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Enhancing Cognitive Work Environments: A Case Study on Job Demands, Resources, and Quiet Quitting in Offshore Front Office BPO Employees in Metro Manila

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Abstract

The Philippines is a leading destination for BPO services because of its cost advantages and skilled workforce. However, front-office BPO employees often encounter challenges associated with shift work, as they have to modify their working hours to meet the demands of foreign clients. These challenges include cognitive strain, burnout, and disengagement, to mention a few. A growing concern in the industry is quiet quitting, where employees do not formally resign but perform their work at a bare minimum. This study seeks to fill this gap by exploring the experiences of front-office BPO employees across all shifts and generational cohorts, focusing on how varying work schedules affect job demands, resources, and quiet quitting behavior. Using the Job Demands-Resources (JD-R) model, the study explores the relationship between burnout, workload, work-family conflict, engagement, feedback, and social support influence quiet quitting. Data was collected from 299 respondents and analyzed using Partial Least Squares - Structural Equation Modeling (PLS-SEM). Findings indicate that higher engagement significantly reduces quiet quitting tendencies. Additionally, feedback and social support mitigate disengagement indirectly by means of improving employee satisfaction, commitment, and work-life balance. The research provides valuable findings for BPO sectors, company leaders, policymakers, and employees - emphasizing the importance of improving workplace conditions to enhance productivity and retention. Future research can build upon these findings to explore further the challenges within the BPO industry and inform policies that promote employee well-being.

Keywords

offshore front-office BPO employees, shift work, quiet quitting, cognitive work environments, JD-R model

1. Introduction

Business processing outsourcing (BPO) involves hiring other entities to handle specific business functions, such as customer service, marketing, human resources, and other Information Technology (IT) functions. Outsourcing is a common practice among companies nowadays as it helps organizations run efficiently and at lower costs (Corporate Finance Institute 2020). In 2019, global outsourced services were valued at 92.5 billion U.S. dollars and contributed $26 billion to the Philippine economy (Statista Research Department 2023). In the same year, Candelario et al. (2024) said that around 1.3 million people were employed within different sectors of the BPO industry. Focusing on the customer service sector, the shift-based nature of the work—often requiring night shifts—poses challenges to employee well-being, particularly in cognitive ergonomics, burnout, and disengagement.

As the Philippines continues to excel in outsourcing customer service, Filipino front office BPO employees had to modify their working hours to coincide with their foreign clients' time zones to meet their company's needs (Jabutay et al. 2022). Due to job demands and shifts of night workers, which run from 10 PM to 6 AM, employees have limited opportunities for social engagement. The need for this kind of labor, particularly because of shift work, significantly impacts employees' cognitive ergonomics regarding engagement and burnout. Leso et al. (2021) found that shift work significantly reduces cognitive efficiency, causing fatigue and impairing attention, memory, and concentration, which lowers productivity and service quality.

The cognitive strains of shift work also give rise to another potential problem within the work environment of front-office BPO employees, which is the concept of quiet quitting, where employees do the bare minimum due to burnout and job dissatisfaction. While the BPO call center industry in the Philippines may seem to pose an ideal work environment due to the number of jobs it generates, the demand for this type of work, especially due to night shift work, extensively affects the cognitive ergonomics of workers in terms of burnout and engagement. Bula et al. (2023) suggested that when customer service representatives (CSRs) use digital technologies in their work, staff disengagement, resulting in burnout and motivational loss, is likely to happen due to the absence of balance between digital and human interaction. This is common in this type of work, and therefore, the study suggested that companies should consider their workers' well-being when it comes to optimizing and improving their workplace environment.

In light of the night/graveyard work schedules, customer service employees experience significant repercussions when adjusting their timetables. Given that the BPO sector significantly contributed to the Philippine economy's recovery, it is crucial to consider the welfare of BPO customer service employees who are at the front lines of keeping the nation's employment rate high. They are the definition of flexibility; whether working from home or in an office, serving clients through phone calls remains their top priority despite the world's transition to a new normal (Bansig et al., as cited by Cabello 2022).

While much of the existing literature has examined the effects of shift work, particularly night shifts, on employee burnout, cognitive function, and engagement (Jabutay et al. 2022 and Leso et al. 2021), there remains a significant gap in research regarding the holistic impact of different work shifts—morning, afternoon, and graveyard—on front office employees and how this can bring about quiet quitting behaviors. Although many studies focus on call center agents, this research aims to broaden the scope by including a variety of front-office roles that involve client-facing activities, whether in person, over the phone, or online. Furthermore, most existing studies have addressed the challenges associated with night shift work, often overlooking how morning and afternoon shifts affect employee well-being, job satisfaction, and engagement. While the link between shift work and burnout is well-documented (Pevec 2023 and Bula et al. 2023), few studies have explored the combined effects of working across all shifts within the same cohort of employees. There are also a few studies that explore the presence of quiet quitting, specifically among front-office BPO employees. This study seeks to fill this gap by exploring the experiences of front-office BPO employees across all shifts, focusing on how varying work schedules affect cognitive ergonomics, employee engagement, and quiet quitting behavior. By addressing this gap, the study aims to provide insights that can help enhance cognitive work environments, promoting better employee well-being and productivity.

