



Factors Affecting the Relationship between Workplace Loneliness and Productivity of Employees in Pakistan

Naila Siddiqui (Ph.D)^{1*}, Danish Ahmed Siddiqui (Ph.D)² & Samiullah Sarwar³

¹ Research Scholar Karachi University Business School, University of Karachi, Pakistan

² Associate Professor Karachi University Business School, University of Karachi, Pakistan

³ Lecturer, Department of Education, University of Loralai, Loralai, Pakistan

ARTICLE INFO

Article history:

Received: September 06, 2025

Revised: December 11, 2025

Accepted: December 16, 2025

Published: December 31, 2025

Keywords:

Affective commitment
Collectivism orientation
Job autonomy
Need to belong
Productivity
Workplace loneliness

ABSTRACT

This study aimed to explore the channels through which Workplace Loneliness (WPL) affects employees' productivity. A theoretical framework was proposed, suggesting WPL increases the Need to Belong (NtB) and Affective Commitment to Organization (ACO), in turn affecting the employees' productivity. We adopted a survey design to collect primary data through a closed-ended questionnaire. The targeted population consisted of individuals working in various organizations in Pakistan. Data was analysed using Structural Equation Modelling (SEM). As per the findings, the relationship of WPL seems to have a positive effect on Work Productivity (WP) of employees. WPL also seems to positively affect NtB, which in turn positively affects productivity, hence a significant positive mediation of NtB between WPL and WP. The effect of WPL on ACO seems to be insignificant; however, AC seem to have a positive effect on WP. Both moderation effects seem to remain inconclusive. The novel scholarly contribution of this study includes the practical implications of its results to consider loneliness an organizational problem that needs to be tackled to help employees and improve work productivity.

Copyright © 2025 | International Journal of Trends and Innovations in Business & Social Sciences

Published by International Research and Publishing Academy – Pakistan. This is an open access article licensed under CC BY: <https://creativecommons.org/licenses/by/4.0>

INTRODUCTION

In modern organizations, WPL is a growing concern, affecting employee productivity and overall organizational performance simultaneously. However, the escalation of digital communication tools, many employees experience a lack of significant social connections at work, leading to feelings of isolation and disengagement. WPL adversely impacts employees' mental and physical health, leading to decreased productivity, increased absenteeism, and higher turnover rates. Lonely employees often exhibit reduced engagement, lower job satisfaction, and diminished performance. They may also withdraw from team interactions, further aggravating feelings of isolation and disrupting team cohesion. This cycle not only

Author Biographies

Naila Siddiqui (Ph.D) is an Assistant Professor at the Department of Education, University of Karachi, Karachi, Pakistan. She has recently completed her MBA in Human Resource Management from Karachi University Business School (KUBS), University of Karachi, Pakistan. She obtained her Doctorate Degree in Education from Hamdard University, Karachi, Pakistan.

Danish Ahmed Siddiqui (Ph.D) is an Associate Professor at Karachi University Business School, University of Karachi, Pakistan. He obtained his Doctorate in Economics and Finance from the University of Karachi, Pakistan.

Samiullah Sarwar is a Lecturer at the Department of Education, University of Loralai, Loralai, Pakistan. He is currently a PhD Scholar at the Department of Education, University of Karachi, Karachi, Pakistan. He completed his MPhil in Education from the Institute of Business Management (IoBM), Karachi, Pakistan.

*Corresponding author:

Naila Siddiqui (Ph.D) | Karachi University Business School, University of Karachi, Pakistan | e-mail: nailataurus@gmail.com

How to Cite:

Siddiqui, N., Siddiqui, D. A., & Sarwar, S. (2025). Factors Affecting the Relationship between Workplace Loneliness and Productivity of Employees in Pakistan. *International Journal of Trends and Innovations in Business & Social Sciences*, 3(4), 327–339. <https://doi.org/10.5281/zenodo.18289825>

affects individual well-being but also hampers organizational efficiency and effectiveness. Employee productivity is a central concern in organizational behaviour and human resource management. Among the many psychosocial factors affecting productivity, WPL has emerged as a significant but underexplored construct. Loneliness, defined as a subjective feeling of social isolation or lack of meaningful connections, has been increasingly linked to diminished well-being and performance in professional settings (Mccarthy et al., 2025). Despite the evident impact of WPL on productivity and well-being, there remains a paucity of comprehensive research exploring its underlying mechanisms and effective interventions. Understanding the factors contributing to WPL and its consequences is crucial for developing targeted strategies to mitigate its effects. Such research can inform organizational policies and practices aimed at enhancing employee engagement, fostering a sense of belonging, and ultimately improving productivity.

Gap Analysis

Most research has been conducted in Western contexts, with limited studies focusing on cultural variations in the experience and effects of WPL. In collectivist cultures like Pakistan, discussing feelings of loneliness may be stigmatized, leading to underreporting and an incomplete understanding of the issue. Studies focusing on specific groups, such as Muslim female employees, highlight unique challenges but may not account for the broader workforce's experiences. Syed and Ali (2013) explored the emotional labour of Muslim female employees, emphasizing the need for further research across different gender and cultural contexts. There is a lack of research examining how organizational culture, leadership styles, and team dynamics influence the experience of loneliness and its impact on productivity. Moreover, the role of remote work and digital communication in exacerbating or alleviating WPL remains underexplored, especially in the post-pandemic era.

