




The Reciprocal Relationship Between Quiet Quitting and Turnover Intention Among Marketing Employees: Critical Insights from Cross-Lagged Path Analysis

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ABSTRACT

Quiet Quitting (QQ) and Turnover Intentions (TI) are emerging contemporary human resource issues that influence employee behavior and their decision to stay or leave an organization. QQ and TI pose potential threats to long-term employee retention, sustained productivity, and workplace continuity. Research on QQ and TI has mainly been cross-sectional, with limited empirical evidence from longitudinal data on how employee QQ and TI evolve and interrelate over time. Additionally, the literature has yet to reach a consensus on which variable predicts the other. To address these gaps, based on withdrawal cognition theory, job embeddedness theory, conservation of resources theory, the progressive withdrawal theory, and Herzberg's Hygiene-Motivation theory, cross-lagged path modeling was used to test six proposed hypotheses. Survey questionnaires collected data from marketing professionals in two waves—initially at Time 1 (N = 102) and a follow-up at Time 2 (N = 81), seven months later. Hypothesis testing was conducted using covariance-based structural equation modeling. Results showed a positive, significant correlational association between QQ and TI at each time point, indicating that increases in one are associated with increases in the other. TI remained stable or consistent from Time 1 to Time 2, while QQ showed lower and non-significant stability. TI was a positive causal temporal predictor of QQ, not vice-versa. Based on strong theoretical foundations, the study examined the ongoing debate of the temporal reciprocal effects of QQ and TI from a longitudinal perspective among marketing employees. The contribution to both theory and practice was summarized.

Keywords: turnover intention; quiet quitting; reciprocal effects; cross-lagged path analysis; longitudinal data



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1. INTRODUCTION

In the workplace, employers and managers face the repercussions and backlash from shifts in employees' behavior caused by quiet quitting (QQ) and turnover intention (TI). In other words, both concepts reflect changes in employees' attitudes and behaviors toward work. Recently, post-COVID-19 [1-2]. QQ and TI have been extensively examined in academic research due to their impact on employee attitude, workplace behavior, commitment, and productivity, ultimately leading to actual turnover [1, 3-5]. The Global Gallup Report [6] forecasted a rise in QQ and TI across the global workforce in the mid-2020s. This underscores the significant importance of these concepts for managers and researchers in human resource management and employee behavior today.

QQ represents a psychological shift in an employee's mindset where they restrict their work to basic responsibilities without exceeding expectations [1-2, 7]. This minimalist, somewhat passive behavior aims to do just enough to avoid being fired [8]. According to [3, 5], employees displaying QQ behavior do not strive to achieve organizational goals. As a result, it negatively affects work effectiveness, efficiency, and overall productivity. Additionally, the effects of QQ influence customer satisfaction and loyalty over the long term, especially for organizations involved in service delivery [9]. [10-12] argue that when employees exhibit QQ behavior at work, it fosters unhealthy and undesirable traits like low initiative, low motivation, and employee disengagement, which show up as absenteeism, lateness, and decreased work output. On the other hand, [14-15] stated that quiet quitting is a coping strategy used to

protect employees' mental health by minimizing workload or stress to prevent burnout and stressful work conditions, and to achieve work-life balance, not just to avoid job loss.

Turnover intention (TI) measures an employee's willingness or intent to leave the organization [15-16]. In the literature, TI is often used as an indicator of actual turnover [4, 17]. [18] empirically showed that TI is positively related to actual turnover. According to [19], an employee with TI actively looks for the earliest, most convenient opportunity to change jobs. TI is seen as a response to unsatisfactory work conditions or terms [20]. When an employee feels their goals are unmet or unreachable, their natural reaction is to seek the next available exit. The decision to leave or exit the organization (TI) depends on how easy they perceive it is to find another job [21]. For organizations, the cost of TI can be high, including expenses for replacement, strained client loyalty, increased workload for remaining employees, loss of business to competitors, time spent on recruiting and training new staff, workflow disruptions, and the departure of skilled workers to competitors [21].

Studies by [17, 22-24] have shown that the common causes of employee QQ and TI are dissatisfaction with overall workplace conditions—such as a toxic work environment, low pay, slow career growth, stifling work schedules, and burnout. Additionally, it is reasonable to state that an employee experiencing QQ is more likely to exhibit the intent to leave (TI) the organization, or vice versa. Current research [1, 25] indicates that TI is a likely result of QQ, as psychological changes in work and organizational engagement often point to an intention to exit if a suitable opportunity appears. Several studies have established relationships between QQ and TI in various settings: nurses [1], the hospital industry [14], and corporate organizations [16].

A systematic study by [25] on QQ and TI among nurses suggested that QQ mainly predicts TI due to their positive correlation. This finding by [25] might imply causation from correlation analysis, which cannot be concluded using cross-sectional data [1, 26]. Similarly, many individual and collective studies on QQ and TI are cross-sectional in design [1,5,22]. Likewise, [27] used a regression-based model on longitudinal data to examine the effect of QQ on TI, without considering bidirectional effects. Therefore, they are limited in their ability to identify potential temporal relationships that could be inferred from the structural connection between QQ and TI. As noted by [24-25], there is a lack of longitudinal empirical studies to determine valid causal relationships between QQ and TI. The questions to be answered are: Is QQ behavior a cause or temporal predictor of TI? Or is TI the cause of QQ behavior among employees? Is the effect positive or negative? To the best of the author's knowledge, this is the first longitudinal study to use cross-lagged path analysis to explore the temporal relationships between QQ and TI among healthcare marketing employees, and possibly in other areas of industry as well.

