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Ethnic Discrimination and Workplace Productivity in Ghana's Manufacturing Sector: The Mediating Role of Psychological Health and Moderating Role of Self-Esteem

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ABSTRACT

This ongoing research examines the universal yet frequently overlooked phenomenon of workplace ethnic discrimination in Ghana, a determinant of organizational performance. It analyzes the influence of workplace discrimination based on ethnicity on Ghana's operational efficiency in the manufacturing industry, with a novel focus on psychological health as a mediator and self-esteem as a moderator. Theories like Social Identity Theory and Conservation of Resources are combined to examine the interaction among group identification, dynamic resource distribution, and workplace discrimination. The study analyzed survey data from 400 manufacturing employees in Accra using regression-based mediation and moderation modeling. Key findings reveal three significant contributions: (1) ethnic discrimination directly impacts workplace productivity ($\beta = -0.300, p < 0.01$); (2) psychological health partially mediates this relationship, explaining how discrimination harms productivity through employee psychological health (indirect effect = $-0.244, p < 0.005$); and (3) self-esteem buffers the negative impact on psychological health (interaction $\beta = 0.028, p < 0.05$), with high self-esteem employees showing greater resilience. These findings advance theoretical understanding by integrating identity-threat and resource-conservation mechanisms in a non-Western context. Practically, they show that manufacturing firms must move

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beyond symbolic diversity commitments to implement concrete reforms such as transparent promotion systems, inclusive leadership development, and workplace mental health support to protect both employees' well-being and organizational productivity. The study highlights the strategic importance of inclusive human resource practices, psychological health support, and an equitable promotion system for sustainable productivity in an ethnically diverse workplace.

Keywords: Ethnic Discrimination; Self-Esteem; Psychological Health; Workplace Productivity; Manufacturing Industry

1. Introduction

Over the past years, ethnic discrimination has long complicated economic development, with workplace manifestations presenting particular challenges for organizational productivity. Workplace productivity is the core of the research. In everyday life, discrimination occurs in educational institutions, public spaces, and workplaces. Among these, workplace discrimination erodes equality, stifles innovation, and sustainability^[1]. This study focuses specifically on how ethnic discrimination affects workplace productivity within Ghana's manufacturing sector, a context where ethnic diversity intersects with industrial performance in underexplored ways. Past research has explored the relationship between ethnic discrimination and Gross Domestic Product (GDP) per capita in various nations^[2].

Scholarly literature has consistently noted that countries with less competitive economies, such as most African countries, often stem from highly ethnically diverse societies where historical injustices, political disparities, or social stratification often intersect with contemporary workplace dynamics^[3-5]. However, integral diversity can yield significant benefits, such as driving innovation and creativity, improving decision-making, and broadening market networks^[6,7]. According to Umeh et al.^[8], mismanagement of diversity can lead to detrimental outcomes, including communication failures, severe psychological disorders, and reduced productivity. Despite diversity impacting innovation and work group performance, some research has not provided conclusive evidence to show ineffectiveness, likely due to varying methodologies, contextual differences, and factors specific to situations.

Empirical research by Yasin et al.^[9] has shown that developing nations with elevated ethnic diversity typically exhibit lower economic growth, occasioned by heightened social fragmentation, diluted trust, and substandard institutional quality. Another strand of literature carried out by Ozgen and Won et al.^[10,11] reported that linguistic diversity in the

workplace decreases productivity. The issue of this diversity remains contentious, as the relationship is non-linear: too much or too little can impede growth. At the same time, an intermediate level could yield optimal economic outcomes.

Building on prior work such as Awaworyi Churchill and Danquah^[12], which focuses on Ghana's high ethnic diversity (fractionalization index: 0.846), this research examines Ghana's ethnic landscape and its historical context in Africa. Analysis unveils significant socio-economic disparities rooted in regional and ethnic divisions, opening the urgency to treat the ethnic discrimination prudently, particularly within the critical manufacturing industry.

Ghana's manufacturing industry comprises a workforce with a multicultural background. These dynamics are especially salient given the sector's robust performance with a recording of 6.3% year-on-year growth in the fourth quarter of 2024 and contributing GH¢ 5.54 billion (in constant 2013 prices) to the national GDP during that period^[13]. This growth outpaces the broader industrial sector, which recorded only 0.2% growth in the same quarter, underscoring manufacturing's role in Ghana's economy. The industry's employment reflects the country's rich ethnic diversity, making it a key context for examining diversity-related challenges. The hierarchical nature of ethnic diversity has intensified conflicts over ethnic favoritism, in which individuals from the dominant group receive preferential treatment^[14] in hiring, wage disparities, and promotions^[14]. Dwomoh et al.^[15] reported that 59.1% of employees in Ghana experienced discrimination, particularly in recruitment, promotion, and compensation. Additionally, Barr and Oduro^[16] stated that ethnic minorities relegated to unskilled roles, lacking access to skill development opportunities, perpetuate cycles of underperformance. These overall findings illustrate the widespread discrimination in Ghana's working environment.

Another study by Opoku et al.^[17] extended the focus to psychological health, stating that it plays a crucial mediating role between Leader-Member Exchange (LMX) and employee

voice behavior. The research also places considerable value on creating a safe environment to encourage employee voices. Although researchers have investigated the nature of ethnic discrimination, employees' voices, and other factors that can impede organizational effectiveness, a significant research gap remains. That is, the psychological mechanism by which discrimination affects productivity in Ghana's manufacturing industry remains underdeveloped. Specifically, it is necessary to understand how discrimination impacts employees' psychological health and the role individual resources (e.g., self-esteem) play in moderating these effects.

In essence, the research synthesizes empirical findings on ethnic discrimination and its impact on organizational productivity, examining how these effects serve as direct economic influences and why closer scrutiny is required. By contrast, the research aims to narrow a critical gap by examining how perceived ethnic discrimination affects workplace productivity, with psychological health as a mediating factor and self-esteem as a moderating factor. All referred variables are identified by humans to impact human capital, weakening long-term economic growth.

This paper builds on two theoretical frameworks, namely, Social Identity Theory^[18] and Conservation of Resources Theory^[19]. The study frameworks would assess discrimination as a double psychological and structural stressor that depletes employee resources and finally impairs performance.

Exploring these psychological dynamics, the study would provide in-depth insights into the sunk costs of prejudice and strategies to enhance employee engagement, mental well-being, and productivity. Based thereon, the research seeks to answer the following research questions:

1. What is the impact of ethnic discrimination on organizational productivity within the manufacturing sector in Accra, Ghana?
2. How does employees' psychological health mediate the relationship between ethnic discrimination and organizational productivity in the manufacturing sector in Accra, Ghana?
3. How does self-esteem moderate the effect of ethnic discrimination on psychological health and workplace productivity?

