

Analysis of the Impact of Organizational and Personal Factors on Depersonalization: A Logistic Approach

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Abstract

This study examines the organizational and personal factors influencing depersonalization, a key dimension of burnout syndrome. Using a binomial logistic model, data from 250 workers were analyzed to identify the most relevant predictors. The results highlight that negative work relationships and burnout significantly increase the likelihood of depersonalization, while service time and high levels of personal accomplishment act as protective factors. Additionally, intermediate professional levels are associated with a higher risk of depersonalization, possibly due to greater job expectations. The model demonstrated excellent predictive capacity (AUC = 0.8816) and significant overall fit. These findings emphasize the importance of addressing work relationships, promoting emotional well-being, and fostering positive perceptions of personal achievement as strategies to prevent depersonalization in workplace settings.

Keywords: depersonalization, burnout, work relationships, personal accomplishment, logistic model.

Introduction

Depersonalization is a key component of burnout syndrome, characterized by negative and detached attitudes toward work and individuals in the workplace (Maslach & Jackson, 1981). This phenomenon affects not only the psychological well-being of workers but also the quality of organizational performance, creating a vicious cycle that reduces productivity and increases costs associated with turnover and absenteeism (Schaufeli & Bakker, 2004). In today's work environments, where the demands and pressures to meet goals are high, depersonalization has become an increasingly common issue, especially in professions with high emotional demands.

Analyzing the factors associated with depersonalization is essential for designing effective interventions that promote workplace well-being. However, most studies on this topic take descriptive approaches, limiting their ability to identify causal or predictive relationships among the variables involved. In this context, advanced statistical models, such as logistic regression analysis, provide deeper insights into the interactions between factors associated with burnout and the likelihood of experiencing depersonalization. This article addresses this issue by developing a binomial logistic model designed to predict the probability of medium or high levels of depersonalization among workers, using variables such as workplace relationships, years of service, level of personal accomplishment, and the presence of burnout. By offering robust predictive analysis, this model contributes not only to the theoretical understanding of the phenomenon but also to the implementation of preventive and corrective strategies in organizational settings.

Burnout syndrome, conceptualized by Maslach and Jackson (1981), encompasses three fundamental dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. Depersonalization, defined as a cynical and detached attitude toward individuals in the workplace, is particularly relevant in professions with high human interaction, such as education, healthcare, and social services (Schaufeli & Bakker, 2004). This dimension has been linked to significant deterioration in workplace relationships and increased organizational conflict.

Previous research has identified factors influencing depersonalization, highlighting burnout as a critical predictor. According to Leiter and Maslach (2005), emotional exhaustion amplifies the likelihood of developing depersonalized attitudes. On the other hand, positive workplace relationships have been shown to be a protective factor, significantly reducing the incidence of depersonalization (Taris et al.,

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2005). Additionally, years of service and level of personal accomplishment have also been identified as relevant variables, though their effects vary depending on the work context (Demerouti et al., 2001).

Despite these advancements, existing literature has limitations, such as the lack of robust predictive models that integrate multiple variables into the analysis of depersonalization. While descriptive and correlational studies exist, few have employed advanced statistical approaches, such as logistic regression, to explore the likelihood of depersonalization based on specific factors. This methodological gap underscores the need for research that combines a strong theoretical foundation with analytical tools capable of identifying predictive patterns.

This article responds to this need by developing a binomial logistic model to predict levels of depersonalization among workers. By considering key variables such as workplace relationships, years of service, and the presence of burnout, this study aims to contribute to a comprehensive understanding of the phenomenon and to the formulation of effective strategies for its prevention and management in organizational settings.

The primary objective of this study is to develop and evaluate a binomial logistic model capable of predicting levels of depersonalization among workers, classified into High/Medium and Low categories. This approach aims to identify the most relevant variables influencing depersonalization and quantify their impact, providing a robust analytical tool for designing intervention strategies in workplace settings.