1.1 Theoretical Framework and Hypothesis Development

1.1.1 Withdrawal Cognition Theory

Withdrawal cognitive theory suggests that employees in organizations go through specific mental processes, such as contemplating quitting, seeking other jobs, and forming intentions to leave [28]. These mental processes influence or lead to actual employee turnover. Such thoughts are often triggered when employees perceive low support from their workplace, stressful or adverse work conditions, job insecurity, low satisfaction, and low morale [29]. In other words, employees are more likely to experience feelings of QQ and TI when they are unhappy with their work conditions. A systematic study by [30] confirmed that employee cognitive withdrawal supports QQ and TI behaviors that ultimately harm organizational growth. Similarly, [29] affirmed that high levels of withdrawal cognition were common among employees experiencing unfavorable work conditions.

1.1.2 Job Embeddedness Theory

Job embeddedness theory describes the factors, both on and off the job, that reduce an employee's likelihood of leaving their position. These on-and-off-the-job factors include ties to people, employees' perception of fit with their jobs, and beliefs about the costs of leaving [31-32]. According to [31], employees are less likely to leave their organizations if they have strong reasons to stay, such as close family ties, compatibility with their roles, and reluctance to sacrifice current benefits. An employer can decrease the chances of an employee leaving or harboring quiet quitting intentions by engaging them in their work. According to [33], job embeddedness is a strategy that organizations use to retain skilled staff. In summary, the more embedded an employee is, the less likely they are to leave the organization and the less likely they are to develop or display counterproductive attitudes and behaviors like QQ and TI.

1.1.3 Conservation of Resources Theory

The conservation of resources theory [34] is based on the idea of minimizing losses and maximizing gains. An average employee aims to maintain conditions that support their well-being in the organization. Any changes in policies or actions (such as a change in work conditions, threats to income, poor supervision, etc.) that threaten this sense of well-being cause stress and can lead to feelings of dissatisfaction, anxiety, and counterproductive behaviors like QQ and TI [35-36]. Similarly, when employees face loss or the threat of loss, they tend to generate gains that are larger than perceived losses. The conservation of resources theory examines how employees respond both under stress and when not under stress. When an employee experiences a shortage of resources, they respond by conserving their resources or energy to reduce loss. The theory recognizes that perceptions of loss and gain vary from person to person [35]. Conversely, when there is a surplus of resources, employees are likely to reserve some for future use. In this study's context, employees facing unfavorable work conditions may exhibit QQ and TI as coping strategies to lessen the negative impact of these conditions.

1.1.4 Herzberg's Hygiene-Motivation Theory

[37-39] introduced two mutually exclusive constructs Hygiene and Motivation—to explain potential causes of employee satisfaction with their jobs. The hygiene-motivation theory includes hygiene (extrinsic factors or dissatisfiers) and motivation (intrinsic factors or satisfiers), which are reasons why employees might feel dissatisfied and demotivated about their jobs [38]. Extrinsic factors related to the work environment include pay, salary, wages, supervision, company policies, and job security. Intrinsic factors refer to aspects of the work itself, such as promotion, recognition, job improvement, and responsibility. This theory is relevant to the study because it identifies the factors responsible for employee dissatisfaction, which can lead to undesirable organizational behaviors such as QQ and TI [3-4]. [40] used hygiene-motivation factors as mediators to explain how to achieve affective organizational commitment among employees in the healthcare marketing industry. Therefore, when employers and managers understand the root causes of certain behaviors, they can address the underlying issues effectively.

1.1.5 Theory of progressive withdrawal

The theory of progressive withdrawal explains the psychological and behavioral changes seen in employees exhibiting QQ and TI behaviors. It offers a framework to understand how QQ and TI are connected and develop within an organization [5]. According to [41-42], the withdrawal progression theory states that behaviors such as tardiness, absenteeism, low morale, QQ, and TI are closely linked, related, and tend to predict each other over time in the workplace. The theory suggests that negative employee behaviors start small and gradually get worse, eventually leading to employee turnover. As [43] noted, these QQ behaviors begin in minor forms and slowly escalate, ultimately resulting in employee disengagement from the organization (that is, leaving the organization). This theory is important for understanding how the shift occurs from QQ to TI or from TI to QQ. As [5] observed, previous research on QQ and TI mainly depends on theories of social exchange, leader-member exchange, organizational support, and equity [1-2, 8, 44]. However, the withdrawal progression theory uniquely captures three operational dimensions outlined by the cross-lagged path model: (1) The Correlational Dimension, which assesses the correlation effects of QQ with TI at time 1 and time 2. Specifically, at different points of assessment, are QQ and TI positively or negatively related? (2) The Autoregressive Dimension, which looks at how QQ and TI influence themselves over time—does QQ behavior at time 1 predict QQ at time 2, or does TI at time 1 predict TI at time 2? (3) Most importantly, this theory explores the possible causal, directional, or predictive effects of QQ at time 1 on TI at time 2, as well as the influence of TI at time 1 on QQ at time 2. As a result, cross-lagged path analysis was employed to model the proposed relationships, effectively and dynamically capturing the key insights derived from withdrawal cognition theory, job embeddedness theory, conservation of resources theory, Herzberg's Hygiene-Motivation theory, and the theory of progressive withdrawal.