1.1 Objectives

The study aims to determine the factors influencing quiet quitting and the well-being of BPO front-office employees. This study is limited to offshore front-office BPO employees in Metro Manila taking morning shifts, afternoon shifts,

and graveyard or night shifts in their workplace. Specifically, the study seeks to:

1. Determine the respondents' level of
    a. Job demands (Work-Family Conflict, Workload);
    b. Job resources (Social Support, Feedback);
    c. Burnout;
    d. Engagement;
    e. Quiet quitting
2. Investigate the effect of the variables under job demands and job resources on respondents' level of burnout and engagement.
3. Examine the effect of the variables under job demands and job resources on quiet quitting.
4. Ascertain the influence of respondents' level of burnout and engagement on quiet quitting.
5. Provide BPO leaders with crucial information to improve the cognitive work environments of their employees and address issues such as burnout and disengagement.

The findings of this study, which could potentially uncover issues in the offshore front office BPO industry, are of significant importance. It could provide BPO leaders with crucial information to improve the well-being of their employees and address issues such as burnout and disengagement. The empirical study will employ a quantitative causal-comparative research design to identify the relationship between quiet quitting, with variables under job demands and resources as the primary factors and burnout and engagement as mediating variables. The researchers are optimistic that these findings will pave the way for more effective strategies in the industry, empowering BPO leaders with the knowledge they need to make positive changes.

2. Literature Review

The literature review encompasses studies from past researchers on factors affecting cognitive well-being in the workplace, specifically among call center agents, using the JD-R Model by Demerouti et al. (2001) and Bakker & Demerouti (2017) as the study's theoretical foundation. While there is existing literature on job demands and resources and the emergence of quiet quitting, there are gaps in understanding the phenomenon, particularly in the offshore BPO context. Numerous studies have employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the interrelationship between these variables, providing consistent findings across various contexts (e.g., Dewi & Riana 2019; López-Núñez et al. 2020; Kaufman & Taniguchi 2020).

Despite this, there is a notable gap in the literature regarding the specific application of the JD-R model to offshore front-office BPO employees in Metro Manila, especially in relation to the emerging phenomenon of quiet quitting. While quiet quitting has gained attention in recent studies, such as Xueyun et al. (2023), which suggest it is prevalent among Generation Z, there is a lack of research that investigates whether this behavior extends beyond Generation Z or is present across multiple shifts (morning, afternoon, graveyard) and across different customer service roles in offshore BPO companies.Moreover, the existing literature on quiet quitting is often limited to call center agents, primarily focusing on night shifts. Studies such as Badilla et al. (2023) have explored quiet quitting among professionals in Metro Manila, but these studies are industry-agnostic, lacking a specific focus on the BPO sector. Badilla et al.'s research on emotional exhaustion and quiet quitting does not account for the diverse roles or shifts within BPO environments, nor does it explore the multi-generational aspect of quiet quitting behavior.

This study seeks to explore quiet quitting across a broader range of BPO customer service positions (including call center agents and other front-office employees), work shifts (morning, afternoon, graveyard), and generational cohorts (Generation Z, Millennials, and Generation X). By examining the cognitive work environment, which encompasses job demands (workload, work-family conflict) and resources (social support, feedback), this research will explore how these factors influence quiet quitting behaviors. The cognitive demands of the job, combined with the availability of resources to cope with these demands, can affect employee engagement and burnout—key mediating factors that influence quiet quitting. By assessing how these dynamics vary across different shifts and generational groups, this study aims to provide a comprehensive understanding of how cognitive stressors in the BPO work environment contribute to quiet quitting, addressing an underexplored area in the literature.

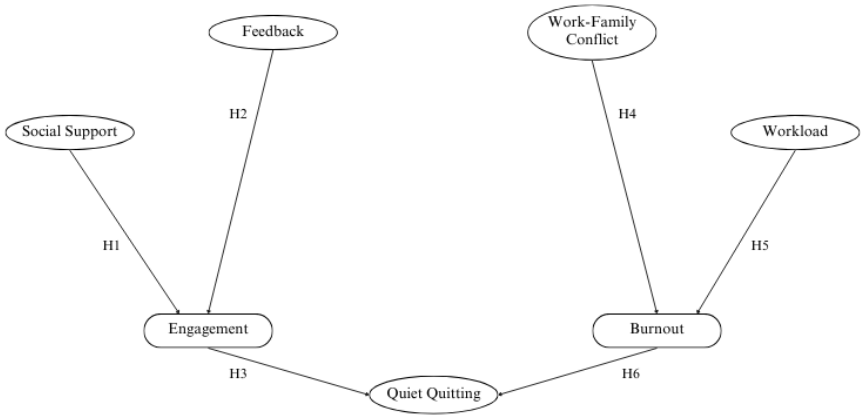

Figure 1. Conceptual Framework

Figure 3 shows the conceptual paradigm of the study. It clearly illustrates the interrelationship between the independent, mediating, and dependent variables on call center agents' cognitive well-being and on quiet quitting. The JD-R Model was further developed by adding up variables for job demands and was adopted from the following study by Kaiser et al. (2020) and the particular factors of job resources are from the studies of Scholze & Hecker (2023) and Kaihlanen et al. (2023). Lastly, the researchers selected quiet quitting as an outcome for the JD-R model.