This article is organized into five main sections. The first section presents the theoretical framework underlying the logistic model and its application in the analysis of depersonalization, highlighting key research in the field of burnout. The second section describes the methodology used, including variable definitions, model design, and statistical tests applied. The third section outlines the model's results, emphasizing the contributions of each variable and the overall model fit. The fourth section discusses the findings in relation to the theoretical framework and their practical implications for managing workplace well-being. Finally, the fifth section presents conclusions, study limitations, and recommendations for future research.

Theoretical Framework

Depersonalization as a Component of Burnout

Depersonalization is one of the three fundamental dimensions of burnout syndrome, a construct extensively studied in organizational psychology. According to Maslach and Jackson (1981), depersonalization is characterized by negative, detached, and cynical attitudes toward individuals in the workplace. This component primarily affects professionals who work in direct contact with others, such as teachers, healthcare personnel, and social workers, generating a negative impact on the quality of workplace relationships and organizational productivity (Schaufeli & Bakker, 2004).

The theoretical model of burnout posits that depersonalization is a defensive response to elevated levels of emotional exhaustion, where individuals emotionally distance themselves to cope with work pressure and demands. Leiter and Maslach (2005) suggest that this dimension reflects not only emotional disconnection but also a deterioration in work commitment and motivation, potentially contributing to a generalized decline in organizational performance.

Factors Related to Depersonalization

- **Workplace Relationships:** Positive workplace relationships have been identified as a protective factor against depersonalization. According to Taris et al. (2005), a collaborative and supportive work environment significantly reduces the likelihood of developing negative attitudes toward colleagues and clients. Conversely, conflictive relationships or lack of support increase the risk of burnout, particularly depersonalization.
- **Years of Service:** The duration of service within an organization or profession is also associated with depersonalization, though its effects vary. Demerouti et al. (2001) found that employees with longer tenure tend to develop more effective coping strategies, reducing burnout incidence. However, prolonged exposure to stressful work conditions can increase vulnerability to depersonalization in some cases.
- **Level of Personal Accomplishment:** Personal accomplishment, understood as the perception of achievement and satisfaction at work, inversely relates to depersonalization. Leiter and Maslach (2005) emphasize that individuals with high levels of personal accomplishment tend to exhibit greater resilience to burnout, while those with low personal accomplishment are more prone to adopting detached and cynical attitudes.
- **Burnout:** The relationship between burnout and depersonalization is direct and robust. Emotional exhaustion, a key dimension of burnout, acts as a precursor to depersonalization by depleting individuals' psychological resources (Maslach & Leiter, 2016). This link underscores the need for an integrated approach to addressing burnout to reduce the incidence of depersonalization.

Logistic Models in Predicting Depersonalization

Logistic regression is a widely used statistical technique for modeling relationships between a categorical dependent variable and one or more explanatory variables, which may be continuous or categorical. In the context of this study, depersonalization—classified into High/Medium and Low levels—is analyzed as a dependent variable using a binomial logistic model. This approach estimates the probability of belonging to a specific category based on individual characteristics and work environment factors (Hosmer et al., 2013).

The binomial logistic model is expressed as follows:

$$\text{Logit}(P) = \ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

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Where:

- P : Probability of belonging to the High/Medium depersonalization category.
- β_0 : Intercept.
- $\beta_1, \beta_2, \dots, \beta_n$: Regression coefficients associated with explanatory variables $X_1, X_2, \dots, X_n$.

This model not only identifies which variables have a significant effect on depersonalization but also quantifies their impact through the interpretation of odds ratios (OR). Odds ratios represent the change in the likelihood of depersonalization for each additional unit of the explanatory variable, holding all other variables constant.

Applications of Logistic Models in Burnout Studies

Logistic models have been employed in various studies to analyze factors associated with burnout and its dimensions. For instance, Taris et al. (2005) used logistic analyses to demonstrate that positive workplace relationships significantly reduce the likelihood of depersonalization, while emotional exhaustion markedly increases it. Similarly, Demerouti et al. (2001) found that a lack of job resources and excessive demands are closely linked to a higher risk of burnout, including its manifestations of depersonalization.

