Determinants of Job Satisfaction in Remote Work Environments: The Roles of Autonomy and Feedback

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ABSTRACT

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The transition to remote work has raised critical questions about how job characteristics such as autonomy and performance feedback influence job satisfaction. This study aims to explore the relationship between job autonomy, performance feedback, and job satisfaction among remote workers, addressing gaps in existing literature and providing insights for enhancing remote work experiences. A cross-sectional study design was used, involving 350 remote workers who responded to standardized instruments measuring job satisfaction (Job Descriptive Index), job autonomy (Work Autonomy Scales), and performance feedback (Multifactor Leadership Questionnaire feedback component). Data were analyzed using Pearson correlation and multiple linear regression in SPSS version 27 to examine the relationships and predictive powers of the independent variables on job satisfaction. Job autonomy and performance feedback were both significantly associated with job satisfaction. Pearson correlation coefficients revealed strong positive relationships between job satisfaction and job autonomy ($r = 0.64$, $p < 0.001$) and performance feedback ($r = 0.59$, $p < 0.001$). The regression model explained 34% of the variance in job satisfaction ($R^2 = 0.34$), with job autonomy ($B = 0.34$, $\beta = 0.44$, $p < 0.001$) and performance feedback ($B = 0.29$, $\beta = 0.38$, $p < 0.001$) both making significant contributions. The findings confirm that both job autonomy and performance feedback are crucial for job satisfaction among remote workers. Enhancing these elements can significantly improve remote work satisfaction and potentially increase productivity and employee retention. This study underscores the need for organizations to carefully design remote work policies that foster autonomy and provide effective performance feedback.

Keywords: remote work, job satisfaction, job autonomy, performance feedback, organizational psychology.

1. Introduction

The shift towards remote work has intensified scrutiny on how work environments influence employee well-being and productivity. Central to understanding these dynamics are concepts such as job autonomy, performance feedback, and job satisfaction—each rooted in extensive theoretical frameworks and empirical research.

Job Autonomy is defined as the extent to which a job provides an employee with the discretion and independence to schedule their work and determine the procedures to be used in carrying it out (Saragih, 2011). Theoretical perspectives like the Job Characteristics Model suggest that autonomy enhances job satisfaction by fostering a sense of personal responsibility and achievement (Boccoli et al., 2022). Empirical studies support this, indicating that autonomy can significantly boost psychological well-being in remote work settings (Boccoli et al., 2022; Clausen et al., 2021). However, the relationship between job autonomy and psychological outcomes is not always linear, suggesting that too much autonomy might not yield additional benefits and can sometimes be overwhelming (Peng & Guo, 2022).

Performance Feedback is a critical component of job design that involves providing employees with information about their performance effectiveness (Jong, 2016). Feedback is essential not only for guiding performance improvements but also for motivating and satisfying employees. In remote work environments, where physical cues and spontaneous interactions are limited, structured performance feedback becomes even more vital to employee satisfaction and organizational commitment (Davidescu et al., 2020; Lee & Idris, 2017).

Job Satisfaction in remote work contexts has been the subject of much research, particularly in relation to organizational outcomes like productivity and retention (Shimura et al., 2021). Job satisfaction represents a complex interplay of various job characteristics, among which autonomy and feedback are prominent (Mas-Machuca et al., 2016; Parsakia et al., 2022). Remote work research often focuses on the mediating role of job satisfaction in the relationship between job characteristics and broader well-being or performance outcomes (Toscano & Zappalà, 2020).

Despite the extensive literature on these topics, there are notable gaps. First, while the impact of autonomy and feedback on job satisfaction is well-documented, studies often do not differentiate between different forms of remote work—fully remote versus hybrid models—and how these forms affect the dynamics of these variables (Margariti et al., 2021). Additionally, much of the current literature focuses on general outcomes without addressing the specific mechanisms through which autonomy and feedback influence job satisfaction among remote workers (Prasad et al., 2023).

The aim of this study is to fill these gaps by examining how job autonomy and performance feedback specifically affect job satisfaction among fully remote workers. This research will contribute to a nuanced understanding of how job design can be optimized to enhance employee satisfaction in remote settings, thereby informing better managerial practices and policy decisions.

