies affiliated with the Ministry of Industry in general:

a. It is necessary for companies to pay more attention to the accountability dimension of their leaders in a way that enhances their psychological ownership, by adopting the following mechanisms, subjecting all leaders to the unity of command, working to adhere to official rules and regulations to limit individual and personal decisions, and developing a work code that includes organizational rules and procedures, as well as defining... Roles and responsibilities, and creating a healthy organizational climate for interaction with subordinates.

b. Senior leaders in companies can work to enhance self-identity and belonging, giving psychological ownership more attention, by employing personal traits and charisma to achieve the best achievement, in addition to enhancing the basic skills of leaders and increasing their self-confidence to accomplish difficult tasks.

c. Additional attention to the dimension of self-efficacy, which enhances the level of psychological ownership by adopting effective work mechanisms by granting powers and delegating responsibilities to some of its leaders, in a way that reduces waste of time and effort, and evaluating the performance of leaders and employees through a set of fairs, objective standards, which should be reviewed continuously.

d. The necessity of reducing narcissism by presenting new, useful and rare ideas in a way that contributes to reducing toxic leadership behaviours of officials in companies through the tendency to adopt new working methods that differ from the approved routine methods, and are based on supporting personal and collective initiatives to improve performance.

e. Reducing authoritarianism in companies and reducing toxic leadership by recognizing all opinions, even if they differ
in their directions, and looking at matters and issues from different angles.

f. Paying more attention to the issue of psychological ownership in its four dimensions, and directing it to contribute to reducing toxic leadership behaviours through effective adoption of accountability and enhancing self-identity, belonging, and self-efficacy.

5. Conclusions

In conclusion, psychological ownership plays a crucial role in influencing attitudes and behaviors within organizations, when combined with toxic leadership, it leads to negative consequences for both individuals and organizations alike. Recognizing this interaction is essential for organizations to create a positive work environment that promotes healthy levels of psychological ownership. By implementing strategies such as open communication and employee empowerment, organizations can mitigate the impact of toxic leadership on psychological ownership, leading to improved organizational outcomes.

Toxic leadership harms individuals, teams and organizations. To combat its negative effects, organizations must adopt proactive measures that focus on prevention, open communication, promoting psychological safety, and enforcing accountability. By prioritizing employee well-being and promoting positive leadership practices, organizations can create a healthy and productive work environment.

It is important to identify potential signs of toxicity during hiring processes so that candidates with problematic traits can be eliminated early. Organizations should also invest in leadership development programs that focus on promoting positive behaviors such as empowerment, communication skills, empathy, and emotional intelligence.

Data Availability:
The data used to support the results of this study has been included in the article.

Conflict of Interest:
The authors declare that they have no conflicts of interest.

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