1.1.6 Study Objectives

In light of the theoretical lens described, the study objectives (SO) are:

1. Correlational dimension:
SO1- To test the association between Quiet Quitting and Turnover Intentions over time (Zero Order Correlations at time 1 and Time 2, respectively)
2. Autoregressive dimension
SO2- To test the stability of effects for Quiet Quitting and Turnover Intentions over time (Stability coefficient or Autoregressive effect)
3. Causal dimension
SO3- To test the bidirectional or causal effects between Quiet Quitting and Turnover Intentions (Reciprocal effects)

1.1.7 Research Questions

Consequently, based on the study objectives listed above, the following research questions (RQ) were generated, namely-

1. RQ1- Is there a positive association between Quiet Quitting and Turnover Intentions over time (that is, unlagged effects)
2. RQ2- Are Quiet Quitting and Turnover Intentions stable or consistent over time? (At baseline time 1 and at time 2)
3. RQ3- Does Quiet Quitting causally predict Turnover Intentions or vice-versa?

1.1.8 Hypotheses of the study

Based on the SO and RQ, the following hypotheses were proposed, namely:

1. Hypothesis 1a: There is a positive and significant association between Quiet Quitting and Turnover Intentions at Time 1
2. Hypothesis 1b: There is a positive and significant association between Quiet Quitting and Turnover Intentions at Time 2
3. Hypothesis 2a: Turnover Intentions tend to be stable or consistent over time
4. Hypothesis 2b: Quiet Quitting tends to be stable or consistent over time
5. Hypothesis 3a: Quiet quitting positively predicts Turnover Intentions scores over time
6. Hypothesis 3b: Turnover Intention positively predicts Quiet Quitting over time

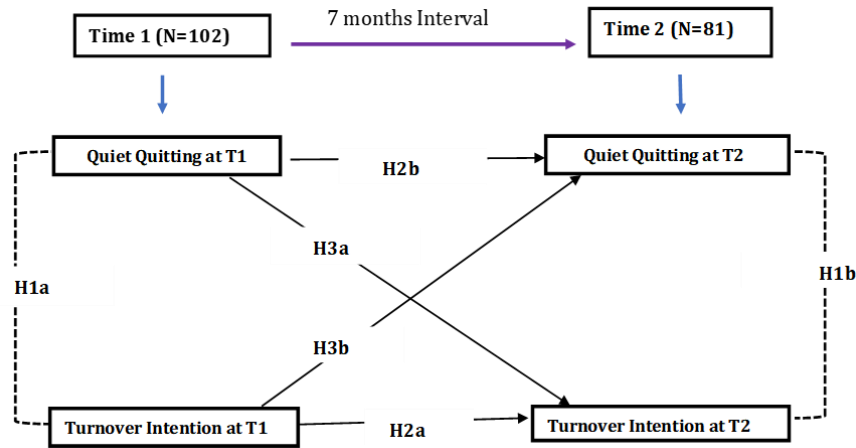


Figure 1. Theoretical model showing the test of hypotheses

The framework of the study is presented in Figure 1

2. METHODS

2.1 Participants and Procedure

The study used a quantitative approach with data collected at two points: baseline and after 7 months. The 7-month time lag was chosen because a longer duration helps identify expected directional changes and dynamic effects [45]. Employees in Nigeria's pharmaceutical marketing industry were selected due to the high turnover rates in the country [46]. In Africa, Nigeria's pharmaceutical sector is the largest and fastest-growing within healthcare [47]. The industry employs between 20,000 and 50,000 marketing staff involved in pharmaceutical marketing, which is a highly demanding job [46]. Therefore, this highlights the need for operational and human resource managers to study the time-dependent effects of QQ and TI.

Participants in the study included 150 operational and managerial employees from pharmaceutical marketing companies in Nigeria. A structured online questionnaire via Google Forms was administered at baseline between February 2025 (Time 1, T1) and re-administered to the same group after 7 months (October 2025; Time 2, T2). A projected attrition rate of 25% was expected to retain at least 80 participants for the final assessment. Participants provided their consent electronically before completing the questionnaire. In total, 102 participants were assessed at baseline (Time 1), and 81 participants at follow-up (Time 2). This is fewer than the recommended 200 participants for a cross-lagged path model with two waves [48-49]. However, for a study with a simple design and established research instruments, a smaller sample size is acceptable [48].

2.2 Analytical Strategy: Cross-lagged Path Analysis

A cross-lagged path model is a statistical technique used within structural equation modeling. It is an exploratory method that estimates unlagged, lagged, and bidirectional relationships among constructs measured over time [50]. Cross-lagged path analysis is also called dynamic modeling because it examines how variables influence themselves across multiple occasions [45, 50]. The unlagged path relationships refer to the correlation between variables measured at the same time point (e.g., QQ1 and TI1). This sheds light on the relationship between the constructs at that specific moment. In other words, a positive correlation coefficient indicates that an increase in one construct is linked to an increase in the other. The lagged, or autoregressive paths, reflect the stability of measurements from one time to the next [50]. Specifically, TI2 is regressed on the previous TI1, indicating the consistency of the measurement over time. A positive and significant value suggests that the construct becomes stronger from one time point to the next. Lastly, the cross-lagged, or bidirectional paths (QQ1 to TI2, and TI1 to QQ2), show how one construct (e.g., QQ measured at Time 1) predicts another (e.g., TI measured at Time 2), providing insight into possible causal or reciprocal relationships between the variables.