This research aims to provide a new perspective on eth-

nic discrimination in Ghana's manufacturing industry, contributing to both theoretical advancements and practical strategies for the management of workplace diversity in African economies. Specifically, by integrating Social Identity Theory (SIT) and Conservation of Resources (COR) to elucidate the psychological mechanisms linking discrimination with productivity, moderated by self-esteem, the research proposes a nuanced extension of existing theoretical models to understanding beyond the direct effect of workplace discrimination, especially in a non-Western context. It sheds light on the role of individual psychological resources. It underscores the need for stronger policy guidance for HR practitioners, industry leaders, and government stakeholders committed to building equitable, high-performing organizations that balance economic growth with diversity and sustainability.

This paper is structured as follows. Section 2 would present the theoretical and conceptual frameworks of the studies and, more importantly, examine how these variables may be connected. Section 3 will lay out the methodology for collecting data for this study, which specifies the channels through which these variables are measured. Section 4 will detail the results from the collected data. Section 5 will lay out the discussion of the results in relation to the literature review provided in the previous chapter. Section 6 will provide the paper's conclusion, state any limitations, and offer additional recommendations.

2. Literature Review and Theoretical Background

2.1. Theoretical Background and Hypothesis Development

The integration of theoretical frameworks, including Social Identity Theory (SIT) and Conservation of Resources (COR) Theory, in the research has explained the relationship between ethnic discrimination and workplace productivity through self-esteem-moderated psychological mechanisms.

Social Identity Theory (SIT), developed by Tajfel et al.^[18], posits that individuals gain part of their self-esteem from group affiliation, such as ethnicity, which significantly influences their social behavior and self-perception within society. Within this framework, ethnic identity is described as a component of an individual's self-concept stemming from membership in an ethnic group, along with its values

and emotional attachment^[20]. This focus is important because the study examines diversity and potential workplace discrimination. SIT hypothesizes that individuals put effort into maintaining a positive social identity. By that, when an individual perceives that their ethnic identity is undervalued or rejected in the workplace, a common manifestation of ethnic discrimination, usually through in-group favoritism and out-group exclusion^[21], it threatens their self-worth. Mismanaged diversity can lead to anxiety, social withdrawal, and reduced performance.

Workplace discrimination can lead to anxiety, social withdrawal, and reduced performance^[22, 23]. In the Ghanaian context, it is important to understand these dynamics. Evidence from research in Ghana reports that ethnic minorities are less likely to be leaders despite being equally qualified, reinforcing the SIT concept^[24, 25].

Empirical research supports the SIT concept that perceived discrimination weakens psychological engagement. For instance, Goreis et al. and Hammond et al.^[22, 23] found that workplace discrimination is associated with stress and reduced work performance. Thrasher et al.^[26] associate workplace discrimination with high pressure and too much alcohol intake among ethnically diverse hospital staff, illustrating its direct impact on psychological health and job performance. Consequently, a strong ethnic identity can serve as the leading psychological resource. Subsequently, Cobb et al.^[27] and Smith and Silva^[28] emphasized the strong role of ethnic identity in cushioning these adverse impacts, improving resilience, and relieving stress caused by discrimination.

Conservation of Resources (COR) Theory, as proposed by Hobfoll^[19], complements SIT by conceptualizing discrimination as a resource drain that depletes employees' personal (self-efficacy, energy), social (support network), and structural resources (job security, career opportunities). Individuals with high self-esteem have a protective factor that helps them navigate challenging situations more effectively^[29]. Empirical research has substantiated that discrimination functions as a persistent stressor, systematically eroding critical employee resources, including cognitive vitality, intrinsic motivation, and social network capital. This resource-depletion cascade ultimately manifests as diminished occupational efficacy. A comprehensive meta-analysis by Schmitt et al.^[30] provides robust evidence that all forms of discrimination are inversely associated with indicators of psy-

chological health. Further corroborating this phenomenon, Shontee^[31] emphasized that individuals facing intersectional discrimination, especially black women in male-dominated fields, are compounded by exclusionary practices and heightened psychological distress. Ghana's manufacturing sector manifests persistent structural inequities by systematically concentrating ethnic minority workers in low-skilled occupational categories^[16]. This institutionalized stratification creates dual barriers: it obstructs career progression opportunities while simultaneously excluding these groups from innovation-centric workflows^[24]. Contrary to this pattern, when self-esteem is well developed through supportive organizational practices, it can lead to improved job performance and satisfaction^[32]. Ghana's ethnically diverse setting, with its potential for discrimination, requires a strategic focus on enhancing individual self-esteem and psychological health^[33].

The theoretical frameworks of SIT and COR demonstrate complementary explanatory power: SIT elucidates the identity-based distress and emotional turmoil triggered by discriminatory experiences, whereas COR delineates the subsequent erosion of both individual psychological reserves and organizational structural supports. Within this dynamic interplay, self-esteem functions as a pivotal moderator attenuating discrimination's adverse effects when robustly developed, yet exacerbating its impact when diminished^[34]. SIT explicitly addresses the cognitive and affective dimensions of workplace discrimination. At the same time, COR provides insight into the mechanisms by which these experiences deplete essential personal and systemic resources, thereby diminishing productivity.

Having outlined the theoretical foundations that link discrimination to productivity through identity threat and depletion of personal resources, the next step is to consider how these processes play out within the specific context of Ghana's manufacturing sector.

2.2. Forms and Impact of Ethnic Discrimination in Ghana's Manufacturing Industry

In Ghana, ethnic discrimination in the manufacturing industry runs through not only explicit but also subtle channels. These systemic disparities in the workplace happen across hiring and promotion opportunities, rule allocation, and several workplace cultural norms, which individual pre-

conceptions, institutionalized procedures, and structural imbalances actively perpetuate, thereby impairing workforce unity and productivity.

Direct and Indirect Forms of Ethnic Discrimination

Overt exclusionary practices in recruitment epitomize direct ethnic discrimination. Becker's^[35] theory of taste-based discrimination elucidates how employer preferences for specific ethnic groups supersede meritocratic principles.

A study conducted by Frimpong and Wolfs^[24] investigated how dominant groups occupy key roles among employees in Ghana's financial organizations (e.g., the Akan). This study found that the majority group disproportionately occupies most managerial positions, while hiring managers disqualify minority candidates despite their equal qualifications. This challenge in the study aligns with SIT^[18], which holds that in-group favoritism leads to occupational discrimination and maintains ethnic hierarchies.

Indirect discrimination also operates through organizational policies and informal norms that appear neutral but unjustly disadvantage the minority groups. For example, language requirements that privilege Akan speakers may restrict upward mobility for others. Phelps^[36] referred to statistical discrimination, as explained. It involves employers relying on group-based assumptions rather than individual merit. Statistical discrimination theory further explains how employers rely on group stereotypes rather than individual assessments. Lawson et al.^[37] found that Akans are commonly perceived as "trustworthy" and "entrepreneurial", while GA workers are labeled "lazy", Ewes "scheming", and North-erners "suited only for manual labor". These subjective perceptions influence informal decisions around promotions, trust, and leadership grooming.

