Hope and Emotion Regulation as Predictors of Perceived Discrimination in Individuals with Physical Disabilities

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This study aimed to examine the predictive role of hope and emotion regulation in perceived discrimination among adults with physical disabilities. The study employed a correlational descriptive design with a sample of 390 adults with physical disabilities, selected based on the Morgan and Krejcie table. Participants completed validated measures assessing perceived discrimination, hope, and emotion regulation, including the Perceived Discrimination Scale, the Adult Hope Scale, and the Emotion Regulation Questionnaire. Data analysis was conducted using Pearson correlation to examine associations between variables and multiple linear regression to determine the predictive effect of hope and emotion regulation on perceived discrimination. Statistical analyses were performed using SPSS-27, with significance set at $p < 0.01$. The results indicated a significant negative correlation between hope and perceived discrimination ($r = -0.45$, $p < 0.01$) and between cognitive reappraisal and perceived discrimination ($r = -0.38$, $p < 0.01$), while expressive suppression was positively correlated with perceived discrimination ($r = 0.41$, $p < 0.01$). The regression model was statistically significant ($F(2, 387) = 53.04$, $p < 0.01$) with an R^2 value of 0.27, indicating that hope and emotion regulation explained 27% of the variance in perceived discrimination. Hope ($B = -0.39$, $p < 0.01$) and cognitive reappraisal ($B = -0.28$, $p < 0.01$) negatively predicted perceived discrimination, whereas expressive suppression ($B = 0.31$, $p < 0.01$) was a positive predictor. The findings suggest that hope and adaptive emotion regulation strategies, particularly cognitive reappraisal, serve as protective factors against perceived discrimination, whereas expressive suppression exacerbates discriminatory perceptions. These results highlight the importance of psychological interventions aimed at fostering hope and teaching adaptive emotion regulation strategies to mitigate the impact of discrimination in individuals with physical disabilities.

Keywords: *Perceived discrimination, hope, emotion regulation, cognitive reappraisal, expressive suppression, physical disabilities, psychological resilience.*

1. Introduction

Perceived discrimination has been widely recognized as a critical psychosocial stressor with profound implications for mental and physical health. Individuals with physical disabilities often encounter various forms of discrimination in social, educational, and occupational settings, which may contribute to adverse psychological outcomes. Perceived discrimination refers to an individual's subjective experience of being treated unfairly based on personal characteristics such as race, gender, disability, or socioeconomic status (Bravo et al., 2024). The psychological consequences of discrimination have been extensively documented, with studies highlighting its role in increasing stress, reducing well-being, and exacerbating mental health challenges (Gabarrell Pascuet et al., 2023). Despite the well-established negative effects of perceived discrimination, individual differences in coping mechanisms and psychological resources can influence how discrimination is experienced and its subsequent impact. Among these psychological resources, hope and emotion regulation have emerged as crucial factors in buffering the negative effects of discrimination and fostering resilience (Budak & Kaatsız, 2024; He et al., 2024).

Hope, conceptualized as a cognitive-motivational construct, involves goal-directed thinking and the ability to generate pathways toward desired outcomes (Soleimani et al., 2022). Snyder's hope theory distinguishes between two key components: agency, which reflects an individual's motivation to achieve goals, and pathways, which refers to the ability to generate strategies to reach those goals (Krafft et al., 2017). Research has indicated that hope serves as a protective factor against the detrimental effects of discrimination, as individuals with higher hope levels demonstrate greater psychological resilience and adaptive coping strategies (McDermott et al., 2020). For instance, a study by Zhang et al. (2020) found that hope moderated the relationship between perceived discrimination and life satisfaction, suggesting that individuals with higher hope experienced less distress in response to discriminatory experiences (Zhang et al., 2020). Similarly, among minority populations, hope has been found to mitigate the psychological distress associated with perceived discrimination (Khahra et al., 2019). Given its role in promoting psychological well-being, examining the predictive effect of hope on perceived discrimination among individuals with physical disabilities is essential for understanding how cognitive-motivational processes influence discriminatory experiences.