2.3 Measures

The questionnaire was divided into two sections. In section 1, basic demographic information of the study participants was collected. This included sex (male or female), age (in years), first degree, type of firm (indigenous or multinational), and current work role (operational or management). Additionally, data was gathered on years of experience in pharmaceutical marketing and years of experience in their current company. Section 2 included the measurement scales for quiet quitting and turnover intention. Quiet Quitting (QQ) was assessed using five items adapted from a psychometric scale developed by [2, 51-52]. Responses were measured on a 4-point Likert scale, from strongly disagree (1) to strongly agree (4). The 4-point Likert scale was applied in this research because the researcher intended to trigger a non-neutral response and to improve respondents' response speed [53-54]. The items were averaged to create a composite score, with

higher scores indicating greater levels of quiet quitting among respondents. Turnover Intention (TI) was measured with 10 items adapted from [16, 21]. Responses were assessed using a 4-point Likert scale ranging from strongly disagree (1) to strongly agree (4). The Responses were averaged to create a composite score. Higher scores indicate greater turnover intention among respondents. Details of the instruments are provided in Appendix 1.

2.4 Common Method Bias (CMB)

To address the possibility of response bias, which could potentially distort the validity of the findings, the datasets from Time 1 and Time 2 were separately assessed using Harman's One Factor method in SPSS [55]. Data from Time 1 showed a variance of 41.23% from the single factor, and Time 2 had 40.80%. Therefore, the likelihood of CMB was clarified since both datasets were below the 50% threshold [55].

2.5 Attrition Bias and Longitudinal Measurement Invariance between models over time

The data collected at Time 1 (N=102) and Time 2 (N=81) were analyzed for attrition; the overall attrition rate was 20.6% (n=21). It is important to verify that participant dropout due to attrition does not significantly impact the model or outcomes of the longitudinal study (attrition bias). According to [56], longitudinal measurement invariance can help identify attrition bias through measurement model comparison within the framework of covariance-based structural equation modeling. In this study, the measurement models from Time 1 and Time 2 data were compared using longitudinal measurement invariance testing available in LISREL syntax [57]. The syntax included the correlation matrices from both datasets (see Appendix 1), used to test for complete invariance with the chi-square (χ^2) difference test. Complete invariance indicates that the models are equivalent across Time points 1 and 2. As presented in Figure 2, a non-significant result ($\chi^2=9.45$, $df=20$, $p=0.977$) provided strong evidence that the measurement model remains invariant in both datasets. Therefore, it is concluded that the 21 participants who dropped out did not differ systematically from those who remained in the study.

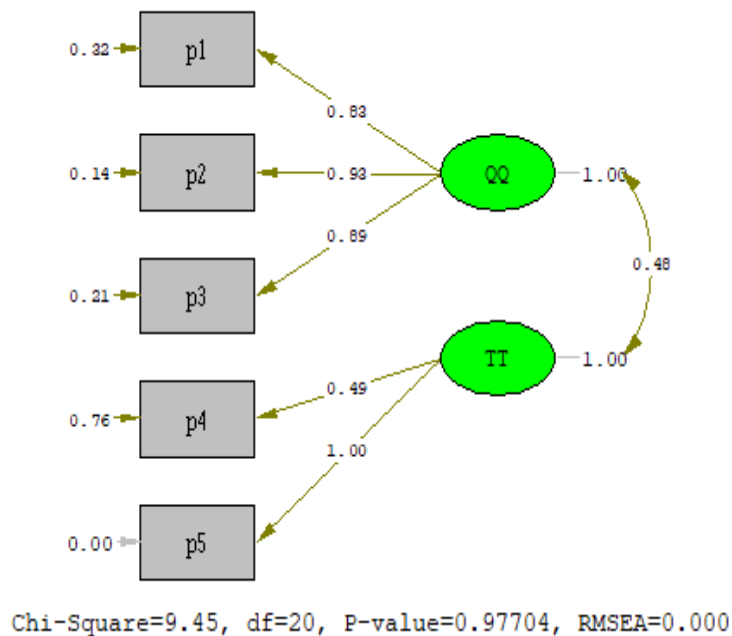


Figure 2. Theoretical model showing the test of hypotheses

2.6 Data Analysis

Descriptive statistics were used to summarize the demographic characteristics of respondents at Times 1 and 2. The measures of quiet quitting and turnover intention were analyzed using means, standard deviations, and correlation analysis. The measurement items for the instruments were assessed for reliability at both time points (t1 and t2) using the Cronbach alpha coefficient [58]. The items measuring the constructs were averaged to create composite scores for QQ and TI. Structural equation modeling was employed to specify and analyze the cross-lagged path model using LISREL [57, 59]. The maximum likelihood estimator in LISREL was used because of its robustness in handling non-normal data. The model fit of the cross-lagged path model was assessed using standard fit indices—standardized root means square residual (SRMR, <0.08), comparative fit index (CFI, >0.95), and root mean square error of approximation (RMSEA, <0.08)—following the recommendations of [60].