Historically, rooted biases further reinforce current-day exclusion. Agbedra^[38] identified that colonial-era policies entrenched regional disparities by focusing on economic development in the southern part of Ghana and ignoring the northern regions, which were economically underdeveloped and undercapitalized. This historical legacy has perpetuated intergenerational disadvantages through limited educational access, restricted vocational training opportunities, and diminished labor market integration. As DiPrete and Eirich^[39] articulate, cumulative disadvantage emerges from the compounding of inequities over time, resulting in a labor market

where ethnic minorities are systematically relegated to low-skilled, precarious employment regardless of qualifications.

2.3. Ethnic Discrimination and Workplace Productivity

Ethnic discrimination can impair both psychological distress and institutionalized structural barriers, which erode productivity in the working environment. Although workplace diversity initiatives have led to positive outcomes for innovation and collaborative dynamics, unaddressed bias results in persistent workplace stress, employee withdrawal, and underemployment of skilled workers. This productivity impairment is grounded in the two theoretical models of the study: COR Theory^[19] and SIT^[18]. The constant discriminatory encounters by employees consume both mental and emotional energy that could otherwise be allocated to task performance, while diminishing attentional focus, problem-solving abilities, and intrinsic motivation. Additionally, exclusion from leadership development programs and mentorship opportunities stifles professional growth^[22]. Promotional bias, a practice perpetuated by structural inequalities, prevents capable individuals from advancing and underutilizes organizational talent. Based on Nunez-Smith et al.' study^[40], structural inequities simultaneously exacerbate these effects through institutionalized barriers, such as promotion discrimination, which systematically prevent qualified individuals from advancing in their careers. This circumstance results in untapped organizational talent pools despite their potential contributions. An illustration of this dynamic emerges from the U.S. healthcare sector, as shown by Nunez-Smith et al.^[40], where Black physicians experience discriminatory treatment patterns, mentorship deficits, and professional role misassignment. This exclusion by minority groups affects psychological assimilation, which precipitates heightened anxiety and diminished workplace involvement. These cognitive and affective responses directly compromise operational efficiency. The synergistic interaction between COR Theory's resource-depletion mechanisms and SIT's identity-threat effects culminates in team disengagement, intergroup mistrust, and lost opportunities for collaborative innovation and knowledge transfer.

Frimpong and Wolfs^[24] demonstrate how promotion-based discrimination exacerbates structural exclusion by systematically limiting career advancement for minority employ-

ees. Baidoe^[41] further justifies that workplace performance suffers measurable declines as a result of pervasive ethnic discrimination, reflecting biases in Ghanaian organizations. Also, Baidoe's^[41] research identifies ethnocentric cultural assumptions as key disruptors of team cohesion, fracturing communication channels, leading to a decline in trust, and hindering an effective community of working together. All in all, these pathways drive a feedback loop that stifles both creative innovation and operational effectiveness.

Additionally, studies with African organizational settings reinforce the importance of ethnic diversity to workplace outcomes. In South Africa, research examining cultural integrations in public sector organizations revealed that unresolved cultural conflict culminates in unfair career management practices and diminished collaboration capacity^[42]. The study emphasized the need to integrate diverse cultural frameworks such as Western liberal principles, Sino-centric values and indigenous Ubuntu perspectives. These integrations enhance employee development and organizational performance. Similarly, within Nigeria's federal university system, ethnicity and state of origin demonstrated significant effects on employee performance, with Igbo workers outperforming colleagues from other ethnic groups^[43]. These findings from Nigeria underscore that ethnic identity remains a salient organizational force requiring deliberate management attention.

H1. *Ethnic discrimination negatively impacts workplace productivity in Ghana's manufacturing industry.*

2.4. Impact of Ethnic Discrimination on Psychological Health in the Workplace

Psychological health acts as a determinant of workforce engagement, stress-coping mechanisms, and holistic operational efficiency^[44], encompassing emotional equilibrium, cognitive adaptability, and recognition of intrinsic value. This construct shapes how employees navigate occupational pressures, sustain output consistency, and foster collaborative relationships. According to the World Health Organization^[45], psychological health is a state in which individuals can realize their potential, identify and address life challenges, and contribute to societal growth.

In other words, a society that has a supportive organizational culture, inclusive decision-making structures, and

respectful cross-group interaction helps individuals' mental health fully bloom in the workplace. On the other hand, hostile workplaces, which perpetuate systemic biases and exclusion based on ethnic background, generate anxiety, professional exhaustion, absenteeism, and increased attrition. These outcomes directly compromise both individual efficacy and institutional service^[46]; others, all of which detrimentally impact workplace productivity^[22].

Goreis et al.^[22] explained that habitual discrimination exposure slowly erodes mental health resilience, impairing both task execution proficiency and interpersonal dynamics. Although it is a worldwide occurrence, the impact of ethnic discrimination on psychological health remains underexamined in Ghanaian organizational contexts. Dwomoh et al.^[15] noted that economic limitations usually force employees to tolerate discriminatory practices. This challenge reflects the societal normalization of discrimination.

However, such normalization fails to attenuate its effects. That is, discrimination in general systematically erodes trust, intensifies turnover intentions, and affects employees' performance^[47]. Proactive organizations that implement inclusive leadership paradigms and equitable policy frameworks demonstrate superior capacity to transform diversity into a competitive advantage rather than an organizational liability. Strategic reframing of ethnic stereotypes, such as reinterpreting the industriousness of Akans or the diligence of Ewes as organizational assets, can facilitate bias dismantlement and operationalize the "Ubuntu" philosophy of collective respect^[48].

Although psychological health helps explain how discrimination can influence productivity, the impact is not necessarily the same for everyone. Individual differences in self-esteem may shape how discrimination affects outcomes, a possibility that is explored in the next section.

Based on the mediating impact of psychological health on workplace productivity, the second hypothesis of the study is as follows:

H2. *Psychological health mediates the impact of ethnic discrimination and workplace productivity.*

2.5. Self-Esteem as the Moderating Variable

Self-esteem is a primary component of psychological health that protects individuals' cognitive appraisals, emo-

tional processing, and behavioral responses to external stressors, such as discrimination. Rosenberg's^[49] theoretical framework described that individuals with higher self-esteem show maximum resilience against psychological distress. Empirical research indicates that individuals with high self-esteem are more motivated to be creative, take proactive initiative, and achieve higher performance outcomes^[50]. In the organization, workers with high vigor and high-esteem are more likely to challenge discriminatory practices, seek support, and maintain performance.