3. Methods

The researchers used Partial Least Squares - Structural Equation Modeling (PLS-SEM), a quantitative predictive methodology, to assess the structural importance of the independent variables concerning the dependent variables. The dependent variable is quiet quitting and the latent variables are the following: burnout, engagement, social support, feedback, workload, and work-family conflict.

The researchers adapted standardized questionnaires from van Veldhoven & Meijman (2014), Haslam et al. (2014), Burr et al. (2019), and Kristensen et al. (2005) to specifically measure the related variables in this study. This questionnaire used a 5-point Likert Scale measuring the levels of the work environment and psychosocial variables considered in the study, such as the variables under job demand and job resource, and quiet quitting. Job demands (workload & work-family conflict) were measured using the "Questionnaire on the Experience and Evaluation of Work" (QEEW), which evaluates employee's work experiences and evaluations in their work environment, and "The Work-Family Conflict Scale" (WAFCS), which is a tool that has been widely used to measure work-to-family conflict. Job resources (social support & feedback) were measured using the "Copenhagen Psychosocial Questionnaire" (COPSOQ), which assesses an individual's psychosocial working conditions, health, and well-being and the QEEW. Social support and feedback were measured using the COPSOQ, and the rest were measured using QEEW. The mediating variables, burnout, and engagement were measured using the "Copenhagen Burnout Inventory" (CBI) tools, which assesses employees' repercussions on human service workers' mental and physical health. Finally, quiet quitting was measured using the instrument "Quiet Quitting Scale," a tool specifically created to measure quiet quitting among employees and COPSOQ.

3.1 Determining Minimum Sample Size

Following the minimum sample size recommendations guarantees that a statistical approach, like PLS-SEM, produces results with sufficient statistical power. Therefore, to determine the minimum sample size needed for the study, the researchers used the 10 times rule, one of the methods of finding the minimum sample size for PLS-SEM. The rule of thumb states that the maximum number of arrowheads pointing at the latent variables will be multiplied by 10. The researchers have six latent variables (Social Support, Feedback, Work-Family Conflict, Workload, Engagement, and Burnout) that will be multiplied to 10 (6x10), which results in 60 minimum sample size. To obtain a more reliable result, the researchers utilized the G*Power Software which resulted in a number of 146 minimum sample sizes. A study in Moroccan Call Center Agents by Iddoub & Barzi (2023) obtained a more reliable minimum sample size

estimate by having the sample size obtained from the G*Power to be multiplied by 2 or 3, as suggested by Hair et al., (2022). As a result, the minimum sample size for this study would be (146x2) = 292.

4. Data Collection

The data-collecting instrument used in this study was a survey questionnaire answered by the eligible respondents, Offshore Call Center Agents in Metro Manila, who responded to the standardized questionnaire that the researchers self-officiated. Respondents completed the survey questionnaire based on their personal experience, knowledge, and opinions in their work environment. The survey questionnaire is composed of questions about their demographics, psychosocial factors, and environment in the workspace. Additionally, the survey questionnaire was answered by utilizing online surveys through Google Forms. The gathered data were interpreted using statistical analysis through structural equation modeling (SEM), specifically the Partial Least Squares Structural Equation Modeling (PLS-SEM). The statistical tool helped the researchers determine the relationship between different factors that affect the quiet quitting of call center agents in Metro Manila according to their job demands and resources in their workspace. From the sampling plan, the standard minimum sample size when using the 10 times rule would be 292. This was the researchers' basis for determining the sample size of participants in the online data collection process.