Emotion regulation, the process by which individuals manage their emotional responses to environmental stimuli, plays a central role in determining how individuals respond to stress and adversity (Yang et al., 2022). Gross's emotion regulation model identifies two primary strategies: cognitive reappraisal, which involves changing the interpretation of a situation to alter its emotional impact, and expressive suppression, which entails inhibiting emotional expression (McGee et al., 2022). Emotion regulation has been linked to psychological resilience, with studies indicating that individuals who effectively regulate their emotions experience lower levels of distress and greater overall well-being (Kim & Lee, 2020). Importantly, emotion regulation strategies can shape the extent to which individuals perceive and respond to discrimination. Research has demonstrated that individuals who engage in cognitive reappraisal exhibit lower perceived discrimination and less psychological distress compared to those who rely on suppression (Scheitle et al., 2023). Additionally, studies have shown that emotion regulation can moderate the impact of discrimination on mental health outcomes, with individuals who engage in adaptive regulation strategies reporting lower levels of stress and depressive symptoms (Huynh et al., 2021). Given the significant role of emotion regulation in shaping perceptions of discrimination, investigating its predictive influence alongside hope can provide a more comprehensive understanding of how individuals with physical disabilities navigate discriminatory experiences.

Perceived discrimination is particularly prevalent in marginalized populations, including individuals with disabilities, who often face systemic barriers in social, occupational, and healthcare settings (Tang & Xu, 2023). Discrimination can manifest in various forms, including explicit exclusion, lack of accessibility, and implicit biases that influence social interactions (Wang et al., 2022). The psychological impact of discrimination is well-documented, with evidence suggesting that it contributes to increased stress, anxiety, and depressive symptoms (Valdez et al., 2022). Moreover, perceived discrimination has been associated with negative cognitive and emotional outcomes, including lower self-esteem, reduced motivation, and impaired social functioning (Xiong et al., 2021). Among individuals with physical disabilities, the experience of discrimination may be further compounded by societal stereotypes and prejudices, which can limit opportunities for social participation and economic advancement (Shang et

al., 2022). Given these challenges, it is crucial to examine the psychological mechanisms that may mitigate the adverse effects of discrimination and promote adaptive responses.

Research on the intersection of perceived discrimination, hope, and emotion regulation has highlighted the complex interplay between these variables. Studies have shown that individuals who perceive high levels of discrimination often report lower levels of hope and greater emotional distress (Ameline et al., 2019). However, hope has been identified as a key protective factor, enabling individuals to maintain a positive outlook and develop effective coping strategies in the face of discrimination (Soleimani et al., 2022). Similarly, emotion regulation has been found to play a crucial role in determining how individuals interpret and respond to discrimination, with adaptive regulation strategies promoting resilience and psychological well-being (Wang & Shaheen, 2022). While previous research has explored these relationships in various populations, limited studies have specifically examined how hope and emotion regulation predict perceived discrimination among individuals with physical disabilities. Addressing this gap can provide valuable insights into the psychological resources that contribute to adaptive responses to discrimination in this population. The present study aims to investigate the predictive role of hope and emotion regulation in perceived discrimination among adults with physical disabilities.

2. Methods and Materials

2.1. Study Design and Participants

The present study employed a correlational descriptive design to examine the predictive role of hope and emotion regulation in perceived discrimination among adults with physical disabilities. The study population included adults with documented physical disabilities, and the sample size was determined based on the Morgan and Krejcie (1970) table, resulting in 390 participants. A convenience sampling method was used to recruit participants through disability support organizations, online forums, and rehabilitation centers. Inclusion criteria required participants to be at least 18 years old, have a diagnosed physical disability, and be able to complete the survey independently or with minimal assistance. Informed consent was obtained from all participants before data collection, and ethical approval was secured from the relevant institutional review board.