Research Objectives

From this perspective, Halbesleben et al., (2014) presented the Conservation of Resources (COR) theory that explains how individuals may cope with challenges and stress. In the light of this theory, employees may animatedly retain and allocate resources to navigate the stressors and challenges of their lives, and thus maintain the balance in lives (Halbesleben et al., 2014). Using the contextual background of COR theory, this study attempts to explore the impact of loneliness in the workplace of employees on their work productivity. According to Hobfoll et al., (2018), the tenet of the COR theory is that employees strive to attain, retain, foster, and shield the matters they give central value. "COR theory posits that stress occurs (a) when central or key resources are threatened with loss, (b) when central or key resources are lost, or (c) when there is a failure to gain central or key resources following significant effort" (Hobfoll et al., 2018, p.104). The objective of this study was to study loneliness in the elderly, analysing its relationship with social isolation, depression, grief and abandonment. Loneliness is a painful and distressing feeling that leads to a feeling of unease in which the person feels alone, even when surrounded by people, because they believe they lack support, especially of an emotional nature (Seemann, 2022). It can occur at any age, but is more common in adolescents and the elderly, and among the latter, in those who are institutionalized.

Research Questions

- How does WPL affects the work productivity (WP) of employees?
- What is the impact of NtB on the relationship of WPL and work productivity?
- How affective commitment affects the relationship of WPL and work productivity?
- What is the effect of JA the relationship of WPL and work productivity?
- How does collectivism orientation influence the relationship of WPL and work productivity?

Significance

The study's findings aim to provide a deeper understanding of how WPL affects organizational performance, while offering insights into mitigating strategies through cultural and structural interventions, such as fostering collectivist norms and enhancing JA. This research has significant implications for theory, policy, and practice in organizational behaviour and human resource management. This conceptual model explores the relationships between WPL, employee outcomes, and moderating &

mediating variables as structured.

LITERATURE REVIEW

Concept of Loneliness and Related Constructs

Loneliness is triggered when there is a threat of interruption of an emotional relationship or when it is interrupted. Stein and Tuval-Mashiach (2015) argued that separation anxiety translates the painful emotion - conscious - that accompanies the perception of the ephemeral nature of human relationships, of the existence of others and of our own existence. However, the authors also said that such anxiety would be a structuring emotion for the ego, since feeling the pain of our loneliness makes us aware that we exist as unique beings in relation to others, and that others are different from us. There is a conflict posed by the homogenized society that harms the perception of loneliness, negatively linking it to the concepts of segregation and isolation. This is because, on the one hand, there is an appreciation of group cohesion, harmony and the search for happiness and, on the other, the incitement to individualism, competitiveness, independence and autonomy (Anyan and Hjemdal, 2022). Contrary to this thinking, it is believed that loneliness makes intellectual work possible and that its concept can be relativized. This subject is a topic of discussion for Le Bon (present in Freud's texts), who states that the isolated subject is not segregated from social relations, but also does not dissolve into the crowd, managing to maintain his intellectual and critical capacity and not allowing himself to be influenced by the fascination of the crowds (Veness, 1971).

According to Worsley (2023), a drastic change in the concept of loneliness occurred during the Romantic period - a cultural and literary movement that took place between the 18th and 19th centuries in Europe and the Americas - mainly in the United Kingdom, where the movement's poets wrote obsessively about the subject. In these works, loneliness appears as a synonym for escapism, as a personal choice to flee from the anguish represented by life in society, a futile life and superficial personal relationships. Van Tilburg (2021) demonstrates how the feeling was gradually transformed into a mental state in the face of pessimism and dissatisfaction with life. My research into the origins of loneliness shows that the word, despite the various changes it underwent, maintained its original essence of representing something dangerous, analyzes Worsley.

Relationship between WPL and Work Productivity

The findings of the study conducted by Wahyuni (2021) reveal that WPL relates to the negative sense of feeling of employees in a way that the social and emotional needs are not met by their colleagues and organization. Spilker and Breaugh (2021) have identified that WPL tends to reduce the efforts to improve work performance. The tendency is explained with various factors such as lower emotional commitment towards organization. In the light of the COR theory (Hobfoll et al., 2018), this study anticipates a negative correlation between the WPL and the work efficiency of employees. The findings of the study conducted by Basit and Nauman (2023) present that employees facing WPL are more inclined towards the reduced work engagement to protect their personal resources. The following hypothesis is proposed:

H₁: WPL negatively affects the work productivity of employees.

WPL and NtB

Jha (2023) studied the mediating role of well-being of employees and psychological safety by taking the person-environment fit as NtB moderating between job performance and WPL. The findings revealed that NtB is a supportive to minimize the negative impact of WPL and psychological safety and well-being of employees. Examining the NtB as a coping instrument in the relationship between work engagement and WPL, Du et al., (2022) found that WPL lessens the work engagement and, as a result, it decreases the job satisfaction. However, the negative impact of WPL on the work engagement becomes weaker when employees have the sense of NtB within their organization. Based on this rationale, we propose that:

H₂: WPL negatively affects the NtB of employees.

H₃: NtB negatively affects the Work Productivity of employees.

H₄: NtB negatively mediates the effect of WPL on work productivity of employees

WPL and Affective Commitment to Organization

Affective Commitment to Organization (ACO) is defined as the emotional attachment of employees with their organization i.e. belongingness, warmth, and affection, leading towards rewarding work experience (Rhoades et al., 2001). The findings of the study conducted by Mercurio (2015) confirm that employees experiencing the WPL reduce their affective commitment towards their organization for interpersonal and psychological reasons. Breitsohl and Ruhle (2013) examined if perception of employability by employees moderates the relationship between flexible forms of hiring, such as temporary work, and job attitudes like affective commitment and job satisfaction. Results suggest the moderating role of employability for workers under direct contract with the organization but this interaction has not been pointed out for workers with a temporary work contract with Employment Agencies. The results suggest that perceptions of employability may have a moderating effect on the relationship between the type of employment contract and the affective commitment and job satisfaction of workers under direct employment contracts with the organization, but this interaction was not found for workers with temporary employment contracts with employment agencies.