5. Results and Discussion

5.1 Estimation of the Path Model

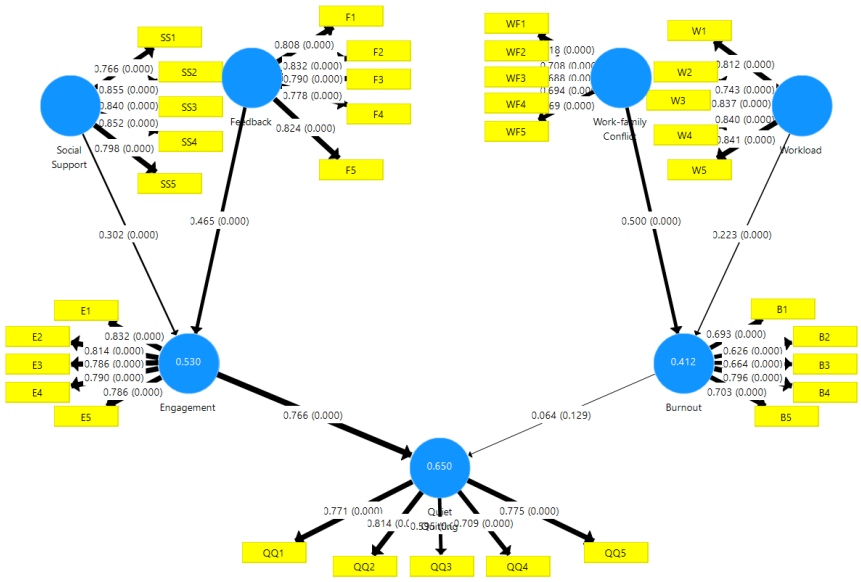

Figure 2. Estimation of the Path Model

Based on the PLS-SEM model in Figure 2, Table 1 summarizes the hypothesis testing summary. The first two hypotheses relate to the association between burnout, engagement, and quiet quitting. Only H6 is not supported between the two hypotheses, indicating that burnout is not associated with quiet quitting in the context of offshore front office BPO employees. H1 and H2 are supported, suggesting an association between feedback and engagement and social support and engagement. Hypotheses H4 and H5 are supported, indicating that work-family conflict, quiet quitting, and workload and burnout are associated. Lastly, since burnout is not associated with quiet quitting, variables that mediate with burnout namely, work-family conflict and workload, will be removed from the model.

Table 1. Bootstrapping Result - Hypothesis Testing

Hypothesis	Standard Coefficient	Remark
Burnout -> Quiet Quitting		
H6: Burnout has a significant effect on the quiet quitting of offshore front-office BPO employees of Metro Manila.	0.064(0.129)	Not Supported
Engagement -> Quiet Quitting		
H3: Engagement has a significant effect on the quiet quitting of offshore front-office BPO employees of Metro Manila.	0.766(0.000)	Supported
Feedback -> Engagement		
H2: Feedback (Job Resource) has a significant effect on the engagement of offshore front-office BPO employees in the workplace.	0.465(0.000)	Supported
Social Support -> Engagement		
H1: Social Support (Job Resource) has a significant effect on the engagement of offshore front-office BPO employees in the workplace.	0.302(0.000)	Supported
Work-Family Conflict -> Burnout		
H4: Work-family conflict (Job Demand) has a significant effect on burnout of offshore front-office BPO employees in the workplace.	0.500(0.000)	Supported
Workload -> Burnout		
H5: Workload (Job Demands) has a significant effect on burnout of offshore front-office BPO employees in the workplace.	0.223(0.000)	Supported

5.2 Refined Path Model

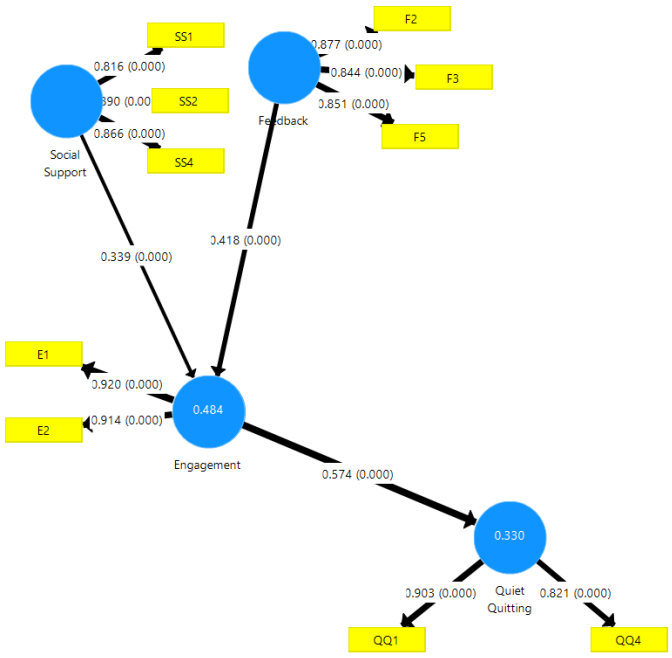

Figure 3. Final PLS-SEM Model

The researchers refined the model, removing the latent variables that are not associated and not connected with each other and presenting a model with significant associations with quiet quitting. Figure 3 shows the refined PLS-SEM model of the study.

