

The Impact of Workplace Ostracism on Mechanistic Organizational Dehumanization Among Design Engineering Sector Employees : The Role of Mechanistic Self-Dehumanization on Employee Robotization

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Abstract—The determination of this research is to examine the influence of workplace ostracism on mechanistic organizational dehumanization among design engineering sector employees and the mediating role of self dehumanization. A quantitative cross-sectional and correlational design with mediation analysis was done among design engineering employees of age range between 30 to 40 years from various organisations of trivandrum and ernakulam districts of kerala through simple random sampling method. Here more emphasis is given to the mechanistic aspects of dehumanization rather than the animalistic aspects because the design engineering sector is more focused on the technical aspects of work .This investigation makes an important contribution by highlighting the underlying mechanisms through which workplace ostracism can lead to mechanistic organizational dehumanization and the mediating process of mechanistic self dehumanization that employees undergo and also the mediation of mechanistic organisational dehumanization in the relationship between workplace ostracism and mechanistic self dehumanization. The importance of this study is that it explores the psychological impact of workplace ostracism on employees and how it can lead to mechanistic dehumanization within the organization. Overall findings suggest that there is a significant positive influence of workplace ostracism towards mechanistic organizational dehumanization, further mechanistic self dehumanization significantly mediates the relationship between workplace ostracism and mechanistic organizational dehumanization, moreover mechanistic organizational dehumanization significantly mediates the relationship between workplace ostracism and mechanistic self dehumanization. These results highlight the ostracism and dehumanizing tendency in workers that has devastating effects on workplace wellbeing and employee mental health.

Keywords: Workplace Ostracism, Mechanistic Organizational Dehumanization, Self Dehumanization, Design Engineering.

I. INTRODUCTION

This research investigates whether experiencing workplace ostracism is positively related to employees perceptions of Mechanistic organizational dehumanization, and the mediating role of self dehumanization on employee robotization as well as its consequences for both employees and organizations. In this research study design engineering employees are taken as a population. The design engineering sector, characterized by its demanding nature and focus on innovation, often necessitates intense collaboration and teamwork. Within this context, the phenomenon of workplace ostracism – the act of ignoring and excluding an individual or group – can have profound consequences. This research investigates the impact of workplace ostracism on mechanistic organizational dehumanization, specifically within the design engineering sector. Mechanistic dehumanization refers to the perception of individuals within an organization as mere instruments or cogs in a machine, devoid of unique human qualities and emotions. We argue that experiencing ostracism can lead individuals to internalize a dehumanized view of themselves (self-dehumanization), which subsequently extends to their perception of the organization as a whole. This study explores the mediating role of self-dehumanization in the relationship between workplace ostracism and mechanistic organizational dehumanization. By understanding this process, we aim to shed light on the detrimental effects of ostracism in this critical sector and inform interventions aimed at fostering a more inclusive and human work environment.

II. REVIEW OF LITERATURE

Sudhir Chandra Das and Deepmala Ekka (2024), conducted a study on Workplace Ostracism and Turnover Intention in Organizations: A Meta-analytic Review, Workplace ostracism (WO) poses a significant threat to organizational wellbeing, with implications for employee turnover intention (TI).

Sanket Dash, Sushant Ranjan, Neha Bhardwaj, Siddhartha K. Rastogi (2024), conducted a study on Workplace ostracism: a qualitative enquiry, The study aims to understand the phenomenon of workplace ostracism from multiple perspectives (target, perpetrator and observer).

Noemie Brison , Gaetane Caesens (2023), conducted a study on The Relationship Between Workplace Ostracism and Organizational Dehumanization: The Role of Need to Belong and its Outcomes, This research investigates whether experiencing workplace ostracism is positively related to employees' perceptions of organizational dehumanization, and examines one underlying mechanism of this relationship (i.e., thwarted need to belong), as well as its consequences for both employees and organizations.

Aisha Sarwar, Lakhi Muhammad (2020), conducted a study on Impact of Organizational Dehumanization on Employee Perceptions of Mistreatment and their Work Outcomes, This research investigates when and why organizational dehumanization leads to employees perceptions of workplace mistreatment, deviant work behaviors and decreased performance.