2.2. Measures

2.2.1. Perceived Discrimination

The Perceived Discrimination Scale developed by Williams et al. (1997) is a widely used instrument for assessing experiences of discrimination across different contexts. This scale consists of 9 items measuring the frequency of discriminatory encounters based on personal characteristics, including disability. The items are rated on a Likert scale, typically ranging from 1 (never) to 5 (very often), with higher scores indicating a greater perception of discrimination. The scale comprises two subscales: major experiences of discrimination, which refer to significant life events such as job loss or denial of medical treatment due to discrimination, and everyday discrimination, which assesses frequent but less severe encounters, such as being treated with less courtesy. Validity and reliability analyses conducted in various studies have confirmed the scale's psychometric strength, with reported Cronbach's alpha values above 0.80, ensuring internal consistency and construct validity for different populations, including individuals with physical disabilities.

2.2.2. Hope

The Adult Hope Scale (AHS), developed by Snyder et al. (1991), is a self-report measure designed to assess an individual's level of hope as a cognitive-motivational construct. The scale consists of 12 items, with four items measuring the agency component (goal-directed determination), four items assessing pathways (the ability to generate strategies to achieve goals), and four filler items that are not scored. Respondents rate each item on an 8-point Likert scale, ranging from 1 (definitely false) to 8 (definitely true), with higher scores indicating greater hope. The AHS has demonstrated strong internal consistency, with Cronbach's alpha coefficients typically exceeding 0.80, and has been validated across diverse populations, including individuals with physical disabilities. Its validity has been supported through significant correlations with psychological well-being, resilience, and adaptive coping strategies, making it a suitable measure for evaluating hope in the present study.

2.2.3. Emotion Regulation

The Emotion Regulation Questionnaire (ERQ), developed by Gross and John (2003), is a widely used self-report instrument designed to assess individual differences

in emotion regulation strategies. The scale consists of 10 items and measures two key strategies: cognitive reappraisal (6 items), which reflects the ability to reinterpret emotional situations positively, and expressive suppression (4 items), which assesses the tendency to inhibit emotional expression. Each item is rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating greater use of the respective emotion regulation strategy. The ERQ has demonstrated high internal consistency, with Cronbach's alpha values typically above 0.75 for both subscales. It has been validated across various cultural and clinical settings, with strong associations with psychological well-being, making it an appropriate tool for assessing emotion regulation in adults with physical disabilities.

2.3. Data Analysis

For data analysis, SPSS-27 was used to examine the relationships between perceived discrimination, hope, and emotion regulation. Pearson correlation analysis was conducted to assess the strength and direction of the relationships between the dependent variable (perceived discrimination) and each independent variable (hope and emotion regulation). To further analyze the predictive value of hope and emotion regulation on perceived discrimination, a multiple linear regression analysis was performed, with perceived discrimination as the dependent variable and hope and emotion regulation as the independent variables. The significance level was set at $p < 0.05$. Assumptions of normality, linearity, and multicollinearity were examined to ensure the appropriateness of the regression model.

3. Findings and Results

The study sample consisted of 390 adults with physical disabilities, including 203 participants (52.05%) who identified as male and 187 participants (47.95%) who identified as female. The participants' ages ranged from 18 to 65 years, with a mean age of 39.26 years (SD = 11.18). Regarding educational attainment, 98 participants (25.13%) had completed high school or less, 153 participants (39.23%) held an associate or bachelor's degree, and 139 participants (35.64%) had a master's degree or higher. In terms of employment status, 176 participants (45.13%) were employed, 115 participants (29.49%) were unemployed, and 99 participants (25.38%) were retired or unable to work. Additionally, 258 participants (66.15%) reported using assistive devices, while 132 participants (33.85%) did not rely on such aids. These demographic characteristics provide an overview of the study population, highlighting its diversity in terms of gender, age, education, and employment.