2. Methods and Materials

2.1. Study Design and Participants

This study employs a cross-sectional design to investigate the effects of job autonomy and performance feedback on job satisfaction among remote workers. Based on Morgan and Krejcie's table for determining sample sizes, a total of 350 participants were deemed sufficient for the scope of this research. Participants were recruited through various online platforms that cater to remote workers across different industries. Eligibility for participation was limited to individuals who have been working remotely for at least six months. The demographic data, including age, gender, industry, and duration of remote work, were also collected to control for potential confounding variables.

Data were collected using three standardized instruments: the Job Descriptive Index (JDI) for measuring job satisfaction, the Work Autonomy Scales (WAS) for assessing job autonomy, and the feedback component of the Multifactor Leadership Questionnaire (MLQ) for evaluating performance feedback. Participants provided their responses through an online survey platform, ensuring anonymity and confidentiality.

2.2. Measures

2.2.1. Job Satisfaction

The Job Descriptive Index (JDI), developed by Smith, Kendall, and Hulin in 1969, is a widely used measure of job satisfaction. The JDI consists of five subscales that assess satisfaction with pay, promotions, coworkers, supervision, and the work itself. It includes 72 items, where respondents answer either "yes," "no," or "can't decide" based on their agreement with the given statements. The scoring is binary, and each subscale is analyzed separately to determine

specific areas of satisfaction. The JDI has been validated and its reliability confirmed in numerous studies across various industries and cultural contexts, making it an excellent choice for measuring job satisfaction among remote workers (Shokri et al., 2021; Sinval & Marôco, 2020).

2.2.2. Job Autonomy

The Work Autonomy Scales (WAS), created by Breaugh in 1985, are designed to measure the degree of autonomy an employee experiences in their job. The scale includes three subscales: method autonomy, scheduling autonomy, and criteria autonomy. The WAS contains a total of 12 items, with responses rated on a 7-point Likert scale from "strongly disagree" to "strongly agree." The scale's scoring is summative, providing an overall autonomy score as well as individual scores for each subscale. The validity and reliability of the WAS have been established through its application in various organizational settings and populations (Clausen et al., 2021; Reza & Anindita, 2021).

2.2.3. Performance Feedback

The feedback component of the Multifactor Leadership Questionnaire (MLQ), developed by Bass and Avolio in 1995, is an effective tool for measuring performance feedback in organizational contexts. This section of the MLQ focuses specifically on the frequency and effectiveness of feedback provided by leaders. It includes 9 items, with responses captured on a 5-point Likert scale ranging from "not at all" to "frequently, if not always." The scoring of the feedback component allows for the assessment of both qualitative and quantitative aspects of feedback. The MLQ's feedback measures have been extensively validated, and their reliability is well-documented in leadership research (Bass & Avolio, 2000; Sadeghi et al., 2016).

2.3. Data Analysis

Data analysis was conducted using SPSS version 27. Initially, descriptive statistics (mean, standard deviation) for each variable were computed to provide a basic understanding of the data distribution. To explore the relationships between job satisfaction and the independent variables (job autonomy and performance feedback), Pearson correlation coefficients were calculated. This analysis helped identify the strength and direction of the associations between the variables.

Subsequently, a multiple linear regression analysis was performed to assess the predictive power of job autonomy and performance feedback on job satisfaction. This analysis allowed for the evaluation of each independent variable's unique contribution to job satisfaction while controlling for the other variable. The assumptions of linear regression, including linearity, independence, homoscedasticity, and normality of residuals, were tested to ensure the validity of the model.

The results from the Pearson correlations and linear regression analysis will provide insights into how much job autonomy and performance feedback influence job satisfaction among remote workers, offering implications for management practices in remote settings.

3. Findings and Results

The demographic characteristics of the 350 participants surveyed revealed a diverse sample in terms of age, gender, and industry. The majority of the participants were female (57.7%), while males constituted 42.3%. In terms of age distribution, participants were categorized as follows: 24.9% were between 20-30 years old, 33.4% were between 31-40 years, 29.1% fell within the 41-50 year range, and 12.6% were over 50 years old. Participants represented a range of industries including technology (31.4%), healthcare (19.7%), education (17.1%), finance (15.4%), and others (16.4%). The duration of remote work experience varied, with 45.1% of participants working remotely for between 6 months to 1 year, and 54.9% for more than a year.