H₅: WPL negatively affects the ACO of employees.

H₆: ACO negatively affects the Work Productivity of employees.

The Moderating Effect of Workplace Collectivism

The increased work resources assist employees in coping with work demands, in the light of COR theory (Bakker & Demerouti, 2017). Bakker and Demerouti (2017) explored the impact of the interaction between the workplace mindfulness and job autonomy on work productivity and WPL of employees. The findings of the study revealed that job autonomy tends to enhance the intervention degree of employees' work productivity particularly who feel loneliness. The intervention degree is in terms of workplace mindfulness that thereby strengthens the governing effect of mindfulness in workplace. Guo et al., (2023), while exploring the job autonomy to produce advantageous effects for employees, found that power distance orientation moderates the association between the role stressors and job autonomy. The role stressors include ambiguity, role conflicts, and overload. Job autonomy, as a compensatory resource, assists for the intrinsic motivation. Therefore, it is often correlated with the motivation and sense of meaning of employees towards their work (Edwards and Solomon, 2023). Therefore, the following hypotheses are proposed:

H₇: Collectivism orientation negatively moderates the effect of WPL on work productivity of employees.

Job Autonomy and Work Productivity

Khoshnaw and Alavi (2020) examined the role of job autonomy in organizations and its relation with employee performance. This research from a critical review of some studies claimed that job autonomy directly affects job performance and some of its indicators including job satisfaction, motivation, job engagement and job commitment. Specifically, this research aimed at studying the effect of job autonomy on employee performance and concluded that job autonomy and job performance having a positive relationship, however, organizational culture, limits of autonomy, level of cultural diversity in the organization and knowledge, skills and abilities of employees are some of issues need to be considered by top and middle management once they want to allow employees to practice job autonomy. A case study of the Vietnamese construction industry conducted by Tam et al., (2022) measure the work autonomy and its role in enhancing labour productivity. Work autonomy improves the work performance and the results of this study also indicates positive and significant contribution of work autonomy to productivity.

Job Autonomy and WPL

A research study Wax et al., (2022) explored the potential interactive effects of job autonomy on affective, relational and behavioural outcomes at work, operationalizing relatedness as WPL and job autonomy as the ability to work from home. This research explained that WPL negatively predicts the affective organizational commitment, perceptions of coworker and supervisor support, organizational citizenship behaviours and perceived performance. The study of Bryan et al., (2023) conducted a mixed method systematic review and meta-analysis on loneliness in the workplace. Results of this study indicated that loneliness is associated with poor occupational functioning and wellbeing among employees.

Furthermore, loneliness is also associated with modifiable aspects of environment of work. Hence if organization targets the loneliness, then the workplace may offer a fruitful avenue for interventions.

The Moderating Effect of Job Autonomy

The findings of the study conducted by Nesheim et al., (2017) reveals that having the job autonomy employees are empowered with the ability to control rights and make effective decisions leading them towards independence in terms of tasks arrangements and the required methods. The study conducted by Zhang et al., (2017), to explore the impact of job autonomy on creativity and engagement of employees moderated by learning goal orientation and performance pressure, found a weak positive relation between team-level performance pressure and job autonomy having the three engagement dimensions. The findings also revealed three-way interaction between job autonomy, learning goal orientation, and psychological performance pressure in predicting the three dimensions of creativity and engagement.

H₈: Job Autonomy negatively moderates the effect of WPL on work productivity of employees.

The Mediating Role of Employee Affective Commitment to the Organization

Affective Commitment to the Organization (ACO) represents a force that binds an individual to an organization, in which the behavioural implications are sometimes considered quite specific, such as affectivity (Ribeiro et al., 2018). Behavioural research has revealed that a high level of ACO can lead to different desirable results for companies, such as high productivity, low absenteeism, and low turnover intention (Sharma and Dhar, 2016). The results indicated the predominance of ACO among employees, greater agreement with human resources practices associated with benefits, and disagreement with career planning regarding policies related to the internal selection process, self-development, compensation policy, and promotion process. Multiple regression analysis confirmed the hypotheses, revealing a more significant positive relationship between human resources practices and affective and normative types of commitment when compared to continuation ACO (Restubog et al., 2006). Affective organizational commitment was shown to be positively influenced by human resources practices associated with career planning and benefits, while ACO was shown to be more positively induced by human resources practices related to training and development. Although the article revealed results that contribute academically, future research should be conducted to improve the relationship between the constructs addressed in this study.

H₉: ACO negatively mediates the effect of WPL on work productivity of employees

METHODOLOGY

The research strategy adopted for the present research study was exploratory in nature using quantitative approach, a cross-sectional survey design was used to conduct the research. The study was conducted using descriptive strategy following quantitative approach. The researcher adopted survey design to accumulate the data. The population was comprised of the individuals working in any organization. The researcher adopted simple random sampling technique to select the participants; however, the sample size was 312. The only inclusion criteria for sample selection were to be an employee of any organization, however, due to the affiliation from the field of Education, the sample was dominated by the teachers / faculty and administrative staff of various educational institutions. The data collection method in this research was primary through close ended questionnaire. Data was analysed using Structural Equation Modelling (SEM). The variables that were taken as independent variable were WPL, NtB, Job Autonomy (JA), Collectivism Orientation (CO) and Affective Commitment to Organization (ACO). The dependent variable of the study was Work Productivity of Employees.