III. RESEARCH OBJECTIVES

1. To investigate the relationship between workplace ostracism and mechanistic organizational dehumanization among design engineering sector employees.
2. To determine the mediating role of self-dehumanization in the relationship between workplace ostracism and mechanistic organizational dehumanization.
3. To determine Mechanistic aspects of organizational dehumanization in the relationship between workplace ostracism and mechanistic self-dehumanization

IV. RESEARCH METHODOLOGY

A. RESEARCH DESIGN

Quantitative cross-sectional and correlational design is used to analyze the relationships between workplace ostracism, self-dehumanization, and mechanistic organizational dehumanization among employees in the design engineering sector. This approach is particularly suitable for examining complex relationships and mediating effects, as it allows for the simultaneous assessment of multiple variables and their interconnections

B. SAMPLING DESIGN

1. Population: Design engineering employees from various organizations to ensure a diverse representation of experiences related to workplace ostracism
2. Sample Size: A total of 60 design engineering employees. The sample size is appropriate for generalizable insights, given the target population.
3. Sampling Technique: A Simple random sampling technique was employed to select participants, ensuring that different subgroups within the design engineering sector were adequately represented.
4. Source of Data: Primary data is used ,Primary data are those which are collected for the first time and further they happen to be original in nature. Primary data are collected through questionnaires.

V. DATA ANALYSIS AND INTERPRETATION

The collected data will be analyzed using 'Hayes Process Macro (Hayes, 2022)' and SPSS For mediation analysis and further pearson correlation analysis, Apart from this appropriate statistical tools will be used for the processing of the raw data to reach the objectives of the study

a. INTERPRETATION OF H1

The descriptive statistics indicate that Workplace Ostracism has a mean of 38.50 and with a standard deviation of 14.04, while mechanistic organisational dehumanisation has a mean of 51.80 with a standard deviation of 10.55. The sample size for both variables is 60. Pearson correlation analysis reveals a significant positive correlation between workplace ostracism and mechanistic organisational dehumanisation ($r = .413$ and $p = .001$). This suggests that higher levels of workplace ostracism are linked with increased perceptions of organizational dehumanization and the correlation is statistically significant at the $p < .01$ level, indicating strong evidence against the null hypothesis.

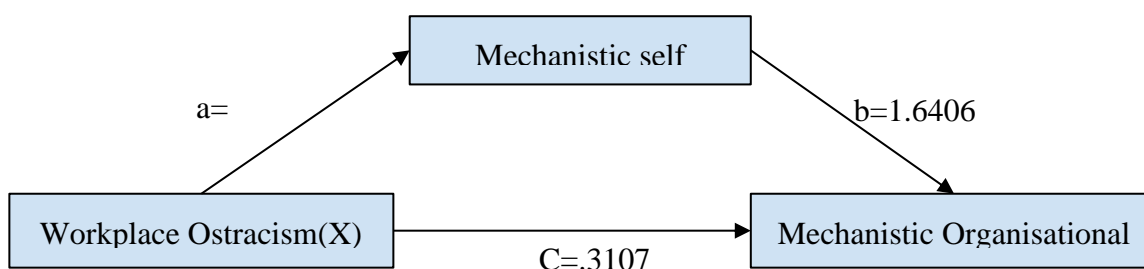
b. INTERPRETATION OF H2

A mediation analysis is conducted and investigated using PROCESS Model 4 (Hayes, 2022) to further examine the relationship between Workplace Ostracism and Organizational Dehumanization, with Self-Dehumanization as a mediator in between and the analysis was based on a sample size of $N = 60$.

For investigating the mechanistic self-dehumanization as a mediator and its significance, workplace ostracism significantly predicts mechanistic self dehumanisation ($B = 0.3022$, $SE = 0.0408$, $t = 7.4038$, $p < .001$) and the model explained 48.59% of the variance ($R^2 = .4859$, $F(1, 58) = 54.82$, $p < .001$) further the standardized regression coefficient for workplace ostracism was $\beta = .6971$, indicating a strong positive relationship between workplace ostracism and mechanistic self dehumanisation.

For investigating the mechanistic Organizational Dehumanization as a mediator in between and its significance, mechanistic self dehumanisation significantly predicts mechanistic organisational dehumanisation ($B = 1.6406$, $SE = 0.1944$, $t = 8.4376$, $p < .001$), However, the direct effect of workplace ostracism on mechanistic organisational dehumanisation is negative and significant ($B = -0.1851$, $SE = 0.0843$, $t = -2.1955$, $p = .0322$) and The model explained 63.14% of the variance ($R^2 = .6314$, $F(2, 57) = 48.81$, $p < .001$) further The standardized coefficients show that workplace ostracism has a negative direct effect on mechanistic organisational dehumanisation ($\beta = -0.2463$), while mechanistic self dehumanisation strongly predicts mechanistic organisational dehumanisation ($\beta = 0.9464$).