Table 2 provides significant information about how the model's constructs relate to one another. Engagement has a significant impact on Quiet Quitting (T Statistics = 13.477, P<0.05), indicating that higher levels of engagement significantly reduce the tendency for quiet quitting. Feedback has a significant impact on Engagement (T Statistics = 6.435, P<0.05), suggesting that providing feedback plays a critical role in enhancing employee engagement. Feedback has a significant impact on Quiet Quitting (T Statistics = 5.539, P<0.05), demonstrating that feedback reduces quiet quitting behaviors. Social Support significantly impacts Engagement (T Statistics = 5.846, P<0.05), indicating the positive impact of workplace social support in fostering employee engagement. Social Support has a significant impact on Quiet Quitting (T Statistics = 5.304, P<0.05), suggesting that social support helps to reduce quiet quitting by having a supportive work environment.

Table 2. Total Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Engagement -> Quiet Quitting	0.574	0.58	0.043	13.477	0
Feedback -> Engagement	0.418	0.418	0.065	6.435	0
Feedback -> Quiet Quitting	0.24	0.242	0.043	5.539	0
Social Support -> Engagement	0.339	0.34	0.058	5.846	0
Social Support -> Quiet Quitting	0.195	0.197	0.037	5.304	0

Table 3 highlights the indicators retained in this study's final iteration of the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis. Each indicator corresponds to a specific latent variable and consists of multiple statements or survey items designed to capture the essence of the measured construct. These statements are carefully aligned with the theoretical definition of the latent variables, ensuring that they collectively reflect the underlying concept accurately. The refinement process in the PLS-SEM model involves iterative evaluations to ensure only indicators with strong statistical relevance and validity—such as meeting thresholds for outer loadings and discriminant validity—are retained. This approach enhances the model's reliability and explanatory power by eliminating weak or non-significant indicators that could otherwise compromise the results.

Table 3. Final Indicators

E1	"I consistently demonstrate perseverance in my work by staying committed to delivering high quality service to clients even when facing difficult situations at work."
E2	"I find it important to satisfy customers, resolve their issues and inquiries, contributing to the organization's goals."
F2	“I have the opportunity to check on how well I am doing with my work.”
F3	“I am able to understand how good or bad my performance is, depending on how people rate my work."
F5	"I feel comfortable seeking feedback from my colleagues and immediate superior regarding my work performance.
QQ1	“I find myself going above and beyond when doing my work.”
QQ4	“I find myself always expressing my opinions and ideas about my work and am willing to take on additional tasks.”
SS1	"I always receive help, encouragement during challenging situations, and advice when facing difficult decisions from my colleagues"
SS2	“I have my immediate supervisor/ colleagues that are willing to listen if I have work related problems.”
SS4	"I feel that my colleagues genuinely share their knowledge and experience with me to help me perform my job more effectively."

Abbreviations: Burnout (B), Engagement (E), Feedback (F), Quiet Quitting (QQ), Social Support (SS), Work-Family Conflict (WF), Workload (W)

5.3 Discussion

In this study, the proponents aim to discuss how the concept of quiet quitting may be attributed to the behavior of offshore front-office Business Process Outsourcing (BPO) employees, particularly in the customer service sector in Metro Manila. This study explored the factors influencing the quiet quitting of BPO front-office employees. The key findings of the PLS-SEM are that first, the proponents examined the relationship between the latent variables – burnout, engagement, quiet quitting, feedback, social support, work-family conflict, and workload. Table 1 shows that burnout and workload do not have a direct significant relationship with quiet quitting, as exhibited by their attributed p-values > 0.05. In relation to this, it was assumed that burnout is not a factor influencing quiet quitting among front-office BPO customer service employees in Metro Manila.

Another result from the study established a positive relationship between engagement and quiet quitting, as shown in Table 2 because it was revealed that high engagement reduces the tendency for quiet quitting. This outcome is ideal, and thus, it provides a positive relationship as supported by the positive outer loading and p-value < 0.05 of engagement to quiet quitting. When an offshore front-office BPO employee is fully engaged in their work, the likelihood of them exhibiting quiet quitting behaviors decreases. However, if they struggle to find satisfaction in their work, their propensity to quiet quit becomes a possibility. Abaleta et al.'s (2023) study states that employee engagement indicates work-oriented engagement, and this contrasts with the idea of quiet quitting involving employees avoiding going above their work requirements.

Relative to the study's findings, efforts to implement structured policies to boost employee engagement should be prioritized by BPO organizations. This can be achieved through employee development programs, wellness initiatives, and the provision of incentives. Doing such can encourage professional growth within the workplace and can provide employees with opportunities for career advancement, thereby increasing motivation – an effective way to reduce disengagement and quiet quitting.

As indicated in Table 4, feedback has a positive indirect effect on quiet quitting while a positive, strong direct effect on engagement, as shown in Table 2. This can be explained by Engelmann's (2022) and Mahand & Caldwell (2023) studies, stating that feedback is crucial for employee engagement as it builds trust, recognizes contributions and supports growth. When feedback and engagement have a positive effect on offshore front-office BPO employees, there is little to no chance that they would quiet quit. They have the drive to go above and beyond their work and will be able to express their ideas and take on additional tasks.Given these findings, it is vital to bolster employees' drive to do their work well to support employee and company growth. BPO companies should establish a regular feedback mechanism, which includes performance reviews and open communication channels. Additionally, the implementation of mentorship programs and peer support activities can cultivate a collaborative workplace environment that promotes engagement and minimizes quiet quitting behaviors.