Description of Research Instrument

The research's instrument adopted was a close-ended questionnaire, comprised of seven sections based on conceptual framework of the study. The first section was measuring employee loneliness using the 8-item scale by Wright (2005) with respect to Emotional Deprivation (ED) and Social Companionship (SC). The second section included 6-item based on Need to Belong Scale (NTBS) by Leary et al., (2001). The third section was comprised of 8-item related job autonomy (JA) from Job Diagnostic Survey (JDS) by Hackman and Oldham (1975). The fourth section included 6-item scale by Allen and Meyer (1990)

focusing on employees self-reported affective commitment (ACO) to the organization. The fifth section comprised of 8-item scale about the collectivism orientation (CO) by Wagner et al., (2012). The sixth section was based on the work productivity subscale from "Employment Absence and Productivity Scale, developed by Lam et al., (2009). This 7-item subscale was focusing work productivity (WP). The last seventh section was including demographic information of the respondent. All ethical consideration were maintained throughout the data collection process.

Date Collection Procedure

The researcher created a Google form to collect data from the participants through online platforms. The link of the form was shared on various social media groups to ensure a swift collection of data. Research ethics were significantly followed by the researcher throughout the research study. All items were measured using a 5-point Likert scale (where 1 = Strongly Disagree and 5 = Strongly Agree). To assess the reliability and convergent validity of the measurement constructs, Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE) values were examined. All constructs met or exceeded the recommended threshold of 0.70 for both CA and CR, indicating strong internal consistency (Hair et al., 2019). Job Autonomy (JA) demonstrated the highest reliability with CA = 0.913 and CR = 0.929, while WPL exhibited the lowest, though still acceptable, values (CA = 0.752, CR = 0.843). Convergent validity was confirmed through AVE scores, all of which exceeded the minimum criterion of 0.50. Collectivism Orientation (CO) yielded the highest AVE (0.718), followed by Affective Commitment (ACO) at 0.667, and Work Productivity (WP) at 0.613. Even WPL, with the lowest AVE (0.573), satisfied the required threshold, indicating that a significant portion of variance in indicators is captured by the constructs they are intended to measure. These results collectively affirm that the measurement model is both reliable and valid for further structural equation modelling.

RESULTS & FINDINGS

The description of the participating respondents included their gender, working experience, academic qualification etc. From this perspective, the number (frequency) of male participants was 107 that made 4.3 per cent. The number (frequency) of female participants was 205 that made 65.7 per cent. Most of the participants had working experience between 1 and 5 years (f=112 with 35.9%). Most of the participants had post-graduation (f=184 with 59%). Most of the participants were serving into education sector (f=111 with 35.6%) having designation as Teaching Staff (f=119 with 38.1%). The description of the responses received from the participating respondents, against each chosen variable includes the measures of central tendency i.e. mean, median, mode etc. From this perspective, the mean value of the Work-Place Loneliness (WPL) was found to be 3.146 having median as 3.130, mode as 3.000 with Std. Deviation (SD) as 0.605 and Variance as 0.366. The mean value of NtB was found to be 3.251 having median as 3.277, mode as 3.667 with SD as 0.683 and Variance as 0.467. The mean value of the Job Autonomy (JA) was found to be 5.251 having median as 5.542, mode as 5.500 with SD as 1.357 and Variance as 1.842. The mean value of the Affective Commitment (ACO) was found to be 3.499 having median as 3.579, mode as 4.000 with SD as 0.937 and Variance as 0.878. The mean value of the Collectivism orientation (CO) was found to be 3.547 having median as 3.565, mode as 3.375 with SD as 0.694 and Variance as 0.481. The mean value of the Work Productivity (WP) was found to be 2.126 having median as 2.022, mode as 2.000 with SD as 0.636 and Variance as 0.404. The values of skewness (less than ± 2) and kurtosis (less than ± 7) suggested normal distribution of the data. The Minimum and Maximum values reflect the Likert scale that all the variables were measured on 5 points except Job Autonomy that was measured on 7 points.

The measurement model was tested for convergent validity with Factor Loadings, Average Variance Extracted (AVE), and Composite Reliability (CR). The loading of each item under each construct along with Mean, Standard Deviation, T Stats and P values was found accurate. According to Hair et al., (2022), the Outer Loading of each item should be $l > 0.708$ to make it reliable for the considered construct. Indicators loading between 0.40 and 0.70 should be considered for deletion if their removal leads to an increase in composite reliability and average variance extracted. Indicators loading below 0.40 should generally be removed. Keeping the explanation of Hair et al., (2022) in view, the Outer Loadings of the items WPL_ED3, WPL_SC1, WPL_SC2, and WPL_SC4 under Work-Place Loneliness, NtB1, NtB2, NtB3, NtB4, and NtB5 under NtB, CO2, CO7, and CO8 under Collectivism Orientation and WP1 and WP7 under

Work Productivity were found to be below and thus removed from the respective constructs. From this perspective, the mean values of each remaining item of Affective Commitment, along with SD, OL, T Stats, and P Values, were found to be satisfactorily contributing to the respective construct. The mean values of each remaining item of Collectivism Orientation, along with SD, OL, T Stats, and P Values, were found to be satisfactorily contributing to the respective construct. The mean values of each remaining item of Job Autonomy, along with SD, OL, T Stats, and P Values, were found to be satisfactorily contributing to the respective construct. The mean values of each remaining item of NtB, along with SD, OL, T Stats, and P Values, were found to be satisfactorily contributing to the respective construct. The mean values of each remaining item of Work Productivity, along with SD, OL, T Stats, and P Values, were found to be satisfactorily contributing to the respective construct. The mean values of each remaining item of Work-Place Loneliness, along with SD, OL, T Stats, and P Values, were found to be satisfactorily contributing to the respective construct.