Conversely, individuals with low self-esteem tend to internalize exclusionary experiences, which results in stress accumulation and performance deterioration, undermining the importance of self-esteem cultivation, especially among minority groups.

Cross-cultural studies conducted by Benner and Graham^[51] provided evidence of adverse effects on self-worth perception when discrimination occurs, with a heightened impact on minority populations. When individuals perceive their ethnic group as devalued within organizational hierarchies, it triggers identity threat responses manifest as anxiety, social withdrawal, and disengagement. Baidoo's^[41] study highlighted how ethnic discrimination in Ghanaian higher education institutions increases academic performance, increases psychological distress, and limits career development opportunities.

The moderating role of self-esteem in the discrimination-health relationship has been investigated in recent studies. For example, a 2024 study conducted among Hispanic young adults discovered that self-esteem significantly softened the association between ethnic discrimination and self-rated health, while resilience did not function similarly as a moderator^[52]. This finding is particularly instructive, as it implies that self-esteem possesses a unique protective factor distinct from other psychological resources.

Supporting this evidence, a longitudinal study involving Chinese college students also discovered that self-esteem helped explain how perceived discrimination influences behavior over a period of time. The research showed that self-compassion strengthened this relationship, which acts as a moderator in the process^[53]. The consistency in these findings across different cultural context builds a strong foundation in the theoretical argument that self-esteem serves as

an important psychological buffer against the impact that comes from discrimination.

Significantly, self-esteem is developed and cultivated through strategic interventions such as inclusive policy implementation, mentorship programs, and transparent performance evaluation systems. Organizations prioritizing self-worth enhancement among historically marginalized groups demonstrate greater capacity to build resilient, high-performing workforces.

The study derives its third hypothesis from this literature review.

H3. *Self-esteem moderates the relationship between ethnic discrimination and workplace productivity.*

2.6. Chapter Summary

Overall, the review highlights three main propositions. First, ethnic discrimination is expected to have a direct negative impact on workplace productivity (H1). Next, psychological health is proposed to mediate the relationship between ethnic discrimination and productivity (H2). Finally, self-esteem is anticipated to moderate the connection between discrimination and psychological health (H3). The conceptual framework has been displayed in **Figure 1**. The next section outlines the methodology used to empirically test these proposed hypotheses.

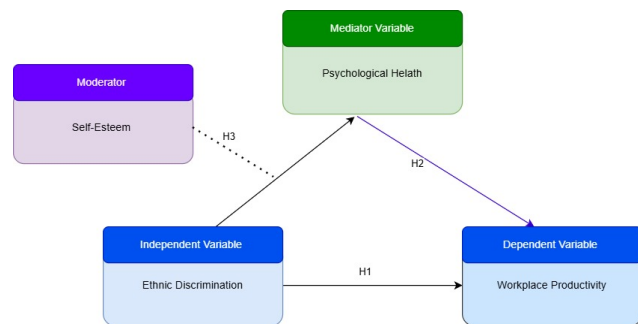


Figure 1. Hypothesis Conceptual Model.

3. Research Methodology

To investigate the evidence of ethnic discrimination and its effects on workplace productivity, this research employs a quantitative method. The primary analytical technique involves Regression Analysis conducted in SPSS to investigate direct and indirect relationships among the vari-

ables. The key constructs, including ethnic discrimination (ED), psychological health (PH), self-esteem (SE), and workplace productivity (OP), were examined using a structured questionnaire based on validated measurement tools. We collected responses via a five-point Likert scale. This approach enabled the study to test the hypothesis and identify employee experiences within Ghana's manufacturing sector. Structural Equation Modeling (SEM) was adopted to test for the direct effects of ethnic discrimination of workplace productivity and also to analyze mediation and moderation simultaneously and assess model fit. This method was appropriate for this study because it allows the examination of latent constructs and indirect pathways while accounting for measurement error.

3.1. Research Design and Approach

This study adopted a structured survey approach to collect data from employees in the manufacturing sector in Accra, an area known for its rich ethnic diversity^[54]. The manufacturing sector was selected for this study due to its prominence in Ghana's industrial landscape. Reports from the Ghana Investment Promotion Centre (2025)^[13] stated that the sector attracted the highest number of registered investment projects in Q4 2024 (66 out of 140 projects), accounting for US\$ 220.62 million in foreign direct investment. This makes it an ideal context for examining ethnic discrimination and its organizational consequences due to its high level of investment activity.

The manufacturing firms in Accra were identified through the Ghana Investment Promotion Centre (GIPC) directory of registered manufacturing companies. A stratified random sampling approach was employed, with strata based on firm size (small: 10–49 employees; medium: 50–249 employees; large: 250+ employees) and subsector (food processing, textiles, chemical, metals). Within each stratum, firms were randomly selected proportional to their representation in the directory. A total of 25 manufacturing firms were approached, of which 18 agreed to participate (72% firm participation rate).

The survey received positive engagement from respondents, achieving 400 valid responses through stratified sampling. This method ensured representation across diverse roles and ethnic groups, thereby strengthening the validity of the findings for Ghana's urban manufacturing workforce.

The design facilitates quantification of variable relationships and supports hypothesis testing.

3.2. Data Collection

The study used a structured electronic questionnaire, based on validated scales from the existing literature, to collect data on ethnic discrimination in the manufacturing sector. 550 employees were targeted across the 18 participating firms. After three follow-up reminders, 418 responses were received (79% response rate). After data cleaning, 18 responses were excluded due to extensive missing data (>15% incomplete). The final analytic sample comprised 400 valid responses. Missing data for the remaining cases were minimal (<2% per variable) and were handled using mean substitution, as Little's MCAR test indicated data were missing completely at random ($\chi^2 = 34.27$, $df = 28$, $p = 0.19$).

The instrument covered five key sections: Demographics, Ethnicity and Discrimination, Psychological Health, Self-Esteem, and Workplace Productivity. All variables were measured using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). Stratified sampling was adopted to ensure proportional representation across ethnic groups, job levels, and roles, age and highest education acquired. These demographic factors were theoretically expected to influence discrimination experiences and outcomes. Prior to full deployment, we conducted a pilot test of the questionnaires to ensure clarity and content validity. Internal consistency reliability was verified using Cronbach's alpha. We secured formal permission from participants and guaranteed their anonymity and confidentiality.

3.3. Measurement of Variables

Independent Variable (ED): The study assessed ethnic discrimination via the Everyday Discrimination Scale (EDS)^[55].

Mediator Variable (PH): The research team evaluated psychological health using the Depression, Anxiety, Stress Scale-21 (DASS21)^[56].

Dependent Variable (WP): Individual Work Performance Questionnaire (IWPQ)^[57].

Moderator Variable (SE): The research evaluated self-esteem using Rosenberg's Self-Esteem Scale^[49].