On the other hand, the data in Table 2 shows social support has also been shown to positively impact engagement. An explanation for this is social support helps manage stress, improve work-life balance, and prevent disengagement (Ali, 2017; Wilkinson, 2022; Harvey, 2023 as cited by Pevec, 2023). The studies show that employees with social support and adaptive changes in management styles were better able to cope with challenges, while those without support reported negative mental health outcomes. With the emotional and psychological help they gain from their colleagues and immediate supervisor, they can engage in their work and provide high-quality services that can contribute to their organization's goals.

To say that a workplace has a supportive work environment, it should have initiatives that encourage social support, such as team-building activities, employee wellness programs, and leadership training. Given this, BPO companies should focus on implementing such activities to foster a supportive working environment for their employees. At the government level, policymakers can enhance labor protections through the implementation of mental health support programs and the provision of fair workload distribution regulations to prevent disengagement and burnout among BPO employees.

Relating feedback and social support may indirectly prevent quiet quitting, as highlighted in Table 4, by addressing disengagement factors. The results showed that feedback enables employees to check, understand, and seek other

employees about their performance, the opportunity to foster relationships and connection inside the workplace enhances engagement as they feel a sense of belongingness, which will push them to be enthusiastic and committed to their work or otherwise. As per social support, psychological support helps employees boost their engagement in the workplace, which again determines the level of engagement in the workplace and their levels of quiet quitting.

Given these findings, company leaders and policymakers alike should consider setting policies that directly alleviate disengagement factors. At the company level, organizations should establish career progression programs, engagement-driven incentives, and flexible work arrangements that can significantly reduce the tendency for quiet quitting. From a legislative perspective, policymakers should ensure that labor laws are prioritizing employee well-being to contribute to a more sustainable and engaged workforce in the offshore BPO sector. This can include implementing fair shift regulations, wellness incentives, and required employee assistance programs.

Table 4. Total Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Engagement -> Quiet Quitting					
Feedback -> Engagement					
Feedback -> Quiet Quitting	0.24	0.242	0.043	5.539	0
Social Support -> Engagement					
Social Support -> Quiet Quitting	0.195	0.197	0.037	5.304	0

5.4 Proposed Improvements

It is recommended that a larger sample size be used to conduct Partial Least Squares Structural Equation Modeling (PLS-SEM) in this study. A larger sample enhances the statistical power of the model, allowing for more reliable estimation of path coefficients and improved detection of significant relationships among latent variables. Having larger sample size can increase the stability of the model, reduce sampling variability, and strengthen the validity of results, particularly for complex models with many indicators and latent variables. Future researchers can explore several areas to address and expand upon this gap. One potential direction is to broaden the sample population by targeting a more comprehensive range of BPO employees across different regions, roles, and companies to enhance the diversity and representativeness of the findings. Conducting longitudinal studies could also provide valuable insights into how the variables of interest, such as Social Support, Engagement, Feedback, and Quiet Quitting, evolve, accounting for factors like employee turnover or workload fluctuations.

5.5 Validation

Hair et al. (2020) noted that the construct reliability of construct scores should fall within the range of 0.7. This coefficient is specifically associated with the reflective measurement model, which assumes that the indicators of a latent variable are subject to random measurement errors. Since the refined model has smaller scale items, the composite reliability value should be at least 0.6 or higher, according to Henseler et al. (2009), as cited by Suryani et al., (2024). Composite reliability measures internal consistency and must not be lower than 0.6 (Henseler et al., 2009 as cited by Rady et al. 2023) therefore, all of the criteria were met based on the results shown below.

The results in Table 5 displays that the constructs used in the study are reliable and exhibit good convergent validity, thereby supporting the robustness of the measurement model. On the other hand Fornell and Larcker (1981) suggest

that the average variance extracted (AVE) should be greater than 0.5. Under the reflective measurement model, the AVE represents the proportion of variance in the indicators accounted for by the underlying latent variable. From the table below, the AVE of the constructs are beyond the value of stated criteria.

Table 5. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Burnout	0.795	0.819	0.865	0.616
Engagement	0.811	0.811	0.913	0.841
Feedback	0.82	0.824	0.893	0.735
Quiet Quitting	0.663	0.679	0.854	0.746
Social Support	0.821	0.832	0.893	0.736
Work-Family Conflict	0.745	0.746	0.887	0.797
Workload	0.874	0.88	0.908	0.664

The researchers initially faced challenges in establishing discriminant validity, as the results indicated unacceptable values for both the Fornell-Larcker Criterion and the Heterotrait-Monotrait Ratio (HTMT). The standard deviation of each respondent's responses to the latent variables was analyzed to address this, revealing unacceptable HTMT ratio values. The four latent variables—Social Support, Feedback, Engagement, and Quiet Quitting—were assessed by calculating the standard deviation for each respondent. Responses with a standard deviation below 0.25 were excluded, following Collier's (2020) recommendation, as such values indicate response bias or the probability of respondent misconduct in answering the survey questionnaire. Therefore, from 346 responses, the data was deduced to 299 reliable responses that can be used to interpret the model. The difference in loading less than .10 also indicates that the item is cross-loading onto the other construct and could threaten discriminant validity (Henseler et al. 2015, as cited by Analysis Inn, 2020). The results of the differences in cross-loadings conducted do not result in the removal of indicators, as all of the values were above the value of 0.10.