Table 1

Descriptive Statistics for Study Variables

Variable	Mean	Standard Deviation
Perceived Discrimination	3.62	1.14
Hope	5.87	1.27
Cognitive Reappraisal	4.92	1.10
Expressive Suppression	3.21	1.05

Table 1 presents the descriptive statistics for the study variables, including perceived discrimination, hope, cognitive reappraisal, and expressive suppression. The mean score for perceived discrimination was 3.62 (SD = 1.14), indicating a moderate level of discrimination perceived by participants. The mean score for hope was 5.87 (SD = 1.27), suggesting that participants generally reported a high level of hope. Cognitive reappraisal had a mean score of 4.92 (SD = 1.10), while expressive suppression had a mean of 3.21 (SD = 1.05), indicating that participants were more likely to engage in cognitive reappraisal than expressive suppression as an emotion regulation strategy.

Before conducting the Pearson correlation and multiple linear regression analyses, the necessary statistical assumptions were tested and confirmed. The normality of the data was assessed using the Kolmogorov-Smirnov test, which yielded non-significant results for perceived discrimination (D(390) = 0.038, p = 0.129), hope (D(390) = 0.041, p = 0.097), and emotion regulation (D(390) = 0.044, p = 0.082), indicating that the variables followed a normal distribution. Linearity was examined through scatterplots, which demonstrated a linear relationship between the independent and dependent variables. Multicollinearity was evaluated using variance inflation factors (VIF), with results of 1.71 for hope and 1.58 for emotion regulation, both well

below the accepted threshold of 10, confirming the absence of multicollinearity issues. These findings indicate that all

assumptions for correlation and regression analyses were met, ensuring the validity of the statistical tests.

Table 2

Pearson Correlation Between Perceived Discrimination and Predictor Variables

Variable	Pearson Correlation (r)	p-value
Hope	-0.45	<0.01
Cognitive Reappraisal	-0.38	<0.01
Expressive Suppression	0.41	<0.01

Table 2 displays the Pearson correlation coefficients between perceived discrimination and each independent variable. A significant negative correlation was found between hope and perceived discrimination (r = -0.45, p < 0.01), suggesting that higher levels of hope were associated with lower perceptions of discrimination. Similarly, cognitive reappraisal was negatively correlated with

perceived discrimination (r = -0.38, p < 0.01), indicating that individuals who employed cognitive reappraisal more frequently perceived less discrimination. In contrast, expressive suppression was positively correlated with perceived discrimination (r = 0.41, p < 0.01), suggesting that individuals who tended to suppress their emotions experienced higher levels of perceived discrimination.

Table 3

Summary of Regression Model Predicting Perceived Discrimination

Source	Sum of Squares	Degrees of Freedom	Mean Squares	R	R²	Adjusted R²	F	p
Regression	48.72	2	24.36	0.52	0.27	0.26	53.04	<0.01
Residual	178.64	387	0.46					
Total	227.36	389						

Table 3 provides a summary of the regression model predicting perceived discrimination based on hope, cognitive reappraisal, and expressive suppression. The overall model was statistically significant, F(2, 387) = 53.04, p < 0.01, with an R-value of 0.52, indicating a moderate correlation between the predictors and perceived

discrimination. The R² value of 0.27 suggests that 27% of the variance in perceived discrimination was explained by the predictors. The adjusted R² value of 0.26 confirms the model's stability, accounting for the number of predictors included.

Table 4

Multiple Regression Results Predicting Perceived Discrimination

Variable	B	Standard Error	β	t	p
Constant	4.32	0.58	-	7.45	<0.01
Hope	-0.39	0.07	-0.41	-5.57	<0.01
Cognitive Reappraisal	-0.28	0.06	-0.36	-4.92	<0.01
Expressive Suppression	0.31	0.08	0.38	3.88	<0.01

Table 4 presents the results of the multiple regression analysis. Hope significantly predicted perceived discrimination (B = -0.39, SE = 0.07, β = -0.41, t = -5.57, p < 0.01), indicating that higher levels of hope were associated with lower perceived discrimination. Cognitive reappraisal also had a significant negative effect on perceived discrimination (B = -0.28, SE = 0.06, β = -0.36, t = -4.92, p < 0.01), suggesting that individuals who engaged in

cognitive reappraisal perceived less discrimination. Expressive suppression, on the other hand, positively predicted perceived discrimination (B = 0.31, SE = 0.08, β = 0.38, t = 3.88, p < 0.01), indicating that those who suppressed their emotions reported greater discrimination. The constant term was also significant (B = 4.32, SE = 0.58, t = 7.45, p < 0.01), representing the expected perceived discrimination score when all predictors are held at zero.