3.4. Ethical Considerations

Before data collection, the researchers obtained ethical clearance from the affiliated university. Partakers received clear information about the study’s objectives and potential risks, and provided voluntary electronic consent. Confidentiality and anonymity were guaranteed. Participation was entirely optional, and respondents could withdraw at any stage without consequences. The principal researcher securely protected the data in encrypted digital files, to which only they had access. This study adhered strictly to institutional ethical standards and applicable data protection regulations.

3.5. Endogeneity and Causal Validity

To address endogeneity risks, particularly reverse causality and omitted variable bias in regression models analyzing the impact of individual, organizational, and structural factors on discrimination experiences, the research integrated established theoretical frameworks, including Social Identity Theory and the Theory of Discrimination. These frameworks provided robust justification for hypothesized directional effects of systemic factors on discrimination outcomes. Omitted-variable bias (OVV) was further reduced by including control variables such as age, gender, educational level, and ethnic background. We conducted a Durbin-Wu-Hausman test to assess endogeneity in key independent variables. The results indicated no significant issues, thereby supporting the causal validity of the regression estimates.

3.6. Common Method Bias Assessment

Harman’s single-factor test was used to assess any potential common method bias because all variables were measured using self-reported questionnaires. All items measuring all variables were entered into an unrotated exploratory

factor analysis. The results revealed that a single factor accounted for 28.4% of the variance, which is well below the commonly recommended threshold of 50%, suggesting that common method bias is unlikely to substantially influence the findings.

In addition, the marker variable technique was employed by including a theoretically unrelated construct (social desirability) in the survey instrument. The marker variable exhibited negligible correlations with the primary study variables, providing further evidence that common method bias does not pose a significant threat to the validity of the results.

With the measurement and analytical procedures established, the next section presents the empirical results. It begins with a description of the sample characteristics and proceeds to the analysis of direct effects, followed by the mediation and moderation tests.

4. Results

4.1. Demographic Characteristics of Employees in Accra’s Manufacturing Industry

Table 1 presents the demographic information for respondents in Accra’s manufacturing sector, which offers contextual insights into the results on ethnic discrimination, psychological health, self-esteem, and workplace productivity.

Based on the gender Distribution in the collected data, the sample is mainly male (57.50%), with females accounting for 41.25% and a small proportion (1.25%) opting not to disclose gender. This indicates that the sector has a male-dominated workforce, with technical roles usually held by men. 52.50% of respondents were aged 25–34 years, followed by 35–44-year-olds with 23.75%. Smaller proportions of employees aged 45–54 (9.25%) and 55+ (4.25%).

Table 1. Demographic Characteristics of Respondents.

Category	Numbers	Percentage
Gender		
Female	165	41.25
Male	230	57.50
Prefer not to say	5	1.25
Age		
18–24	41	10.25
25–34	210	52.50

Table 1. Cont.

Category	Numbers	Percentage
Age		
35–44	95	23.75
45–54	37	9.25
55 and above	17	4.25
Level of Education		
PHD	28	7.00
Master's Degree	109	27.25
Bachelor's Degree	180	44.75
Diploma	18	4.75
High School	65	16.25
Ethnicity		
Akan	182	45.5
Asante-Krobo	3	0.75
Dagbani	4	1
Dagari	4	1
Dagati	1	0.25
Dagomba	3	0.75
Djerma	2	0.5
Ewe	89	22.25
Fante	6	1.5
GA	7	1.75
Ga-Adangbe	72	18
Grushie	3	0.75
Guan	3	0.75
Hausa	16	4
Kasina	2	0.5
Talensi	3	0.75
Current Position		
Entry-Level	126	31.5
Mid-Level	132	33
Senior-Level	97	24.25
Management Level	45	11.25

Source: Author's analysis.

Respondents showed high levels of formal education, with bachelor's degrees (44.75%), master's degrees (27.25%), and finally PhDs (7.00%). The presence of high school graduates (16.25%) and diploma holders (4.75%) adds educational diversity, thereby influencing perceptions of workplace hierarchy.

The sample reflected Ghana's ethnic diversity, with Akans (45.5%) as the largest group, followed by Ewes (22.25%) and then Ga-Adangbe (18.0%). Other ethnic groups are represented in smaller percentages. This industrial diversity provides a suitable ground for researching ethnic discrimination, with the dominant groups creating power imbalances that may impair well-being and productivity.

The majority of students held entry-level positions (31%), followed by mid-level positions (3.0%), with fewer in senior roles (24.25%) and management positions (11.25%).

4.2. Direct Impact of Ethnic Discrimination on Workplace Productivity

The results in **Table 2** present a regression analysis of the study that identifies the impact of ethnic discrimination and workplace productivity in the manufacturing organizations in Accra. The model displays high explanatory power, with R^2 of 0.420 and an adjusted R^2 of 0.412. The results signify that ethnic discrimination, psychological health, and self-esteem together explain approximately 42% of productivity variance. The model is supported by the overall significance test, with a p -value of 0.001, indicating its suitability for inference.

Workplace productivity underperformance is linked to ethnic discrimination to a large extent, indicating that the higher perceived ethnic discrimination among colleagues

lower their work performance in the manufacturing industry. Discriminatory practices, in the long run, impair organizational performance by eroding employee morale and reducing organizational commitment.

Table 2. Results Predicting Workplace Productivity.

Variable	Coefficient	Std.Error	t-Value	p-Value
Intercept	-0.147	0.231	-0.636	0.525
Ethnic Discrimination (ED)	-0.300	0.081	-3.70	0.007**
Psychological Health (PH)	0.165	0.073	2.249	0.025*
Self-Esteem (SE)	0.862	0.053	16.31	<0.001***
R ² [Adjusted R ²]	0.420 [0.412]			
F-statistic [p-value]	95.39 [<0.001]			

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
Source: Author's analysis.

Furthermore, **Table 2** shows that psychological health has a significant positive predictive effect on productivity at 5% significance level, signifying that employees with better psychological health generally exhibit higher work performance.

Next, the correlation between self-esteem and workplace productivity is highly significant at the 1% level. The result foregrounds the pivotal role of self-esteem in impacting employee job performance. Individuals with self-esteem tend to have greater confidence in their abilities, exhibit stronger motivation when executing tasks, and can confront workplace challenges.

In a nutshell, the results indicate that ethnic discrimination significantly reduces workplace productivity, which supports H1, while psychological health and self-esteem are positive factors that enhance employee performance.

4.3. Mediating Effect of Employees' Psychological Health on Workplace Productivity

The results on the mediating role of employee psychological health in the relationship between ethnic discrimination and workplace productivity, as illustrated in **Figure 2**, depict the direct, indirect, and mediating pathways among these variables.