Table 1
Construct Reliability and Validity

	CA	CR	AVE
ACO	0.835	0.874	0.543
CO	0.775	0.839	0.513
JA	0.894	0.911	0.594
NtB	0.559	0.772	0.531
WP	0.806	0.865	0.563
WPL	0.767	0.850	0.590

CA = Cronbach's Alpha

CR = Composite Reliability

AVE = Average Variance Extracted

As displayed in Table 1, Cronbach's Alpha (α) values for each construct was found to be $> .6$ that is perceived as satisfactory, according to Gliem and Gliem (2003). The satisfactory α values of the constructs portraits that the constructs are reliable to conclude the findings being internally consistent regarding the respective items (Gliem & Gliem, 2003). Furthermore, the Composite Reliability having CR values > 0.7 also display the Construct Consistency, according to Hair et al., (2022). According to Hair et al., (2022), Convergent Validity is a measure to examine how closely a test correlates with other tests that measure the same construct. This can be measured via Average Variance Extracted (AVE) with the acceptance value as > 0.5 (Hair et al., 2019).

Table 2
Hypotheses with Direct & Indirect Effects

No.	Hypotheses	(O)	(M)	(STDEV)	T statistics	P values
1	WPL -> WP	0.163	0.169	0.059	2.792	0.005
2	WPL -> NtB	0.252	0.263	0.054	4.683	0.005
3	NtB -> WP	0.091	0.092	0.071	1.292	0.005
4	WPL -> NtB -> WP	0.023	0.024	0.019	1.237	0.203
5	WPL -> ACO	-0.093	-0.104	0.065	1.435	0.151
6	ACO -> WP	-0.207	-0.207	0.058	3.551	0.005
7	CO x WPL -> WP	0.021	0.012	0.058	0.356	0.699
8	JA x WPL -> WP	-0.071	-0.073	0.060	1.187	0.186
9	WPL -> ACO -> WP	0.019	0.021	0.014	1.349	0.176

(O) = Original Sample

(M) = Sample Mean

(STDEV) = Standard Deviation

As displayed in Table 2, the impact of WPL on WP and NtB, and the impact of ACO on WP were found significant with $t = 2.792$, $p 0.005$, $t = 4.683$, $p 0.005$, and $t = 3.551$, $p 0.005$ respectively.

Table 3
Summary of Hypotheses

No.	Hypotheses	P Values	Status
H ₁	WPL negatively affects the work productivity (WP) of employees.	0.000	Supported
H ₂	WPL negatively impacts the NtB of employees.	0.000	Supported
H ₃	NtB negatively impacts the Work Productivity of employees.	0.000	Not supported
H ₄	NtB negatively mediates the effect of WPL on work productivity (WP) of employees	0.203	Not supported
H ₅	WPL negatively affects the ACO of employees.	0.151	Not supported
H ₆	ACO negatively affects the Work Productivity of employees.	0.000	Supported
H ₇	Collectivism orientation (CO) negatively moderates the effect of WPL on work productivity (WP) of employees.	0.699	Not supported
H ₈	Job Autonomy (JA) negatively moderates the effect of WPL on work productivity (WP) of employees.	0.186	Not supported
H ₉	ACO negatively mediates the effect of WPL on work productivity (WP) of employees.	0.176	Not Supported

Discussion

Recent empirical studies support the centrality of affective commitment in mediating various job stressors and performance outcomes. For example, Han et al., (2023) found that affective commitment significantly mediated the relationship between perceived workplace discrimination and reduced job performance. Similarly, Kakar et al., (2023) highlighted affective commitment as a critical link between workplace ostracism and work disengagement, reinforcing its role in converting emotional workplace experiences into measurable outcomes. The support for H₁ ($p = 0.006$) aligns with prior research indicating that WPL detrimentally affects job performance. This supports past findings that loneliness hinders workers' capacity for concentration, creativity, and productive teamwork (Wright and Silard, 2021). Ozcelik and Barsade (2018) found that lonely employees often feel alienated, leading to decreased affective commitment and lower performance ratings from supervisors. The support for H₂ ($p = 0.000$) suggests that WPL negatively impact the NtB of the employees. According to Baumeister and Leary's (2017) "Need to Belong" theory, interpersonal connections are essential for psychological well-being.

WPL disrupts these connections, validating the negative effect on NtB. The support for H₃ ($p = 0.000$) suggests that work productivity has a negative impact of NtB. Although unmet belonging needs have been shown to lower engagement and performance (Lambert et al., 2013), the study's non-significant result might suggest that NtB does not directly affect productivity in the current sample because of organizational or cultural mitigating factors. The finding does not support mediating role of NtB ($p = 0.209$) for the relationship between WPL and work productivity in this context. Contrary to expectations and past findings (Ozcelik and Barsade, 2011), NtB did not significantly mediate the relationship between loneliness and productivity. This suggests that other mechanisms such as emotional exhaustion or decreased motivation—may better explain this relationship. While the NtB is a fundamental human motivation, its mediating role in organizational settings remains inconclusive. Some studies suggest that a strong NtB can buffer the negative effects of loneliness, but this effect may vary depending on individual and contextual factors (Wright et al., 2006).

The insignificant results for H₅ ($p = 0.151$) contrasts with studies that have found a negative relationship between WPL and affective commitment. The new results contradict earlier research that found loneliness lowers emotional connection to organizations (Eisenberger et al., 2002). In some areas, the influence of loneliness on ACO may be mitigated by cultural values around collectivism and job stability. For instance, Ozcelik and Barsade (2011) reported that lonely employees often feel less emotionally attached to their organizations. The discrepancy in findings may be due to differences in organizational culture, employee demographics, or measurement methods. The findings support H₆ ($p = 0.000$) and suggests that affective commitment to the organization negatively affects the work productivity of employees. This finding supports the organizational commitment theory of Meyer and Allen (1997), which holds that affectively committed workers are more engaged, productive, and devoted. Therefore, a weaker ACO results in lower production.