3. RESULT AND DISCUSSION

3.1 Demographic Analysis

Table 1. Demographic Analysis of Respondents over Time

Attributes	Time 1 (N=102)	Time 2 (N=81)	Mean Values
Age in years (+SD)	33.91±5.50	33.79±5.26	33.85 years
Gender (%)			
Male	70 (68.6)	68 (84.0)	69 %
Female	32 (31.4)	13 (16)	22.5 %
Qualification (%)			
Diploma	2 (2)	1 (1.2)	1.5%
BSc/HND	79 (77.5)	56 (69.1)	67.5%
BPharm/PharmD	21 (20.5)	24 (29.6)	22.5%
Company (%)			
Indigenous	73 (71.6)	57 (70.4)	65%
Multinational	29 (28.4)	24 (29.6)	26.5%
Work Role (%)			
Representatives	82 (80.4)	67 (82.7)	73.5%
Manager	20 (19.6)	14 (17.3)	17%
Years in Industry	5.96±5.90	5.67±4.14	5.82 years
Years in Current	3.61±3.13	3.75±2.71	3.68 years

Table 1 displays the demographic distribution of participants at baseline and during the follow-up. Overall, the attributes were consistent between Time 1 and Time 2. The average age was about 34 years in both datasets. Regarding gender, males outnumbered females at both time points. Typically, Bachelor of Science degree holders (n=67.5) were more numerous than pharmacy degree holders (n=22.5). Additionally, more participants worked for indigenous or locally owned companies than for multinational corporations. Throughout both data collection periods, most participants were operational staff (n=149), compared to those in managerial roles (n=34). On average, respondents had about 6 years of experience in the pharmaceutical marketing industry, with roughly 3.7 years of experience at their current jobs.

Table 2. Descriptive and reliability statistics of Observed Variables

Measures	QQ1	QQ2	TI1	TI2
Mean	10.91	10.32	24.97	26.16
SD	3.08	2.97	6.79	7.79
Skewness	0.24	0.26	0.25	-0.02
Kurtosis	-0.09	0.08	-0.61	-0.57
CA	0.70	0.71	0.91	0.94

Note: SD=standard deviation; CA=Cronbach Alpha; QQ1=quiet quitting measures at time 1; QQ2=quiet quitting measured at time 2; TI1=turnover intention measured at time 1; TI2=turnover intention measured at time 2

Table 2 presents the average scores for the QQ and TI at Time 1 and Time 2. Overall, TI scores were higher than QQ scores (e.g., at Time 1, QQ was 10.91 and TI was 24.97; at Time 2, QQ2 was 10.32 and TI2 was 26.16). Additionally, the mean QQ scores declined from 10.91 in QQ1 to 10.32 in QQ2, while TI scores increased from 24.97 at Time 1 to 26.16 at Time 2. The adequacy of the constructs' distribution was assessed using skewness and kurtosis values within the range of ± 2 to ± 7 [58]. Skewness for the QQ construct was 0.24 at Time 1 and 0.26 at Time 2, with kurtosis ranging from -0.09 to 0.08. For the TI construct, skewness was 0.25 and -0.02 at Times 1 and 2, with kurtosis values of -0.61 and -0.57. These distribution measures suggest that the data follow a normal distribution pattern. The multivariate normality of the constructs (QQ1, TI1, QQ2, and TI2) was tested using the Mahalanobis distance test in SPSS [61]. The Mahalanobis distance test measures the distance between a data point and the center of a multivariate distribution, thereby enabling clear identification of outliers in a dataset. The minimum and maximum Mahalanobis distance values were 0.299 and 39.776, respectively, with a mean of 3.951 (5.726 standard deviations). The critical value at $p < 0.05$ with 4 degrees of freedom is 9.488. Since the maximum Mahalanobis distance (39.776) exceeds the critical value (9.488) at $p < 0.05$, multivariate normality was confirmed. The internal reliability of the measurement tools, evaluated with Cronbach's alpha ($CR \geq 0.7$), was satisfactory for both instruments, with values ranging from 0.7 to 0.94.

Table 3. Correlation Matrix of Observed Variables at Time 1 and Time 2

Measures	QQ1	QQ2	TI1	TI2
QQ1				
QQ2	0.062			
TI1	0.468**	0.287**		
TI2	0.044	0.544**	0.192	

Note: ** $p < 0.01$ (2.56); * $p < 0.05$ ($t > 1.96$);

In Table 3, the correlation matrix was used to evaluate the relationships between constructs. The matrix showed that QQ1 was positively linked to TI1 but had no correlation with QQ2 and TI2. However, at Time 2, QQ2 was significantly related to TIs at both Times 1 and 2. Finally, TI at Time 1 was positively related to TI at Time 2, though the connection was not statistically significant. Concerns about multicollinearity were dismissed based on the significant correlations, as none surpassed the 0.9 cut-off set by [62].