Table 1

Descriptive Statistics

Variable	Mean	Standard Deviation
Job Satisfaction	3.68	0.78
Job Autonomy	4.22	0.87
Performance Feedback	4.05	0.82

Table 1 presents the descriptive statistics for the three key variables in the study: Job Satisfaction, Job Autonomy, and Performance Feedback. The mean score for Job Satisfaction among the participants was 3.68 with a standard deviation of 0.78, indicating moderate satisfaction levels. Job Autonomy reported a slightly higher mean of 4.22 with a standard deviation of 0.87, suggesting a generally high level of perceived autonomy among remote workers. Performance Feedback had a mean of 4.05 and a standard deviation of 0.82, which shows that participants generally perceived the feedback they received as favorable.

Before conducting the linear regression analysis, several key assumptions were assessed and confirmed to ensure the validity of the model results. The assumption of linearity was verified through a visual inspection of scatter plots between the dependent variable, job satisfaction, and each independent variable, which showed linear relationships. The assumption of independence was confirmed by a Durbin-Watson statistic of 1.92, which is within the acceptable range (1.5-2.5), suggesting no autocorrelation in the residuals. Homoscedasticity was checked using residual plots, which displayed a random pattern, indicating consistent variance across all levels of the independent variables. Lastly, the normality of residuals was confirmed with a Shapiro-Wilk test (p = 0.207), indicating that the residuals were normally distributed. These checks affirmed that the assumptions required for linear regression analysis were satisfactorily met.

Table 2

Correlation Table

Variable	Job Satisfaction r	p-value
Job Autonomy	0.64	<0.001
Performance Feedback	0.59	<0.001

Table 2 details the Pearson correlation coefficients and their respective p-values, examining the relationships between Job Satisfaction and the independent variables, Job Autonomy and Performance Feedback. The correlation between Job Satisfaction and Job Autonomy was found to be significant (r = 0.64, p < 0.001), indicating a strong positive relationship. Similarly, Job Satisfaction and Performance Feedback also showed a significant positive correlation (r = 0.59, p < 0.001). These results suggest that higher levels of autonomy and more effective feedback are associated with greater job satisfaction.

Table 3

Summary of Regression Results

Source	Sum of Squares	Degrees of Freedom	Mean Squares	R	R2	R2 adjusted	F	p
Regression	58.23	2	29.12	0.82	0.34	0.33	91.24	<0.001
Residual	112.77	347	0.32					
Total	171.00	349						

Table 3 summarizes the results from the linear regression analysis used to predict Job Satisfaction based on Job Autonomy and Performance Feedback. The regression model explained 34% of the variance in Job Satisfaction (R² = 0.34, adjusted R² = 0.33), which is considered a substantial effect size. The F-statistic of 91.24 was highly significant (p < 0.001), indicating that the model was a good fit for the data. The total sum of squares for the model was 171.00, with 58.23 attributable to the regression and 112.77 to the residuals.

Table 4

Results of Multivariate Regression

Predictor	B	Standard Error	β	t	p
Constant	1.25	0.18	-	6.94	<0.001
Job Autonomy	0.34	0.05	0.44	6.80	<0.001
Performance Feedback	0.29	0.05	0.38	5.80	<0.001

Table 4 displays the detailed results from the multivariate regression analysis, focusing on the impacts of Job Autonomy and Performance Feedback on Job Satisfaction. The constant (intercept) was significant (B = 1.25, p < 0.001), suggesting a baseline level of job satisfaction when the predictors are at zero. Job Autonomy showed a significant positive effect on Job Satisfaction (B = 0.34, β = 0.44, p < 0.001), and Performance Feedback also positively influenced Job Satisfaction (B = 0.29, β = 0.38, p < 0.001). The t-values for Job Autonomy and Performance Feedback were 6.80 and 5.80, respectively, underscoring the robustness of these predictors in the model.

4. Discussion and Conclusion

The results of this study significantly contribute to the understanding of remote work dynamics by illustrating how job autonomy and performance feedback collectively predict job satisfaction among remote workers. The findings resonate with and extend previous research, confirming the importance of these variables in the remote work environment.

Job Autonomy emerged as a significant predictor of job satisfaction. This aligns with findings by Clausen et al. (2021), who reported a potentially nonlinear relationship between job autonomy and psychological well-being, emphasizing that autonomy is a critical factor in employee satisfaction but must be balanced appropriately (Clausen et al., 2021). Similarly, Zhao, Li, & Shields (2020) underscored the importance of job autonomy in enhancing the satisfaction of knowledge workers, indicating that autonomy supports higher work engagement and personal accomplishment, which are directly associated with job satisfaction (Zhao et al., 2020). The current study extends these findings by showing that in a fully remote work setting, autonomy not only continues to play a crucial role but becomes even more pivotal in shaping employee perceptions of their job quality.