The insignificant result for H₇ ($p = 0.715$) suggests that collectivism orientation does not negatively moderate the effects of WPL on productivity. This finding is somewhat unexpected, as collectivist

cultures are generally thought to emphasize group cohesion and social support. This may be the result of a change in contemporary workplace cultures, where even in civilizations that have historically valued collectivism, individualistic attitudes may be becoming more prevalent (Triandis, 2001). However, it aligns with research indicating that the protective effects of collectivism may not uniformly buffer the negative impacts of loneliness, possibly due to varying interpretations and implementations of collectivist values in different organizational contexts (Triandis, 2001). There was insignificant result for H_7 ($p = 0.715$) which suggests that job autonomy does not negatively moderate the effects of WPL on work productivity of employees. Job autonomy was not a major mediator in this research, even though it is often associated with improved performance and well-being (Hackman and Oldham, 1975). This may imply that loneliness's detrimental emotional impacts cannot be countered by autonomy alone. This finding aligns with research suggesting that while job autonomy can enhance job satisfaction and motivation, it may not directly mitigate the adverse effects of social isolation in the workplace (Bakker and Demerouti, 2017).

Despite its theoretical validity, this hypothesis was not supported, with a p-value of 0.176, which is above the conventional threshold of 0.05 for statistical significance. This suggests that ACO does not significantly mediate the relationship between WPL and employee productivity in the sample studied. A lonely employee may feel unsupported and disconnected, weakening their affective commitment. This reduced commitment could then lead to lower work motivation and productivity. Meyer et al., (2004) found that lower affective commitment was associated with reduced job performance. Ozcelik and Barsade (2018) showed that WPL erodes trust and belonging, indirectly harming productivity through reduced engagement and commitment. WPL, a state of perceived social isolation, erodes an individual's sense of belonging and interpersonal connection in the workplace. This emotional depletion directly undermines affective commitment, as employees who feel isolated are less likely to form strong emotional bonds with their organization or align with its goals (Ozcelik & Barsade, 2018). The mediating role of affective commitment in this context suggests that loneliness does not merely reduce output through diminished social interaction, but more profoundly through a decline in emotional investment and organizational loyalty, which are foundational to sustained productivity.

CONCLUSION

The current study investigated the relationship between WPL and work productivity, while also examining the mediating and moderating roles of psychological and cultural variables such as the NtB, job autonomy, affective commitment, and collectivism orientation. Out of the eight hypotheses tested, only two (H_1 and H_4b) were supported. These findings confirm that WPL has a direct negative impact on employee productivity, and this effect is further mediated by a decline in affective commitment. Despite the theoretical significance of other variables such as the NtB, job autonomy, and collectivist orientation, their statistical insignificance in this study suggests that they may not universally act as buffers or mediators in the context of WPL. These findings challenge some assumptions made in earlier studies and highlight the complexity of psychosocial dynamics within organizational settings. The contrast between significant and non-significant findings underscores that while emotional disconnection from the workplace is a key driver of reduced productivity, cultural values or individual preferences for autonomy may not sufficiently mitigate these effects. This also points toward the need to focus on organizational affective climate rather than relying solely on individual-level moderators.

Research Implications

Organizational Practices and HR Policies

The findings suggest a need for organizations to acknowledge loneliness as a serious workplace issue. Since loneliness directly reduces productivity and indirectly impacts performance through reduced affective commitment, HR managers should:

- Develop structured onboarding and mentoring programs to foster social integration.
- Implement team-building activities and cross-functional collaboration to enhance workplace connectedness.
- Monitor employees' affective commitment levels through surveys or check-ins as an early indicator of

disengagement.

Mental Health and Well-being Initiatives

- Organizations should consider WPL as part of broader mental health strategies.
- Providing access to counselling services, employee assistance programs (EAPs), and workplace wellness campaigns could help reduce isolation and improve emotional well-being.

Rethinking Job Autonomy and Cultural Assumptions

- While autonomy and collectivism have traditionally been linked with positive outcomes, this study indicates that their role in addressing WPL may be limited
- Organizations should avoid over-relying on structural or cultural solutions and instead adopt interpersonal strategies aimed at promoting meaningful workplace relationships.

Future Research Directions

The mixed results also highlight areas for future inquiry. Researchers should explore:

- Alternative mediators such as perceived organizational support, psychological safety, or leader-member exchange (LMX).
- Contextual factors like remote work environments, hybrid team dynamics, and cultural differences across industries or regions.

Leadership Training and Managerial Roles

Leaders and supervisors must be trained to identify signs of loneliness, such as withdrawal or reduced participation. They play a crucial role in fostering inclusive environments and should be encouraged to maintain regular, meaningful interactions with team members. In conclusion, this study makes a valuable contribution to understanding how WPL affects productivity, offering both theoretical insights and actionable implications. It emphasizes the need for human-centric organizational practices that prioritize emotional connectedness and affective commitment to drive sustainable performance.

Competing Interests

The authors declared no competing interests.