This study applies a similar approach by integrating key variables, such as workplace relationships, years of service, level of personal accomplishment, and the presence of burnout, into a logistic model to predict levels of depersonalization. This approach not only confirms the relevance of these variables but also provides an analytical tool to identify workers at risk and design tailored interventions.

Advantages of the Logistic Approach

The logistic model offers several advantages in analyzing phenomena such as depersonalization:

- **Flexibility:** It allows for the inclusion of explanatory variables of different types, such as continuous (years of service) and categorical (level of personal accomplishment).
- **Intuitive Interpretation:** Odds ratios facilitate result interpretation, providing a direct measure of the impact of each variable on the likelihood of depersonalization.
- **Predictive Capacity:** Tools such as the ROC curve and the area under the curve (AUC) assess the model's ability to correctly classify individuals, ensuring analytical robustness.

Relevance of the Approach in Organizational Contexts

Applying logistic models in organizational settings enables companies to identify risk patterns associated with depersonalization and other dimensions of burnout. By quantifying the impact of factors such as workplace relationships and burnout levels, these tools provide valuable insights for designing preventive and corrective strategies that promote workplace well-being and reduce burnout-associated costs, such as absenteeism and staff turnover (Schaufeli & Bakker, 2004).

Methodology

Study Design

This study adopts an explanatory quantitative design based on a binomial logistic model, with the objective of analyzing the probabilities of developing medium or high levels of depersonalization as a function of various explanatory variables. This approach identifies factors associated with the phenomenon and quantifies their impact, providing valuable information for designing organizational interventions.

Population and Sample

The target population consists of workers from various sectors exposed to stress-related job performance situations. The sample, selected through purposive non-probability sampling, includes 250 participants who completed a structured questionnaire designed to assess burnout dimensions and associated variables. Participants were classified into two depersonalization categories: High/Medium and Low, based on criteria previously established in the literature (Maslach & Jackson, 1981).

Study Variables

- **Dependent Variable:**
 - **Depersonalization:** Classified as High/Medium (1) and Low (0) according to results from the burnout questionnaire.

- **Independent Variables:**

1. **Workplace Relationships:** Evaluated using an ordinal scale measuring perceptions of workplace support and collaboration.
2. **Years of Service:** Measured in years.
3. **Level of Personal Accomplishment:** Classified as High, Medium, and Low, based on perceptions of achievement and job satisfaction.
4. **Presence of Burnout:** A categorical variable indicating whether the participant exhibits significant symptoms of emotional exhaustion.
5. **Professional Level:** Classified into three categories: Basic, Intermediate, and Advanced.

Statistical Model

The binomial logistic model used in this study is formulated as follows:

$$\text{Logit}(P) = \ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n$$

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Where:

- PP: Probability of belonging to the High/Medium depersonalization category.
- β_0 : Intercept.
- $\beta_1, \beta_2, \dots, \beta_n$: Regression coefficients associated with the explanatory variables $X_1, X_2, \dots, X_n$.

Procedure

- **Data Collection:** A structured questionnaire was used, including the Maslach and Jackson (1981) burnout scale and measures of the independent variables. Data were collected both in-person and online, ensuring participant confidentiality.
- **Preliminary Analysis:** Descriptive analyses and normality tests were conducted for continuous variables. Correlation tests were also applied to identify potential relationships among explanatory variables.
- **Logistic Model Estimation:** The logistic model was estimated using specialized statistical software. Regression coefficients were interpreted through odds ratios (OR), indicating changes in the probability of depersonalization for each additional unit of the explanatory variable.
- **Model Validation:** Model validity was assessed using:
 - **ROC Curve:** To measure the model's predictive capacity (AUC).
 - **Goodness-of-Fit Tests:** Such as the Hosmer-Lemeshow test.
 - **Residual Analysis:** To check for the absence of significant outliers.

Diagnostic Tests

- **Linearity in the Logit:** Evaluated using residual plots and interaction analyses between continuous variables and their logarithmic transformations.
- **Multicollinearity:** The Variance Inflation Factor (VIF) was calculated to ensure no strong correlations existed among the independent variables.
- **Independence of Errors:** Verified using the Durbin-Watson statistic.
- **Goodness of Fit:** The Hosmer-Lemeshow test confirmed that the model fits the data adequately.