Ethnic discrimination in **Figure 2** has a substantial and significant direct negative impact on employee psychological health, with $\beta (-0.42)$ and $p < 0.001$. This result supports H2 of the study, which explains how greater ethnic discrimination experientially damages workers' health. Hence, discriminatory treatment in the workplace not only poses social and ethical challenges but also is a major psychological stressor on psychological health.

The results also reveal that psychological health has a significant positive impact on workplace productivity with $\beta = 0.580$ and $p = 0.037$. Employees with higher psychological health status tend to achieve higher levels of productivity in the manufacturing industry. Moreover, by contrast, reduced psychological health dilutes employees' ability to perform efficiently, highlighting the importance of psychological health in the working environment.

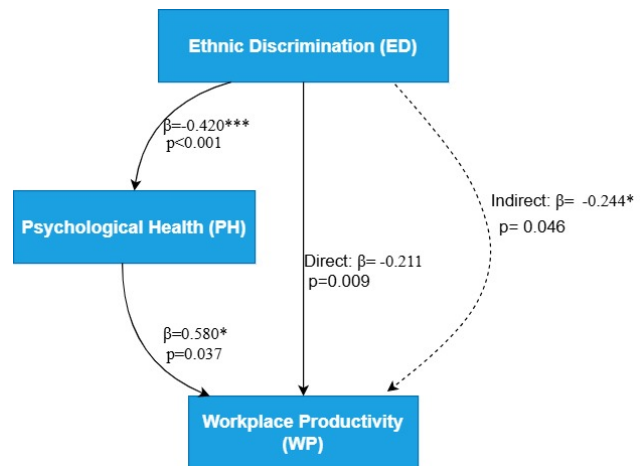


Figure 2. Mediation Model of Psychological Health in the Relationship between Ethnic Discrimination and Workplace Productivity.
Note: β = standardized coefficient. * $p < 0.05$, *** $p < 0.001$.

Importantly, as shown by the dashed pathway in **Figure 2**, the indirect effect with $\beta = -0.244$ and $p = 0.046$ of ethnic discrimination on workplace productivity through psychological health provides a partial effect. This evidence indicates that psychological health plays an important role in explaining how ethnic discrimination affects productivity, although it does not fully account for the relationship between these two variables. In other words, the negative impact of ethnic discrimination on productivity is partly caused by

harming employee psychological health, with a lasting effect operating through direct pathways.

In conclusion, the results presented in **Figure 2** affirm that employee psychological health partially mediates the relationship between ethnic discrimination and workplace productivity in the manufacturing industry of Accra, Ghana.

4.4. Moderating Effect of Employees' Self-Esteem on Workplace Productivity

This section examines the role of self-esteem as a moderator between ethnic discrimination and psychological health. Furthermore, how psychological health indirectly impacts workplace productivity.

Figure 2 shows that ethnic discrimination has a substantial negative impact on employee psychological health, with $\beta = -0.917$ and $p < 0.001$. The meaning behind these results highlights that greater ethnic discrimination exposure is significantly harmful to workers' psychological health.

Nevertheless, self-esteem, as a moderator, showed a positive impact on psychological health ($\beta = 0.094$, $p = 0.009$). This suggests that when an employee has higher self-esteem, they can better resist the harms of discrimination, becoming more resilient emotionally, more self-confident, and more flexible in coping with challenges, thereby maintaining better psychological health. Consequently, self-esteem is a vital personal resource that can enhance employees' psychological health.

To add to the usage of the pathway in **Figure 3**, the link term between ethnic discrimination and self-esteem has a positive and statistically significant effect on psychological health ($\beta = 0.028$, $p = 0.035$). This clearly confirms that self-esteem moderates the relationship between ethnic discrimination and psychological health and supports H3. Such positive figure interplay means that high levels of self-esteem in an individual can counteract the adverse effects of ethnic discrimination on psychological health. Simplistically, employees with stronger self-esteem are better able to ease their trauma connected with their experiences, therefore narrowing the extent to which such experiences impair their psychological health.

The results also show the psychological health role, as it has a significant positive impact on workplace productivity. This finding implies that employees with better psychological health status may generally yield more products or services.

For the most part, H3 has been answered and confirmed: that self-esteem of an individual significantly moderates the relationship between ethnic discrimination and employee psychological health, and that psychological health has a significant impact on workplace productivity. These findings highlight the importance of fostering psychological resources together with organizational efforts to address diversity.

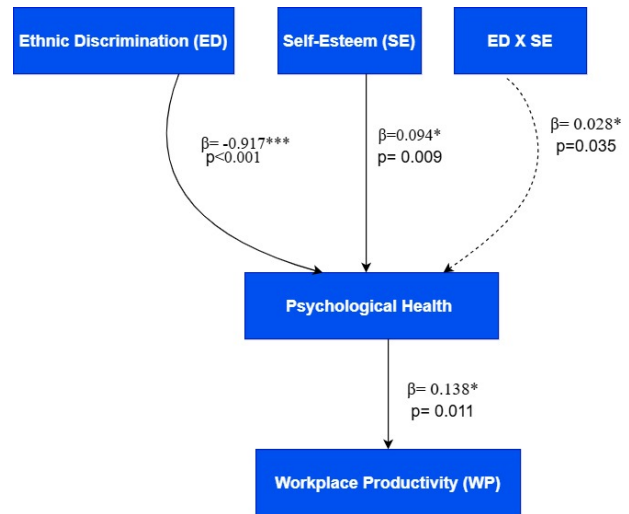


Figure 3. Moderating Effect of Employees' Self-Esteem.

Note: β = standardized coefficient. * $p < 0.05$, *** $p < 0.001$.

4.5. Model Diagnostics

A series of diagnostic tests was conducted to evaluate the adequacy of the mediating and moderating models depicted in **Figures 2** and **3**. These tests focused on measurement reliability, construct validity, and overall model fit, and the results are presented in Appendices A and B. The measurement models construct both research objectives, delivering perfect indicator reliability, with all observed items showing significant loading on their corresponding latent variables. This includes that the measurements of ethnic discrimination, psychological health, self-esteem, and workplace productivity are sufficiently precise.

Convergent validity was established for all constructs, as the age variance extracted (AVE) values exceeded the recommended minimum threshold of 50, and composite reliability values exceeded 0.70. These results indicate a high degree of internal consistency among the indicators. Despite the AVE for self-esteem being marginally below the recommended 0.50 threshold, the construct still demonstrated adequate convergent validity, given its high composite reliability.

bility ($CR > 0.70$). These findings confirm that the constructs used in the mediating and moderating analyses are both reliable and valid. Overall goodness-of-fit statistics further support the applicability of the estimated models. For the mediating model in **Figure 2**, the residual-based fit indices all fell within acceptable ranges, indicating minimal approximation error and a good reflection of the structure of the observed data. As reported in **Appendix A**, the structural diagnostic results are consistent with the diagram, confirming that ethnic discrimination has a statistically significant negative impact on psychological health, psychological health has a significant positive impact on workplace productivity, and ethnic discrimination still exerts a direct negative effect on productivity. These results support the partial mediation mechanism.