Conceptual Framework-1



Total effect of workplace ostracism on mechanistic organisational dehumanisation: $B = 0.3107$, $SE = 0.0899$, $t = 3.4578$, $p = .001$, indicating that without considering the mediator, workplace ostracism has a positive and significant relationship with organizational dehumanization and Direct effect of workplace

ostracism on mechanistic organisational dehumanisation: $B = -0.1851$, $SE = 0.0843$, $t = -2.1955$, $p = .0322$, suggesting that once self-dehumanization is accounted for, the direct effect becomes negative further Indirect effect of workplace ostracism on mechanistic organisational dehumanisation through mechanistic self dehumanisation: $B = 0.4958$, $BootSE = 0.1098$, 95% CI [0.2994, 0.7351], confirming a significant mediation effect and completely standardized indirect effect was $\beta = 0.6597$, further supporting the role of self-dehumanization as a strong mediator.

Table 1: Total, Direct, and Indirect Effects of X on Y of H2

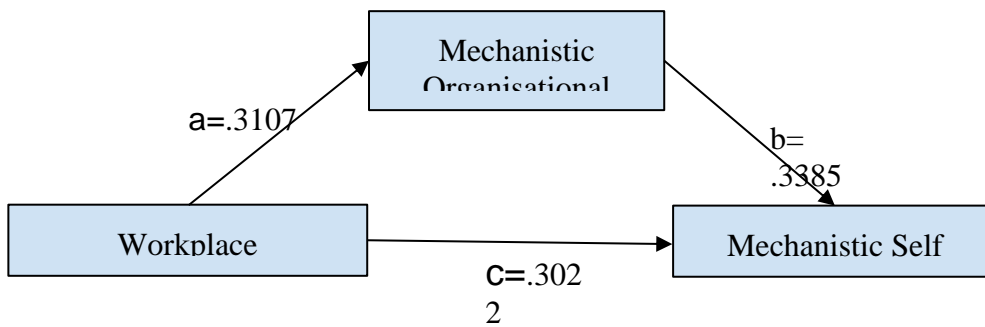
Effect Type	Effect	SE	t	p	LLCI	ULCI	Standardized Effect
Total Effect of X on Y	0.3107	0.0899	3.4578	.0010	0.1308	0.4906	0.4134
Direct Effect of X on Y	-0.1851	0.0843	-2.1955	.0322	-0.3539	-0.0163	-0.2463
Indirect Effect(s) of X on Y							
<i>Unstandardized Indirect Effect</i>	0.4958	0.1098	-	-	0.2994	0.7351	-
<i>Completely Standardized Indirect Effect</i>	0.6597	0.1215	-	-	0.4357	0.9329	-

c. INTERPRETATION OF H3

For hypothesis 3, considering mechanistic organisational dehumanisation as a mediation and workplace ostracism significantly predicts mechanistic organisational dehumanisation ($B = 0.3107$, $SE = 0.0899$, $t = 3.4578$, $p = .0010$) further explained 17.09% of the variance in mechanistic organisational dehumanisation ($R^2 = .1709$, $F(1, 58) = 11.96$, $p < .001$) and the standardized regression coefficient for workplace ostracism was $\beta = 0.4134$, indicating a moderate positive relationship between workplace ostracism and mechanistic organisational dehumanisation.

For Mechanistic self-dehumanization both workplace ostracism ($B = 0.1970$, $SE = 0.0302$, $t = 6.5341$, $p < .001$) and mechanistic organisational dehumanisation ($B = 0.3385$, $SE = 0.0401$, $t = 8.4376$, $p < .001$) significantly predict mechanistic self dehumanisation and further the model explained 77.14% of the variance in SDS ($R^2 = .7714$, $F(2, 57) = 96.17$, $p < .001$) and the standardized coefficients show that both workplace ostracism ($\beta = 0.4544$) and mechanistic organisational dehumanisation ($\beta = 0.5868$) are strong positive predictors of mechanistic self dehumanization.

Conceptual Framework-2



The total effect of workplace ostracism on mechanistic self dehumanisation is $B = 0.3022$, $SE = 0.0408$, $t = 7.4038$, $p < .001$, indicating a significant positive relationship between workplace ostracism and SDS and the direct effect of workplace ostracism on SDS: $B = 0.1970$, $SE = 0.0302$, $t = 6.5341$, $p < .001$, confirming a strong positive direct effect of workplace ostracism on mechanistic self dehumanisation further the Indirect effect of workplace ostracism on mechanistic organisational dehumanisation on mechanistic organisational dehumanisation: $B = 0.1052$, $BootSE = 0.0398$, 95% CI [0.0276, 0.1854] also indicating a significant mediation effect of mechanistic organisational dehumanisation moreover the completely standardized indirect effect is $\beta = 0.2426$, further supporting mechanistic organisational dehumanisation as a strong mediator in the relationship between workplace ostracism and mechanistic self dehumanisation.