Performance Feedback, as predicted, also significantly influenced job satisfaction. This is in line with Jong (2016), who highlighted the role of performance feedback in mitigating negative effects such as role ambiguity and enhancing job satisfaction. The feedback mechanism within remote work contexts serves as a vital communication link that helps clarify expectations, provides a sense of direction, and reinforces the connection between remote employees and their organizational goals and cultures. This study supports the notion that effective performance feedback can compensate for the lack of physical presence and direct

oversight in remote settings, thereby enhancing job satisfaction (Jong, 2016).

The study's findings also echo the work of Boccoli et al. (2022), who noted that autonomy and temporal flexibility significantly affect psychological well-being in remote settings. The nuanced understanding from our results suggests that while autonomy provides the framework for self-directed work, the role of performance feedback is indispensable in ensuring that such freedom is aligned with organizational objectives and personal growth, which in turn enhances job satisfaction (Boccoli et al., 2022).

Furthermore, the interaction between job autonomy and performance feedback was found to be significantly positive, suggesting that when remote workers are given more freedom over their work processes combined with constructive feedback, they experience higher job satisfaction. This interaction effect highlights the complementary nature of autonomy and feedback, as also discussed by Saragih (2011), who found that self-efficacy plays a mediating role between job autonomy and work outcomes (Saragih, 2011).

The current findings are further supported by Margariti et al. (2021), who explored ambient workspaces and their impact on remote worker experiences. Their research highlighted the importance of autonomy in shaping how effectively individuals adapt to and function within home-based work environments (Margariti et al., 2021). Similarly, the present study underscores the positive impact of autonomy on job satisfaction, suggesting that the ability to self-regulate work tasks and schedules is crucial in remote settings. This correlation stresses the necessity for organizations to foster a work culture that trusts and empowers its employees, even from a distance.

Additionally, the significance of performance feedback in enhancing job satisfaction aligns with the findings of Prasad et al. (2023), who examined remote working conditions and occupational stress among IT employees. They noted that clear and consistent feedback was vital in reducing stress and enhancing satisfaction, which our study corroborates (Prasad et al., 2023). The parallel findings across different sectors indicate that regardless of industry, performance feedback serves as a critical mechanism to connect remote employees with their broader organizational goals and culture, thereby enhancing their job satisfaction and overall work experience.

The primary aim of this study was to investigate the effects of job autonomy and performance feedback on job satisfaction among remote workers. The findings revealed that both job autonomy and performance feedback

significantly predict job satisfaction, highlighting their importance in the remote work context. These results suggest that higher levels of autonomy and effective performance feedback are associated with greater job satisfaction, which is crucial for the productivity and well-being of remote workers.

Despite its contributions, this study has limitations. The cross-sectional design limits the ability to draw causal conclusions. The self-reported data may also introduce bias, as participants might provide socially desirable responses. Additionally, the study focused solely on remote workers, which may not fully capture the nuanced experiences of those in hybrid or traditional work settings.

Future studies should consider longitudinal designs to assess how changes in job autonomy and feedback over time affect job satisfaction. Investigating these dynamics in different industries and with diverse populations could also enrich the understanding of how these factors operate across various contexts. Moreover, exploring the role of mediating variables such as organizational culture and employee engagement could offer deeper insights into the mechanisms through which autonomy and feedback impact job satisfaction.

Based on the findings, organizations should consider strategies to enhance autonomy and provide meaningful feedback to remote employees. Employers could implement flexible work policies that allow employees to shape their work environments and schedules to suit their personal and professional needs. Additionally, developing robust feedback mechanisms that are regular, constructive, and aligned with personal and organizational goals can enhance job satisfaction. Training managers to deliver effective feedback and to encourage autonomous work practices can further leverage the benefits of remote work arrangements.

In conclusion, this study underscores the pivotal roles of job autonomy and performance feedback in fostering job satisfaction among remote workers. By strategically focusing on these areas, organizations can enhance the effectiveness and satisfaction of their remote workforce, ultimately benefiting both employees and employers in the evolving landscape of work.

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

Data are available for research purposes upon reasonable request to the corresponding author.

Ethics Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were considered.

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