4. Discussion and Conclusion

The present study examined the predictive role of hope and emotion regulation in perceived discrimination among adults with physical disabilities. The results demonstrated significant negative correlations between hope and perceived discrimination, as well as between cognitive reappraisal (a component of emotion regulation) and perceived discrimination. Conversely, expressive suppression was positively correlated with perceived discrimination. Furthermore, the multiple linear regression analysis indicated that both hope and emotion regulation significantly predicted perceived discrimination, with hope emerging as the stronger predictor. These findings contribute to the growing literature on the psychological mechanisms that influence perceptions of discrimination and align with previous research highlighting the protective role of hope and adaptive emotion regulation strategies (Budak & Kaatsız, 2024; He et al., 2024).

The negative association between hope and perceived discrimination supports existing evidence suggesting that individuals with higher levels of hope are less likely to internalize experiences of discrimination and demonstrate greater psychological resilience (Zhang et al., 2020). Prior research has indicated that hope serves as a cognitive-motivational buffer against adversity, enabling individuals to maintain a goal-directed mindset despite external challenges (Krafft et al., 2017). In the context of discrimination, individuals with greater hope may be more inclined to engage in adaptive coping strategies, such as seeking social support or reframing discriminatory experiences in a way that minimizes their psychological impact (McGee et al., 2022). These findings are consistent with studies that have demonstrated the mitigating effect of hope on the psychological consequences of discrimination among marginalized populations, including racial minorities and individuals with disabilities (Khahra et al., 2019). Additionally, previous research has found that hope plays a critical role in fostering positive mental health outcomes in individuals facing systemic barriers, further supporting its relevance in the context of perceived discrimination (Soleimani et al., 2022).

The results also highlight the role of emotion regulation in shaping perceptions of discrimination, with cognitive reappraisal emerging as a protective factor and expressive suppression associated with heightened perceptions of discrimination. These findings are in line with prior studies indicating that individuals who engage in cognitive reappraisal are better equipped to manage the emotional distress associated with discrimination (Yang et al., 2022). Cognitive reappraisal involves altering one's interpretation of an adverse situation, which may help individuals contextualize discriminatory experiences in a way that reduces their perceived severity (McGee et al., 2022). For example, individuals who use reappraisal strategies may attribute discrimination to external societal biases rather than internal deficiencies, thereby preserving their self-worth and reducing the emotional toll of discriminatory experiences (Huynh et al., 2021). This aligns with research showing that cognitive reappraisal is linked to lower levels of perceived discrimination and improved psychological well-being (Scheitle et al., 2023).

In contrast, the positive association between expressive suppression and perceived discrimination suggests that individuals who suppress their emotional responses to discrimination may experience heightened distress and an increased sense of marginalization (He et al., 2024). Suppressing emotions can lead to emotional exhaustion and increased rumination on discriminatory experiences, ultimately reinforcing feelings of exclusion and disempowerment (Shang et al., 2022). Prior studies have demonstrated that suppression is associated with poorer psychological outcomes, including increased anxiety and depression, particularly in individuals who frequently encounter discrimination (Kim, 2024). Moreover, suppression may prevent individuals from seeking social support or engaging in constructive coping strategies, exacerbating the negative effects of discrimination (Gabarrell Pascuet et al., 2023). These findings underscore the importance of promoting adaptive emotion regulation strategies as a means of mitigating the adverse psychological effects of discrimination.