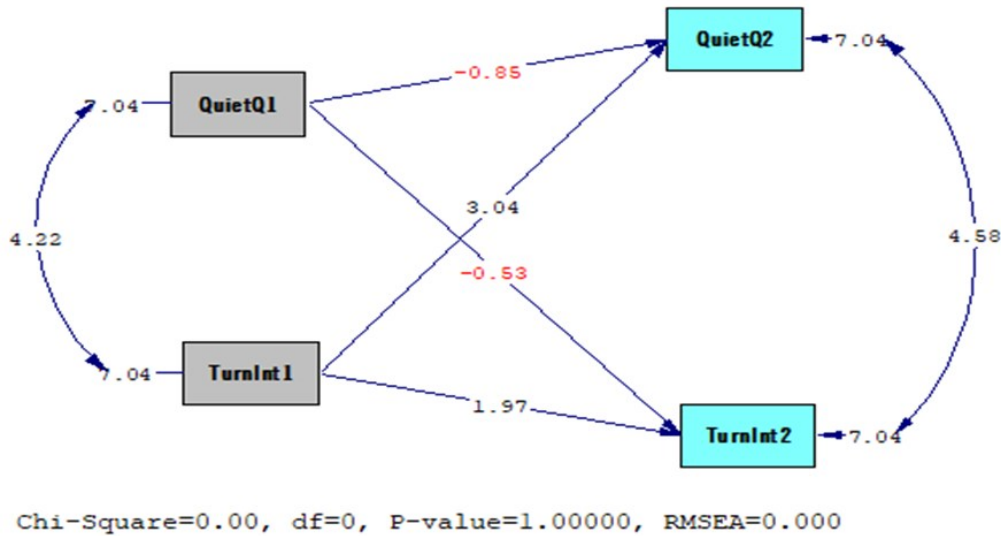


Figure 3. LISREL output of cross-lagged path analysis using t-values

Note. QuietQ1(QQ1) =Quiet Quitting score at time 1; QuietQ2 (QQ2) =Quiet Quitting at time 2; TurnInt1(TI) at time 1; TurnInt2 (TT2) at time 2

Figure 3 shows the basic cross-lagged path model output from LISREL. The model was perfectly fitted, with a CFI value of 1 and an RMSEA value of 0, making it a saturated model. Here, QQ1 and TI at time 1 are positively correlated (t-value=4.32, $p < 0.001$). This indicates a positive relationship between the two variables at time 1. The error terms for QQ2 and TT2 were also positively correlated ($t = 4.58$, $p < 0.001$). This positive association may suggest that the unexplained variances in QQ and TT at time 2 are related. Furthermore, the lagged or autoregressive effects were presented—QQ1 to QQ2 was negative and not significant with a t-value of -0.85 (less than 1.96); TI1 to TI2 was significant with $t = 1.97$. Finally, the cross-lagged or reciprocal path relationships showed that QQ1 to TI2 was not significant ($t = -0.53$), and TI1 to QQ2 was positive and significant ($t = 3.04$).

Table 4. Tests of Hypothesis for Cross-lagged Model

Test of Hypothesis	coefficients	t-value	Inference
Unlagged effects			
QQ1 <-----> TI1	0.47**	> 2.56	H1a supported
QQ2 <-----> TI2	0.54**	> 2.56	H1b supported
Stability effects			
QQ1 -----> QQ2	-0.09	-0.85	H2a not supported
TI1 -----> TI2	0.22*	1.97	H2b supported
Reciprocal effects			
QQ1 -----> TI2	-0.06	-0.53	H3a not supported
TI1 -----> QQ2	0.33**	3.04	H3b supported

Note: * $p < 0.05$ ($t > 1.96$), ** $p < 0.01$ ($t > 2.56$), SD=standard deviation, QQ1 and QQ2 are quiet quitting scores measured at Time 1 and 2, respectively. TI1 and TI2 are Turnover intention scores measured at Time 1 and 2, respectively.

From Table 4 and Figure 4, the unlagged, autoregressive, and reciprocal paths of the cross-lagged model were examined to test the proposed hypotheses. For the unlagged effects, the relationship between QQ and TI at time 1 was positive and significant ($r = 0.44$, $p < 0.01$), indicating that higher levels of QQ are associated with higher levels of TI. Therefore, hypothesis H1a was supported. Similarly, at Time 2, QQ also showed a positive relationship with TI ($r = 0.54$, $p < 0.01$), suggesting a strong connection between the two constructs. Thus, hypothesis H1b was supported.