According to Hair et al. (2021), if the data does not meet the mentioned criterion despite efforts, researchers may decide to make some iterative adjustments to the measurement model, such as modifying or eliminating construct definitions to meet the criteria. The researchers of the study iteratively adjusted the constructs in the model with theoretical considerations, ensuring that the adjustments were cautiously done thus solving the discriminant validity issues as presented in Tables 6 and 7. A similar study by Henseler et al. (2014) also recommends further theoretical evaluation and model testing in solving the mentioned problem. Their study encountered a similar issue despite the application of Fornell-Larcker and HTMT, and suggested using model re-specification as a solution to the discriminant validity problem for the study

Table 6. Fornell-Larcker Criterion

	B	E	F	QQ	SS	WFC	W
Burnout	0.785						
Engagement	0.287	0.917					
Feedback	0.284	0.65	0.857				
Quiet Quitting	0.416	0.572	0.461	0.864			
Social Support	0.23	0.625	0.684	0.401	0.858		
Work-Family Conflict	0.484	0.321	0.263	0.285	0.234	0.893	
Workload	0.375	0.533	0.537	0.456	0.492	0.332	0.815

Abbreviations: Burnout (B), Engagement (E), Feedback (F), Quiet Quitting (QQ), Social Support (SS), Work-Family Conflict (WF), Workload (W)

Table 7. Heterotrait-Monotrait Ratio (HTMT)

	B	E	F	QQ	SS	WFC	W
Burnout							
Engagement	0.344						
Feedback	0.341	0.796					
Quiet Quitting	0.558	0.771	0.621				
Social Support	0.282	0.761	0.828	0.542			
Work-Family Conflict	0.609	0.413	0.336	0.415	0.301		
Workload	0.435	0.639	0.637	0.604	0.582	0.408	

Abbreviations: Burnout (B), Engagement (E), Feedback (F), Quiet Quitting (QQ), Social Support (SS), Work-Family Conflict (WF), Workload (W)

Table 8 presents the study's Variance Inflation Factor (VIF) for the inner model. All figures result in a range from 1 - 2.415, all falling below criterion 3. According to Hair and Alamer (2022), VIF values that fall below the criterion value of 3 indicate that there is no multicollinearity evident and is not a concern in the study's research model

Table 8. Variance Inflation Factor (VIF)

Indicators	VIF
E1	1.867
E2	1.867
F2	1.911
F3	1.793
F5	1.804
QQ1	1.325
QQ4	1.325
SS1	1.714
SS2	2.105
SS4	1.843

Abbreviations: Burnout (B), Engagement (E), Feedback (F), Quiet Quitting (QQ), Social Support (SS), Work-Family Conflict (WF), Workload (W)

According to the study conducted by Yuan et al. (2023), it is necessary to assess the overall goodness of fit of the model in this study. This goodness of fit can be seen and evaluated under the Model Fit, which is displayed in Table 9. The two primary tests to be observed are the Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI). As Hair et al. and Henseler et al, as cited by Yuan et al. (2023), the criteria for evaluation of the models are the following: (1)Standardized Root Mean Square Residual: SRMR < 0.08. However, SRMR < 0.1 is acceptable. (2) Normed Fit Index: NFI > 0.9 since that is the usual value of accepted fit. However, a study conducted by Aghimien et al. (2022) has a derived NFI value of 0.742 which was still considered to be acceptable as this was supported by one of the cited studies. It was noted that the accepted NFI value should range from 0.6 to 0.9. (Singh 2009, as cited by Aghimien et al. 2022) Following these criteria of evaluation will indicate that the overall model of this study has a good fit since its SRMR has a value of 0.06, which is less than 0.08, while the NFI value of this study is 0.753, which is within the range of 0.6 to 0.9, and is considered to be acceptable as supported by the stated studies. The said values of the SRMR and NFI are from the column of the Saturated Model since the Saturated Model indicates the correlation between all constructs (Ringle et al. 2024).