Table 2 : H3 ,Total, Direct, and Indirect Effects of X on Y of H3

Effect Type	Effect	SE	t	p	LLCI	ULCI	Standardized Effect
Total Effect of X on Y	0.3022	0.0408	7.4038	.0000	0.2205	0.3839	0.6971
Direct Effect of X on Y	0.1970	0.0302	6.5341	.0000	0.1366	0.2574	0.4544
Indirect Effect(s) of X on Y							
<i>Unstandardized Indirect Effect</i>	0.1052	0.0398	-	-	0.0276	0.1854	-
<i>Completely Standardized Indirect Effect</i>	0.2426	0.0839	-	-	0.0684	0.4031	-

VI. FUTURE SUGGESTIONS

- Organizations should focus on reducing workplace ostracism to prevent its detrimental effects on employees' self-perception and workplace experience and further the intervention strategies aimed at fostering workplace inclusion and psychological well-being could mitigate the impact of workplace ostracism and for future research could examine potential moderators for example , organizational

support, leadership style, that might buffer the adverse effects of workplace ostracism.

- Future research could employ longitudinal designs to examine the causal relationships between workplace ostracism, self-dehumanization, and organizational dehumanization over time. This would provide a more nuanced understanding of the temporal dynamics of these constructs and further Incorporating qualitative methods, such as interviews or focus groups, could provide richer insights into the lived experiences of employees who experience workplace ostracism and dehumanization. This would help to understand the underlying mechanisms and contextual factors that contribute to these phenomena.
- Future research could explore other potential mediators or moderators in the relationship between workplace ostracism and dehumanization. For example, individual differences in resilience, coping strategies, or social support could influence the impact of ostracism and could also examine the animalistic aspects of dehumanization in the design engineering sector. This would provide a more comprehensive understanding of the different ways in which employees can be dehumanized in the workplace.
- Based on the findings of this study and future research, interventions could be developed to mitigate the negative effects of workplace ostracism and dehumanization. These interventions could focus on promoting inclusion, building positive relationships, and fostering a sense of belonging in the workplace

VII. CONCLUSION

The results from the analysis suggest that workplace ostracism is significantly related to mechanistic organizational dehumanization and employees who experience higher levels of workplace ostracism tend to perceive their organizations as more dehumanizing in nature. These findings highlight the importance of addressing workplace ostracism to mitigate its potential negative effects on employees perceptions of their work environment and the future research could explore potential mediators or moderators to better understand this relationship in an organisational context.

The results indicate that mechanistic self-dehumanization positively mediates the relationship between workplace ostracism and mechanistic organizational dehumanization and Initially the workplace ostracism has a significant positive total effect on mechanistic organizational dehumanization. However, when self-dehumanization is included in the model, the direct effect turns negative, suggesting that workplace ostracism primarily influences organizational dehumanization through self-dehumanization.

These findings suggest that employees who experience workplace ostracism may internalize mechanistic self-dehumanization, which in turn widens their perception of mechanistic organizational dehumanization. The negative direct effect implies that workplace ostracism alone does not directly cause mechanistic organizational dehumanization, but its effect is channeled through changes in employees' perception.

The results of the mediation analysis from 'Hayes process macro spss' indicate that mechanistic organisational dehumanisation partially mediates the relationship between workplace ostracism and mechanistic self-dehumanization. Specifically, workplace ostracism has a positive direct effect on mechanistic self-dehumanization. Additionally, mechanistic organisational dehumanisation plays a significant role as a mediator, with higher levels of workplace ostracism leading to increased perceptions of mechanistic organisational dehumanisation, which in turn leading to mechanistic self-dehumanization.

The total effect of workplace ostracism on mechanistic self dehumanisation is significant, with mechanistic organisational dehumanisation acting as an mediating factor that partially explains the relationship with other variables further the direct effect of workplace ostracism on mechanistic self dehumanisation remains significant even after accounting for mechanistic organisational dehumanisation, suggesting that both direct and indirect pathways influence self-dehumanization in the workplace.

VIII. REFERENCES

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