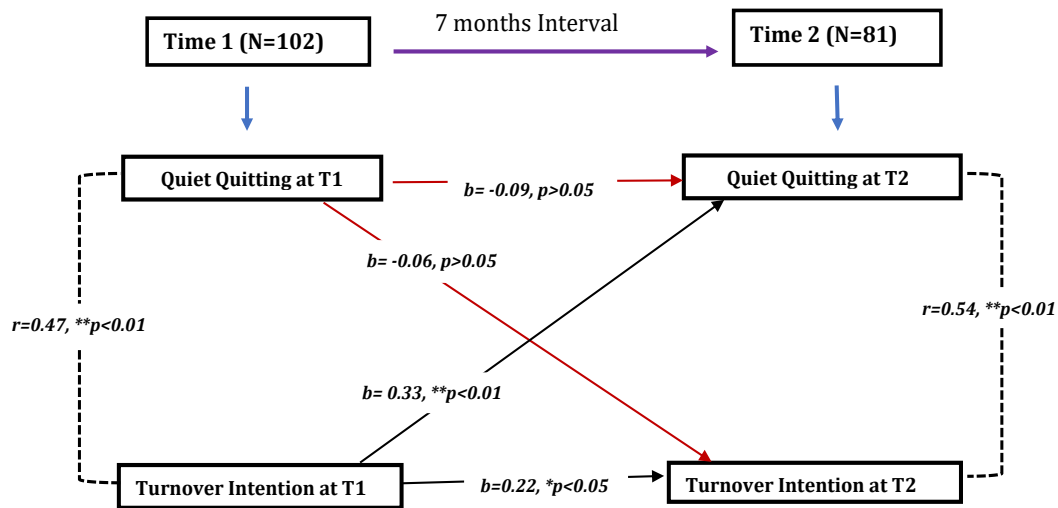


Figure 4. Cross-lagged Path Model of Quiet Quitting and Turnover Intention

Note. * $p < 0.05$, ** $p < 0.01$, b =beta or standardized regression coefficient, r =correlation coefficient, T1=Time 1, T2=Time 2, red colored arrows=not significant paths, black colored arrows=significant paths, dotted lines=correlation

The analysis of the autoregressive paths showed that regressing QQ at time 2 on QQ at time 1 yielded no significant result ($\beta = -0.09, p > 0.05$). This indicates that QQ did not change from time 1 to time 2. This suggests that QQ remains relatively stable in intensity over time. Therefore, hypothesis H2a was not supported. However, when TI at time 2 was regressed on TI at time 1, the coefficient was positive and significant ($\beta = 0.22, p < 0.05$). This demonstrates a consistent and positive increase in the intensity and level of TI from one time point to the next. As a result, hypothesis H2b was supported. Finally, the reciprocal influence between the two constructs was examined using cross-lagged paths. The results showed that QQ at Time 1 did not impact TI at Time 2 ($\beta = -0.06, p > 0.05$). This indicates that the level of QQ at Time 1 did not predict or affect the level of TI at Time 2. Therefore, hypothesis H3a was not supported. Conversely, the reciprocal effect of TI at time 1 strongly predicted the intensity of QQ at time 2 ($\beta = 0.33, p < 0.01$). This shows that TI levels at time 1 influenced QQ levels at time 2. In other words, higher TI scores initially positively affected QQ at time 2. Therefore, hypothesis H3b was supported.

3.2 Discussion

The study applied a cross-lagged path model to examine three issues related to the time-dependent relationship between QQ and TI. First, we evaluated the consistency of QQ and TI across various time points. Second, the study investigated the relationship between QQ and TI at each assessment period. Finally, we analyzed the bidirectional (reciprocal) effects of QQ and TI at two time points to identify the direction of influence or prediction. Overall, the final cross-lagged model matches the study's theoretical framework. For RQ1, the positive, significant correlations between QQ and TI indicated that higher QQ scores were associated with higher TI scores at both time points. This indicates that employees who experience TI are likely to exhibit QQ behavior. This finding supports previous research on the positive connection between these behaviors [25-26, 51]. These results confirm the proposed hypotheses H1a and H1b. To address RQ2, mixed findings were observed: QQ did not show a significant change from time 1 to time 2, which does not support the proposed hypothesis (H2a). This may indicate that the lack of significance reflects little or no change in initial QQ behavior over time. This aligns with the findings of [7, 11, 14, 44], who described QQ as a nuanced, silent behavior marked by gradual disengagement over time. The study's results suggest that QQ subtly manifests as undesirable and disengaged behaviors, including absenteeism, low work commitment, reluctance to take on additional tasks, and minimal participation [11, 14]. In other words, an employee exhibiting QQ has established boundaries in their engagement with the organization, doing just enough to justify their compensation.

Conversely, TI showed consistent growth or strengthening from time 1 to time 2 (supporting hypothesis H2b). This aligns with the literature, which suggests that an employee planning to leave will actively seek opportunities to exit. This is further supported by [4, 17-18], who indicate that TI is a precursor and indicator of actual turnover. Finally, RQ3 is addressed by the results exploring the reciprocal relationships between QQ and TI over time. Hypothesis H3a was not supported because QQ at baseline (time 1) did not predict TI at time 2. This indicates that employees who exhibited QQ behavior at time 1 did not necessarily influence their subsequent TI behavior at time 2. This finding aligns with [27], who found that QQ did not influence TI (when they repeated the analysis on the same sample six months apart), despite identifying a significant relationship in earlier analysis. Conversely, the findings of this study generally challenge the conclusions of cross-sectional studies [1, 5, 22], which suggested that QQ behavior directly predicts TI behavior. This key difference likely stems from the nature of data collected through cross-sectional analysis, which does not clarify the temporal effects of QQ on TI over time (longitudinal data).