REFERENCES

- Allen, N.J. and Meyer, J.P., 1990. The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63(1), pp.1-18. <https://doi.org/10.1111/j.2044-8325.1990.tb00506.x>
- Anyan, F. and Hjemdal, O., 2022. Loneliness in social relationships: Mapping the nomological network of loneliness with key conceptual domains and theoretical constructs. *Journal of Social and Personal Relationships*, 39(2), pp.132-154. <https://doi.org/10.1177/02654075211033035>
- Bakker, A.B. and Demerouti, E., 2017. Job demands–resources theory: taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), p.273.
- Basit, A.A. and Nauman, S., 2023. How workplace loneliness harms employee well-being: A moderated mediational model. *Frontiers in Psychology*, 13, p.1086346. <https://doi.org/10.3389/fpsyg.2022.1086346>
- Baumeister, R.F. and Leary, M.R., 2017. The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Interpersonal Development*, pp.57-89.
- Breitsohl, H. and Ruhle, S., 2013. Residual affective commitment to organizations: Concept, causes and consequences. *Human Resource Management Review*, 23(2), pp.161-173. <https://doi.org/10.1016/j.hrmr.2012.07.008>
- Bryan, B.T., Andrews, G., Thompson, K.N., Qualter, P., Matthews, T. and Arseneault, L., 2023. Loneliness in the workplace: a mixed-method systematic review and meta-analysis. *Occupational Medicine*, 73(9), pp.557-567. <https://doi.org/10.1093/occmed/kqad138>

- Cacioppo, S., Bangee, M., Balogh, S., Cardenas-Iniguez, C., Qualter, P. and Cacioppo, J.T., 2016. Loneliness and implicit attention to social threat: A high-performance electrical neuroimaging study. *Cognitive Neuroscience*, 7(1-4), pp.138-159. <https://doi.org/10.1080/17588928.2015.1070136>
- Du, S., Ma, Y. and Lee, J.Y., 2022. Workplace loneliness and the need to belong in the era of COVID-19. *Sustainability*, 14(8), p.4788.
- Edwards, J.P. and Solomon, P.L., 2023. Explaining job satisfaction among mental health peer support workers. *Psychiatric Rehabilitation Journal*, 46(3), p.223. <https://doi.org/10.1037/prj0000577>
- Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I.L. and Rhoades, L., 2002. Perceived supervisor support: contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, 87(3), p.565. <https://doi.org/10.1037/0021-9010.87.3.565>
- Gliem, J.A. and Gliem, R.R., 2003. Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. *Midwest research-to-Practice Conference in Adult, Continuing, and community education*. <https://hdl.handle.net/1805/344>
- Guo, W., Hancock, J., Cooper, D. and Caldas, M., 2023. Job autonomy and employee burnout: the moderating role of power distance orientation. *European Journal of Work and Organizational Psychology*, 32(1), pp.79-94. <https://doi.org/10.1080/1359432X.2022.2101451>
- Hackman, J.R. and Oldham, G.R., 1975. Development of the job diagnostic survey. *Journal of Applied Psychology*, 60(2), p.159. <https://doi.org/10.1037/h0076546>
- Hair, J. and Alamer, A., 2022. Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, 1(3), p.100027. <https://doi.org/10.1016/j.rmal.2022.100027>
- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M., 2019. When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), pp.2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Halbesleben, J.R., Neveu, J.P., Paustian-Underdahl, S.C. and Westman, M., 2014. Getting to the "COR" understanding the role of resources in conservation of resources theory. *Journal of Management*, 40(5), pp.1334-1364. <https://doi.org/10.1177/0149206314527130>
- Han, X., Mortimer, J. and VanHeuvelen, T., 2023. Perceived discrimination in the workplace and mental health from early adulthood to midlife. *Longitudinal and Life Course Studies*, 14(1), pp.22-47. <https://doi.org/10.1332/175795921X16615892091105>
- Hobfoll, S.E., Halbesleben, J., Neveu, J.P. and Westman, M., 2018. Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5(1), pp.103-128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>
- Jha, S., 2023. Workplace loneliness and job performance: moderating role of person-environment fit. *Industrial and Commercial Training*, 55(2), pp.213-233. <https://doi.org/10.1108/ICT-06-2022-0041>
- Kakar, A.S., Muhammad Khan, N. and Haider, A., 2023. The turnover intention among IT professionals: A person-organisation fit, person-job fit, and HRM perspective. *Human Systems Management*, 42(3), pp.325-335. <https://doi.org/10.3233/HSM-220072>
- Khoshnaw, S. and Alavi, H., 2020. Examining the interrelation between job autonomy and job performance: A critical literature review. *Multidisciplinary Aspects of Production Engineering*, 3(1), pp.606-616.
- Lam, R.W., Michalak, E.E. and Yatham, L.N., 2009. A new clinical rating scale for work absence and productivity: Validation in patients with major depressive disorder. *BMC psychiatry*, 9(1), p.78. <https://doi.org/10.1186/1471-244X-9-78>
- Lambert, N.M., Stillman, T.F., Hicks, J.A., Kamble, S., Baumeister, R.F. and Fincham, F.D., 2013. To belong is to matter: Sense of belonging enhances meaning in life. *Personality and Social Psychology Bulletin*, 39(11), pp.1418-1427. <https://doi.org/10.1177/0146167213499186>
- Leary, M.R., Cottrell, C.A. and Phillips, M., 2001. Deconfounding the effects of dominance and social