Similarly, the moderating model shown in **Figure 3** achieved satisfactory model fit, with incremental and absolute fit indices meeting the recommended thresholds. The diagnostic results reported in **Appendix B** confirm that ethnic discrimination has a significant direct negative impact on workplace productivity, self-esteem has a substantial positive impact on productivity, and the interaction effect is marginally significant. This indicates that self-esteem attenuates the adverse impact of ethnic discrimination on productivity. Thus, the diagnostic evidence provided in **Appendices A and B** offers strong empirical support for the mediating and moderating structures depicted in **Figures 2 and 3**, confirming that the estimated relationships are based on well-specified and statistically robust models suitable for inference in the context of Ghana's manufacturing industry.

At the end, having confirmed the statistical adequacy of the models, the discussion now turns to interpreting these findings in relation to the theoretical frameworks and prior research outlined earlier.

5. Discussion

5.1. Ethnic Discrimination and Workplace Productivity in Ghana's Manufacturing Industry

Ethnic discrimination in the manufacturing industry is not merely an interpersonal issue at the individual level but a structural condition that reshapes employees' perceptions of

fairness, belonging, and opportunity. Within the Ghanaian socio-industrial context, manufacturing companies heavily rely on manual labor, production line supervision, and informal coordination. Consequently, production depends not only on technical competence but also on social cohesion and mutual trust. When employees perceive that ethnic background influences management decisions, such as promotions, shift assignments, or supervisor favoritism, workplace outcomes are no longer interpreted as merit-based but instead characterized by group advantages and exclusion.

Such perception helps explain the negative relationship between ethnic discrimination and workplace productivity. Employees who believe reward are unfairly distributed are less motivated to exceed minimum job requirements and may withdraw psychologically and focus on self-protection. In manufacturing environments, these productivity losses often appear subtly through reduced collaboration, slower work rhythms, and higher error rates, rather than open conflict.

This pattern is highly consistent with Murugas and Maharaj^[58], who showed that exclusion erodes employee engagement by weakening organizational belonging. Similarly, Kuuyellah et al.^[59] observed that favoritism and unfairness in Ghanaian workplaces reduce morale and work engagement. This finding is relevant to the present research, as it demonstrates that perceptions of fairness and inclusion remain essential for productivity even in a technically driven environment.

From a theoretical perspective, this finding strongly supports Social Identity Theory^[60], which holds that individuals' sense of self-worth derives from their group membership. When workers perceive the devaluation his or her group, it poses a threat to self-esteem and motivation. This challenges the view that ethnicity is largely benign in Ghana because of the country's political stability^[61], which challenges the assumption that nationwide peaceful coexistence automatically translates into fair workplace treatment and that subtle forms of discrimination still persist in the workplace.

The managerial implications are significant. While manufacturing companies generally prioritize equipment upgrades, technical upgrades, and training to boost productivity, these investment returns may fall short of optimal levels if ethnic discrimination is unaddressed. Therefore, it is important to investigate ethnic discrimination as it is both

an ethical imperative and a strategic productivity consideration.

5.2. Psychological Health as a Mediating Mechanism between Ethnic Discrimination and Workplace Productivity

The structural model highlights the mediating role of employee psychological health. The empirical results indicate that ethnic discrimination significantly impairs workers' psychological health, which indirectly affects workplace productivity. Even after psychological health is included in the model, ethnic discrimination continues to exert a direct influence on productivity. This indicates that ethnic discrimination affects productivity both directly and indirectly through its impact on employee psychological health.

This relationship particularly relevant in Ghana's manufacturing industry, where work environments are marked by high physical demands, rigid production schedules, and limited psychosocial support. In such an environment, ethnic discrimination manifesting through exclusion from decision-making, biased management practices, or favoritism in task assignments is often internalized rather than open resistance. As a result, employees may experience psychological stress, emotional exhaustion, and diminished psychological health, which impair employees' focus, adaptability, and emotional adaptability and overall work performance.

The significant relationship between ethnic discrimination and psychological health suggests that bias operates as a chronic stressor rather than an isolated event. These findings are consistent with the Conservation of Resources Theory^[19], which explains stress as a result of threatened or depleted psychological resources. Ethnic discrimination experiences erode emotional stability, perceived fairness, and control, thereby reducing the psychological capacity that employees can devote to their work roles.

Furthermore, psychological health significantly predicts workplace productivity. Employees with better psychological health are more capable of maintaining focus, regulating emotions, and maintaining emotional balance under pressure, supporting prior evidence that discrimination-related distress undermines performance^[23, 26].

Moreover, the coexistence of a direct effect of ethnic discrimination on productivity indicates a partial mediation. This implies that ethnic discrimination reduces productivity

through additional pathways, such as reduced trust, weakened commitment, and perceptions of an unfair reward system.

From a management perspective, these findings highlight the need to address both the psychological and structural dimensions of workplace discrimination. Anti-discrimination policies must be complemented by psychological health support systems, inclusive management practices, and accessible grievance mechanisms.

5.3. Self-Esteem as a Moderator in the Ethnic Discrimination-Productivity Relationship

The moderating role of self-esteem is demonstrated by the statistically significant interaction between ethnic discrimination and self-esteem in predicting workers' psychological health. Rather than directly influencing workplace productivity, self-esteem shapes how discrimination affects the outcomes of discrimination. In this sense, self-esteem is a psychological buffer that alters the strength of the pathway through which discrimination translates into performance-related consequences.

Within Ghana's industry, this moderating effect is particularly relevant. Employees with higher self-esteem possess stronger confidence, a stable sense of self-worth, and resilience to emotions when faced with exclusionary treatment. By that, they are less likely to internalize discrimination as personal failure that may lead to deterioration in psychological health and a greater decline in productivity through the mediating pathway.

This result is also consistent with previous studies, such as Cobb et al., Smith and Silva^[27, 28], that state strong self-concept and identity resources can mitigate the psychological harm associated with discrimination. However, the present research extends this literature by demonstrating that self-esteem primarily exerts its effect by buffering psychological health rather than by directly protecting productivity. This distinction is important because it highlights psychological health as the key transmission mechanism linking discrimination to performance outcomes.

5.4. Theoretical Contributions and Novelty

This study makes several relevant contributions to existing scholarship. To begin, it extends Social Identity Theory

and Conservation Resources Theory by demonstrating how combined frameworks can explain workplace dynamics in a non-Western industrial setting. Basically, the finding confirms that identity threats, as described in Social Identity Theory, can initiate resource depletion processes consistent with COR Theory, ultimately leading to reduced employee productivity.