Aquí tienes la traducción de la sección **Discusión:**

Discussion

Interpretation of Results

The findings of this study confirm that depersonalization is significantly influenced by both workplace and personal factors, aligning with previous research (Maslach & Jackson, 1981; Schaufeli & Bakker, 2004). In particular, negative workplace relationships and the presence of burnout emerged as the most robust predictors, with a significant impact on the likelihood of developing medium or high levels of depersonalization. These results highlight the importance of addressing the work environment and stress management as key elements in preventing burnout.

The protective effect of personal accomplishment reinforces the importance of fostering a positive perception of achievement and satisfaction at work. This finding is consistent with studies such as those by Leiter and Maslach (2005), which suggest that high levels of personal accomplishment act as a buffer against work-related stress. Additionally, years of service, although presenting a smaller impact, were associated with a lower likelihood of depersonalization, potentially reflecting the development of more effective coping strategies with accumulated experience.

On the other hand, the intermediate professional level, which showed a positive relationship with depersonalization, may be linked to higher expectations and demands compared to basic levels. This finding underscores the need to explore how job responsibilities and workload perceptions vary across hierarchical levels.

Comparison with Previous Studies

This study aligns with research identifying workplace relationships and burnout as critical factors in depersonalization (Taris et al., 2005; Demerouti et al., 2001). However, it offers a novel approach by quantifying these effects through a logistic model and including professional level as an explanatory variable. Compared to descriptive studies, this predictive approach allows for a more detailed and applicable understanding of the phenomenon, providing a foundation for targeted interventions.

Practical Implications

The results have direct implications for organizational management and workplace well-being. First, improving workplace relationships should be a priority to reduce the incidence of depersonalization. Strategies such as promoting a positive work climate, mediating conflicts, and fostering teamwork can be particularly effective. Second, addressing burnout through stress management programs, mindfulness workshops, and work-life balance policies can significantly contribute to reducing depersonalized attitudes.

Furthermore, fostering high levels of personal accomplishment through recognition programs, professional development opportunities, and positive feedback can strengthen workers' resilience to depersonalization. Finally, the results suggest the need to pay attention to the specific demands of intermediate professional levels, where employees may face greater pressure and expectations.

Conclusions

This study demonstrates that depersonalization, as a key dimension of burnout syndrome, is significantly influenced by both workplace and personal factors. The findings of the binomial logistic model indicate that negative workplace relationships and the presence of burnout are the primary predictors of depersonalization, while years of service and personal accomplishment act as protective factors. These results underscore the importance of addressing the work environment and implementing stress management strategies as priorities for preventing depersonalization.

Personal accomplishment, highlighted as a significant protective element, emphasizes the role of interventions that promote achievement and satisfaction at work. Recognition programs, positive feedback, and professional development opportunities can strengthen workers' resilience and reduce depersonalized attitudes. Additionally, the finding that intermediate professional levels are more likely to experience depersonalization suggests the importance of tailoring intervention strategies to the specific needs of each hierarchical level.

Methodological Contributions

The use of a logistic model in this study not only identified the most relevant factors associated with depersonalization but also quantified their impact and validated the predictive capacity of the model. This provides a robust analytical framework for future research exploring similar phenomena in other work contexts.

Limitations and Future Research

Among the limitations of this study is the use of a purposive non-probability sampling method, which restricts the generalizability of the results. Additionally, the cross-sectional design prevents establishing definitive causal relationships. Future studies could adopt longitudinal designs and more representative samples to further understand the dynamics of depersonalization. It is also suggested to explore the impact of additional factors, such as intrinsic motivation, leadership styles, and work-life balance, on the likelihood of depersonalization.

In conclusion, this study contributes to the understanding of depersonalization by integrating key variables into a robust predictive model, providing valuable insights for designing organizational strategies that promote workplace well-being and mitigate the negative effects of burnout on workers.

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