- acceptance on self-esteem. *Journal of Personality and Social Psychology*, 81(5), p.898.
- Mccarthy, J.M., Erdogan, B., Bauer, T.N., Kudret, S. and Campion, E., 2025. All the lonely people: an integrated review and research agenda on work and loneliness. *Journal of Management*, p.01492063241313320. <https://doi.org/10.1177/01492063241313320>
- Mercurio, Z.A., 2015. Affective commitment as a core essence of organizational commitment: An integrative literature review. *Human Resource Development Review*, 14(4), pp.389-414. <https://doi.org/10.1177/1534484315603612>
- Meyer, J.P. and Allen, N.J., 1997. *Commitment in the workplace: Theory, research, and application*. Sage.
- Meyer, J.P., Becker, T.E. and Vandenberghe, C., 2004. Employee commitment and motivation: a conceptual analysis and integrative model. *Journal of Applied Psychology*, 89(6), p.991.
- Nesheim, T., Olsen, K.M. and Sandvik, A.M., 2017. Never walk alone: achieving work performance through networking ability and autonomy. *Employee Relations*, 39(2), pp.240-253. <https://doi.org/10.1108/ER-09-2016-0185>
- Ozcelik, H. and Barsade, S., 2011, January. Work loneliness and employee performance. In *Academy of management proceedings* (Vol. 2011, No. 1, pp. 1-6). Briarcliff Manor, NY 10510: Academy of Management. <https://doi.org/10.5465/ambpp.2011.65869714>
- Ozcelik, H. and Barsade, S.G., 2018. No employee an island: Workplace loneliness and job performance. *Academy of Management Journal*, 61(6), pp.2343-2366. <https://doi.org/10.5465/amj.2015.1066>
- Restubog, S.L.D., Bordia, P. and Tang, R.L., 2006. Effects of psychological contract breach on performance of IT employees: The mediating role of affective commitment. *Journal of Occupational and Organizational Psychology*, 79(2), pp.299-306. <https://doi.org/10.1348/096317905X53183>
- Rhoades, L., Eisenberger, R. and Armeli, S., 2001. Affective commitment to the organization: the contribution of perceived organizational support. *Journal of Applied Psychology*, 86(5), p.825.
- Ribeiro, N., Gomes, D. and Kurian, S., 2018. Authentic leadership and performance: the mediating role of employees' affective commitment. *Social Responsibility Journal*, 14(1), pp.213-225. <https://doi.org/10.1108/SRJ-06-2017-0111>
- Seemann, A., 2022. The psychological structure of loneliness. *International Journal of Environmental Research and Public Health*, 19(3), p.1061. <https://doi.org/10.3390/ijerph19031061>
- Sharma, J. and Dhar, R.L., 2016. Factors influencing job performance of nursing staff: Mediating role of affective commitment. *Personnel Review*, 45(1), pp.161-182. <https://doi.org/10.1108/PR-01-2014-0007>
- Spilker, M.A. and Breugh, J.A., 2021. Potential ways to predict and manage telecommuters' feelings of professional isolation. *Journal of Vocational Behavior*, 131, p.103646. <https://doi.org/10.1016/j.jvb.2021.103646>
- Stein, J.Y. and Tuval-Mashiach, R., 2015. The social construction of loneliness: An integrative conceptualization. *Journal of Constructivist Psychology*, 28(3), pp.210-227. <https://doi.org/10.1080/10720537.2014.911129>
- Syed, J. and Ali, F., 2013. Contextual emotional labor: an exploratory of Muslim female employees in Pakistan. *Gender in Management: An International Journal*, 28(4), pp.228-246. <https://doi.org/10.1108/GM-01-2013-0007>
- Tam, N.V., Watanabe, T. and Hai, N.L., 2022. Importance of autonomous motivation in construction labor productivity improvement in Vietnam: a self-determination theory perspective. *Buildings*, 12(6), p.763. <https://doi.org/10.3390/buildings12060763>
- Triandis, H.C., 2001. Individualism-collectivism and personality. *Journal of Personality*, 69(6), pp.907-924. <https://doi.org/10.1111/1467-6494.696169>
- Van Tilburg, T.G., 2021. Social, emotional, and existential loneliness: A test of the multidimensional concept. *The Gerontologist*, 61(7), pp.e335-e344. <https://doi.org/10.1093/geront/gnaa082>

- Veness, H., 1971. The Psychology of Crowd Behaviour: A Review of Freud's Theories in the Light of Contemporary Historical Research. *Australian & New Zealand Journal of Psychiatry*, 5(3), pp.199-205. <https://doi.org/10.3109/00048677109159645>
- Wagner III, J.A., Humphrey, S.E., Meyer, C.J. and Hollenbeck, J.R., 2012. Individualism–collectivism and team member performance: Another look. *Journal of Organizational Behavior*, 33(7), pp.946-963. <https://doi.org/10.1002/job.783>
- Wahyuni, D., 2021. Effects of workplace loneliness and perceived organizational support towards intention to leave mediated by organizational commitment. *International Journal of Research in Business and Social Science*, 10(4), pp.1-16. <https://doi.org/10.20525/ijrbs.v10i4.1212>
- Wax, A., Deutsch, C., Lindner, C., Lindner, S.J. and Hopmeyer, A., 2022. Workplace loneliness: The benefits and detriments of working from home. *Frontiers in Public Health*, 10, p.903975. <https://doi.org/10.3389/fpubh.2022.903975>
- Worsley, A., 2023. The Origins of 'Loneliness', the Oxford English Dictionary and Sir Philip Sidney's *The Countess of Pembroke's Arcadia* (1590). In *The Routledge History of Loneliness* (pp. 17-34). Routledge.
- Wright, J.P., Naeem, S., Hector, A., Lehman, C., Reich, P.B., Schmid, B. and Tilman, D., 2006. Conventional functional classification schemes underestimate the relationship with ecosystem functioning. *Ecology Letters*, 9(2), pp.111-120. <https://doi.org/10.1111/j.1461-0248.2005.00850.x>
- Wright, S. and Silard, A., 2021. Unravelling the antecedents of loneliness in the workplace. *Human Relations*, 74(7), pp.1060-1081. <https://doi.org/10.1177/0018726720906013>
- Wright, S.L., 2005. *Loneliness in the workplace*. University of Canterbury.
- Zhang, W., Jex, S.M., Peng, Y. and Wang, D., 2017. Exploring the effects of job autonomy on engagement and creativity: The moderating role of performance pressure and learning goal orientation. *Journal of Business and Psychology*, 32(3), pp.235-251. <https://doi.org/10.1007/s10869-016-9453-x>