Conversely, hypothesis H3b was supported because TI at time 1 predicted QQ behavior at time 2. This confirms that TI influences or predicts subsequent QQ behavior, not the other way around, indicating that employees who

display TI behavior later also predict QQ. This finding aligns with research [26], although it is from a cross-sectional perspective. The positive regression coefficient indicates a strong effect on QQ. This finding contradicts the common belief that QQ predicts TI [1, 5, 22]. Possibly, this may be due to three reasons: first, most studies examined the relationship between QQ and TI with QQ as the main predictor [1, 5, 22]. Second, most of these studies are mainly cross-sectional, which inherently do not explore the reciprocal relationship between QQ and TI over time. Finally, most analyses were correlational and do not imply a causal relationship between the variables. In summary, consistent with the theory of progression withdrawal, the findings indicate that the effects of TI increase over time, implying time-dependent change, while QQ tends to remain constant or unchanged. Similarly, TI behavior has a temporal effect on QQ behavior. This suggests that strong TI predicts QQ among employees in the pharmaceutical marketing industry in Nigeria. Organizationally, employees with a high intent to leave (TI) are more likely to display QQ as a coping strategy while awaiting the opportunity to exit. In other words, persisting unfavorable work conditions logically trigger withdrawal cognitive thoughts or the intention to change jobs (TI), which over time is expressed as QQ pending when the actual opportunity to change jobs or leave the organization presents itself. In the context of this study, the temporal precedence of TI over QQ stems from the fact that QQ is adopted as a coping mechanism pending when the employee can exit the organization.

3.3 Theoretical and Practical Implications

The study's findings significantly advance theory development in QQ and TI literature and debate. This is mainly due to the strong reciprocal effects of TI on QQ, which support the theory of progressive withdrawal. As a result, this study suggests that TI predicts QQ behavior rather than the other way around. Therefore, managers can recognize QQ behavior as a consequence of the intent to leave the organization (TI), not merely a self-care response to stress and burnout. Managers should be able to interpret such behavior in the appropriate context—whether QQ behavior is driven by stress and burnout or indicates an early sign of an intent to exit the organization. This distinction will help guide steps to manage QQ and TI effectively. The results support some researchers' view that QQ is not necessarily a harmful behavior [13-14]. Instead, managers should understand it as a self-care and balance mechanism employees use to prevent burnout and undue exploitation [24].

Similarly, employees may exhibit QQ behavior to ensure they stick to their core job responsibilities and avoid exceeding them. Therefore, managers should develop strategies to identify QQ behavior and implement various motivational initiatives to foster greater employee engagement. Such measures include increased incentives for work completed, an improved reward system, additional bonuses for extra effort, better manager-employee interactions to strengthen commitment, flexible work hours, and capacity building [7]. These strategies help improve employees' positive perception of the workplace and enhance their individual ability to deliver better performance or results [17]. Additionally, early detection of TI among employees is crucial for managers. This means that when managers quickly identify TI behavior in an employee, it becomes easier to isolate such cases and explore potential causes. The information obtained from this investigation is vital for making informed corrective actions. This is important because these actions will address the root causes of TI and prevent the development and escalation of QQ behavior into actual turnover [63]. In line with Herzberg's Hygiene-Motivation theory, managers should be able to utilize their knowledge and awareness of the extrinsic and intrinsic factors that influence an employee's QQ and TI behavior at work [40]. For instance, an employee who is not putting in effort (QQ behavior) might be doing so because they are overdue for a promotion (intrinsic) or inadequately compensated for their past performance (extrinsic). As a result, the employer or manager can modify the QQ behavior by addressing these issues. An effective way to manage work teams is to use the QQ and TI instruments as anonymously structured diagnostic tools to screen employees periodically for such behaviors. Therefore, managers should be trained to recognize the signs and symptoms of TI and QQ behavior early enough to enable targeted and effective interventions to prevent their occurrence or at least lessen the incidence and severity of QQ and TI behaviors in the workplace. Such interventions include the identification and removal of dissatisfiers, improving employee involvement in decision-making, improving superior-subordinate collaboration, work processes, and minimizing stress in the workplace.

3.4 Limitations and future research

As expected from any study, some limitations present opportunities for further research. The model used for the cross-lagged path analysis was just-identified and might produce inflated parameter and path estimates. Therefore, future studies should consider a full structural model. Since the study is based on the healthcare marketing industry, caution is advised when applying the findings to employees in other sectors or cultural contexts. The study employed a basic two-time-point cross-lagged panel design, which may limit the amount of information obtained from such models. Future research should explore the hypotheses over longer periods. Additionally, only TI and QQ were included, without considering other individual and organizational variables for mediation and interaction effects. Future studies are encouraged to address this limitation. Finally, although the sample size was justified for this study, replicating the results with a larger sample would help verify their robustness.

4. CONCLUSION

Based on strong theoretical foundations, the study examined the ongoing question of the reciprocal effects of QQ and TI using a cross-lagged path model. This study uniquely advances the discussion on the temporal relationship between QQ and TI from a longitudinal perspective. However, managers and researchers should consider the context when conducting cross-lagged path analysis. To enhance the reliability of findings related to QQ and TI, researchers should broaden their

assessments to include time-dependent effects within specific populations. The study concludes that the correlational relationship between QQ and TI is consistently positive and strong. Additionally, TI remains stable over time, and QQ also appears consistent. Finally, the level of Turnover Intentions predicts the level of Quiet Quitting behavior, rather than vice versa. Managers should be trained to recognize early signs and take corrective actions to reduce QQ and TI in the workplace.

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