Furthermore, the second provided one of the first empirical examinations of psychological health as a mediating mechanism linking ethnic discrimination to productivity outcomes in Ghana's manufacturing sector.

To add up, the research identifies self-esteem as an important moderating factor that weakens the negative psychological effects of discrimination, which highlights self-esteem as a potential focus for organizational interventions aimed at protecting employee mental health and sustaining productivity.

Taken together, these contributions move beyond simple direct-effect explanations by clarifying the psychological processes through which workplace discrimination can influence performance outcomes.

6. Conclusions

Ethnic diversity can hold a strong potential for enhancing organizational performance if effectively managed in Ghana's workforce. This current study investigates the complex topic of ethnic discrimination, psychological health, self-esteem, and workplace productivity in Ghana's manufacturing industry. The research provides empirical evidence of the psychological and performance-related consequences of ethnic discrimination in a non-Western industrial context. Data collected from 400 manufacturing employees in Accra and guided by Social Identity Theory and Conservation of Resources Theory.

The findings indicate that ethnic discrimination undermines workplace productivity both directly and indirectly. Although overall perceived discrimination is relatively low, persistent disparities across minority ethnic groups reveal that national-level cohesion does not guarantee fair treatment within organizations. These challenges challenge the assumption that peaceful ethnic coexistence automatically translates into equity.

Furthermore, the findings integrate Social Identity and

Conservation of Resources theories to explain how identity threats and resource allocation operate. Practically, it urges Ghanaian manufacturers and policymakers to implement tangible reforms such as transparent promotions, inclusive leadership, and mental health support, moving beyond symbolic diversity commitments to foster dignity, well-being, and sustained productivity.

Theoretically, this study advances the literature by showing that ethnic discrimination affects productivity through two pathways: a direct pathway reflecting structural barriers and unfair treatment, and an indirect pathway operating through declines in psychological health. It also highlights the moderating role of self-esteem, indicating that employees' psychological resources can impact how strongly discrimination affects them. This insight has important implications for both theory and workplace practice and the need for organizations to move beyond symbolic diversity commitments.

Practically, evidence-based interventions are required. For example, implementing transparent promotion systems, non-discrimination policies, equal pay for equal work, and supporting work-life balance^[62]. Additionally, organizations should actively promote diversity, equity and inclusion (DEI) in hiring. This will encourage recruitment from diverse backgrounds and broaden the talent pool and improve organizational innovation and performance^[63].

Furthermore, regularly auditing HR data for ethnic disparities can help address structural barriers within organizations^[64]. These sustainable HR practices, which emphasize employee engagement and well-being, can help reduce turnover and strengthen overall organizational performance^[65].

Finally, organizations should develop clear and measurable selection criteria based on job requirements, where candidates are assessed based on their skills. Competencies and experiences rather than background. This would improve fairness and consistency in recruitment^[66].

Limitations and Future Research

Despite its contributions, this research has several important limitations. Challenge to the assumption of design limits definitive causal conclusions, and the reliability. Furthermore, measures may lead to underreporting of discrimi-

nation or distress due to social desirability bias, potentially explaining our relatively operational observations.

Secondly, the sample is drawn from manufacturing companies in Accra, which may limit the generalizability of the findings to other regions of Ghana or other industries, where workplace dynamics and ethnic relations could differ significantly.

Finally, while this research focuses on self-esteem as a key psychological moderating variable, it does so without examining other potential moderators, such as social support, leadership style, organizational justice, and diversity climate. Future research can adopt a broader multi-level design across diverse sectors to explore individual and organizational resources to better understand and mitigate discrepancies.

Author Contributions

Conceptualization, N.A.S. and X.G.L.; writing—original draft preparation, methodology, software and formal analysis, N.A.S.; investigation, V.A.O.; writing—review and editing, J. K.B., A.A.P. and K.J.N.; supervision, project administration, X.G.L.

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Institutional Review Board Statement

This study was approved by the Institutional Review Board of Taiyuan University of Technology. Ethical approval was obtained prior to data collection.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study. Participants were provided with clear information about the study’s objectives and potential risks, and provided voluntary electronic consent prior to completing the survey. Confidentiality and anonymity were guaranteed, and participants were informed of their right to withdraw at any stage without consequences.

Data Availability Statement

The data presented in this study are available upon request from the corresponding author. The data are not publicly available due to privacy and confidentiality restrictions, as the research involves sensitive information about workplace discrimination and psychological health.

Conflict of Interest

The authors have no conflicts of interest to disclose.

Appendix A. Structural Equation Modeling Results for the Mediation Analysis

Table A1. Structural Path Estimates for Mediation Model.

Path	Estimate	p-Value
ED → PH	-0.420	<0.001***
PW → WP	0.580	0.037*
ED → WP (Direct)	-0.211	0.009***
Effect Type		
Indirect Effect (ED → PW → WP)	-0.244	0.046*
Direct Effect (ED → WP)	-0.211	0.009**
Total Effect	-0.445	<0.001***

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
Source: Author’s analysis.

Table A2. Convergent Validity and Construct Reliability Statistics.

Construct	AVE	CR
Ethnic Discrimination (ED)	0.513	0.88
Psychological health (PW)	0.691	0.93
Workplace Productivity (WP)	0.522	0.859

Source: Author’s analysis.

Table A3. Model Fit Indices for Mediation Model.

Fit Index	Estimate	Threshold
χ^2/df	2.310	<3.000
Comparative Fit Index (CFI)	0.940	≥ 0.900
Tucker-Lewis Index (TLI)	0.920	≥ 0.900
RMSEA	0.058	≤ 0.080
SRMR	0.049	≤ 0.080

Source: Author's analysis.

Appendix B. Structural Equation Modeling Results for the Moderation Analysis

Table A4. Structural Path Estimates and Moderation Effect.

Path	Estimate	SE	z-Value	p-Value
ED → PH	-0.917	0.220	-3.390	<0.001***
SE → PH	0.094	0.036	2.610	0.009**
PH → WP	0.138	0.072	2.550	0.011**
Effect				
ED × SE → PH	0.028	0.050	2.110	0.035*

Source: Author's analysis.

Table A5. Convergent Validity and Construct Reliability Statistics.

Construct	AVE	CR
Ethnic Discrimination (ED)	0.513	0.88
Psychological Health (PH)	0.691	0.93
Self-Esteem (SE)	0.469	0.84
Workplace Productivity (WP)	0.522	0.859

Source: Author's analysis.

Table A6. Model Fit Indices for Moderation Model.

Fit Index	Estimate	Threshold
χ^2/df	2.310	<3.000
Comparative Fit Index (CFI)	0.940	≥ 0.900
Tucker-Lewis Index (TLI)	0.920	≥ 0.900
RMSEA	0.058	≤ 0.080
SRMR	0.049	≤ 0.080

Source: Author's analysis.

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