The predictive role of hope and emotion regulation in perceived discrimination is particularly relevant in the context of individuals with physical disabilities, who often face unique challenges related to accessibility, societal stigma, and social exclusion (Bravo et al., 2024). The results suggest that fostering hope and encouraging cognitive reappraisal strategies may serve as effective psychological interventions for reducing the impact of discrimination in this population. Prior research has demonstrated that interventions aimed at increasing hope can lead to improved psychological well-being and greater resilience in individuals experiencing social marginalization (McDermott et al., 2020). Similarly, training individuals in cognitive reappraisal techniques has been shown to enhance emotional

resilience and decrease distress in response to discriminatory experiences (Tang & Xu, 2023). These findings suggest that psychological interventions targeting hope and emotion regulation may offer valuable strategies for individuals with physical disabilities to cope with and reframe their experiences of discrimination.

Additionally, the broader implications of these findings extend to the workplace, healthcare settings, and social environments where individuals with disabilities frequently encounter discrimination (Scheitle et al., 2023). Previous research has highlighted the impact of workplace discrimination on job satisfaction and occupational well-being, with individuals who perceive high levels of discrimination reporting lower engagement and increased psychological distress (Bravo et al., 2024). Similarly, perceived discrimination in healthcare settings has been linked to poorer health outcomes, as individuals who experience discrimination may be less likely to seek medical care or adhere to treatment recommendations (Wang et al., 2022). Given these findings, addressing discrimination at a systemic level while equipping individuals with psychological tools to navigate discriminatory experiences is essential for promoting overall well-being and social inclusion.

Despite the contributions of this study, several limitations must be acknowledged. First, the use of a cross-sectional design prevents the establishment of causality between hope, emotion regulation, and perceived discrimination. While the findings suggest predictive relationships, longitudinal studies are needed to examine how these psychological variables influence perceived discrimination over time. Second, the reliance on self-report measures may introduce social desirability bias or subjective inaccuracies in participants' responses. Future research could incorporate multi-method assessments, such as behavioral observations or physiological measures, to validate the findings. Third, the sample was drawn from a specific population of adults with physical disabilities, limiting the generalizability of the results to other marginalized groups. Future studies should explore these relationships across diverse populations, including individuals with other forms of disabilities or intersecting marginalized identities. Finally, potential confounding variables, such as socioeconomic status, social support, and personality traits, were not controlled for in the present study. Future research should account for these factors to provide a more comprehensive understanding of the predictors of perceived discrimination.

Future research should employ longitudinal designs to examine the stability of the relationships between hope, emotion regulation, and perceived discrimination over time. Investigating how these variables interact dynamically may provide insights into the long-term psychological adaptation of individuals with disabilities. Additionally, experimental studies could explore targeted interventions aimed at enhancing hope and cognitive reappraisal to determine their effectiveness in reducing perceived discrimination and improving well-being. Another avenue for research is the exploration of cultural and contextual differences in the experience of discrimination, as individuals from different backgrounds may exhibit distinct coping mechanisms. Furthermore, studies should examine how social and environmental factors, such as policy changes and disability-inclusive initiatives, influence perceptions of discrimination. By integrating psychological and sociocultural perspectives, future research can contribute to a more holistic understanding of discrimination and its psychological consequences.

Based on the findings of this study, several practical recommendations can be made. First, psychological interventions aimed at increasing hope and teaching adaptive emotion regulation strategies should be developed for individuals with physical disabilities. Cognitive reappraisal training programs can be integrated into rehabilitation and counseling services to enhance emotional resilience in response to discrimination. Additionally, advocacy efforts should focus on reducing systemic barriers and fostering inclusive environments that promote equal opportunities for individuals with disabilities. Workplace policies should prioritize anti-discrimination training and inclusive hiring practices to create supportive professional environments. Similarly, healthcare providers should be trained to recognize and address discriminatory practices to ensure equitable access to care. Lastly, community-based support programs that foster social connectedness and empower individuals with disabilities should be expanded to enhance psychological well-being and reduce the impact of discrimination.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Acknowledgments

Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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