Table 9. Model Fit

	Saturated Model	Estimated Model
SRMR	0.067	0.071
d_ULS	0.246	0.277
d_G	0.192	0.195
Chi-Square	363.448	367.276
NFI	0.753	0.750

6. Conclusion

In Metro Manila, the phenomenon of quiet quitting has become increasingly noticeable among professionals, particularly among call center agents working the graveyard shift. This study aimed to understand the cognitive workplace factors contributing to this trend by examining the job demands and resources affecting quiet quitting among offshore front-office BPO employees. Using the JD-R Model and data from 299 respondents, the study found significant relationships between engagement, social support, feedback, and quiet quitting behavior. A conceptual model was estimated using the PLS-SEM to check for relationships between variables that lead to quiet quitting.

The researchers found positive relationships between engagement, social support, and feedback to quiet quitting behavior in the context of offshore front-office BPO employees. Key findings indicate that higher engagement reduces the likelihood of quiet quitting, as engaged employees are more committed and motivated. Conversely, a lack of social support from colleagues or supervisors; although not directly, can lead to decreased confidence and motivation, directly impacting engagement resulting in quiet quitting. Regular feedback was also found to be essential for maintaining motivation and engagement, directly impacting quiet quitting behaviors.

These findings highlight the importance of fostering supportive work environments that prioritize employee well-being and engagement. Industry leaders and administrative leaders should focus on implementing structured policies that focus on the career development and work-life balance of the BPO workers. Leaders should promote leadership and communication training which allows the training of supervisors to provide constructive feedback to offer valuable guidance in connecting to their team members and ensuring the workplace is a more positive and supportive environment where employees feel valued. BPO leaders can also focus on strengthening employee engagement by providing career development initiatives and implementing employee wellness programs that focus on work-life balance. Lawmakers can use this research to formulate policies that promote employee well-being in the BPO sector and enhance labor protection, particularly within the offshore front-office sector. Policies could be focused on enforcing policies that prioritize fair workload and schedule, and other wellness initiatives for the employees. This can include the implementation of the fair shift regulations, and wellness incentives. Requiring the BPO sectors to undergo leadership training and social support training can also address employee engagement of the workers and have a structured way of providing feedback by strictly implementing feedback policies. Mental health advocates can use this study as a motivation for raising awareness on the existing issue on the stress suffered by the employees within the industry.

Overall, this study contributes to the understanding of cognitive factors influencing quiet quitting and underscores the need for further research to develop innovative solutions for the challenges faced by the BPO industry. By addressing these factors, organizations can enhance the cognitive work environments of their employees, leading to improved well-being and productivity.

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Biographies

Engr. Jesselyn B. Alcain finished her Bachelor of Science in Industrial Engineering at the University of the Philippines, Diliman, Quezon City, and was also a DOST-SEI scholar. She received her Master of Science in Management Engineering from the University of Santo Tomas in 2011. She is doing postgraduate studies for a Ph.D. in Commerce at the University of Santo Tomas. She had almost a decade of professional industrial engineering experience in a multinational semiconductor company, where she handled various functions such as manufacturing line operation, capacity planning, and systems support. She was also a key member of several new product start-ups. Currently, she is the continuous improvement lead of a leading non-life insurance company, where she spearheads process improvement projects and drives customer experience initiatives. She is also concurrently the Internal Quality Audit Lead who is instrumental in the company's transition to and maintenance of ISO 9001:2015. She has been a part-time lecturer at the University of Santo Tomas, Faculty of Engineering since 2013.

Angel Justine S. Campos is an undergraduate fourth-year industrial engineering student at the University of Santo Tomas. She is interested in continuous improvement and specializes in quality engineering, a field that aligns with her attention to detail and problem-solving skills. She believes learning new things is key to excellence, especially in the dynamic field of industrial engineering. Her academic journey began at Saint Louis University - Laboratory High School (SLU-LHS), where she graduated as an academic awardee in junior high school. She continued at SLU-LHS - Senior High (SLU-LHS-SH), excelling as a bronze medallist for academic excellence in the Science, Technology, Engineering, and Mathematics (STEM) track. Beyond academics, Angel has demonstrated leadership and adaptability. She developed organizational and teamwork skills as a core team leader for the SLU Intramurals. She also served as an executive staff member in the Engineering Student Council under the marketing team. Her experience as an executive staff enhanced her creative problem-solving ability and improved her communication skills. Lastly, during her internship at Boxed Up Logistics, she gained hands-on experience in content creation for company advertisements and competitor analysis, which instilled confidence in her practical skills and abilities. With her detail-oriented mindset, willingness to learn, and commitment to excellence, she aspires to become an industrial engineer who drives efficiency, innovation, and quality in her field.

Charlize M. Fagara is a fourth-year Industrial Engineering student at the University of Santo Tomas. She completed her primary to senior high school education at Manresa School in Parañaque, where she graduated from Grade 12 under the ABM track with honors. She gained useful expertise in retail operations and industrial engineering applications during her internship with SM Retail, which ended in 2024. She intends to use her solid understanding of industrial engineering concepts to develop creative and effective solutions across a range of sectors.

Sunshine E. Maloles is currently an undergraduate fourth-year industrial engineering student at the University of Santo Tomas. Her interests include process optimization and ergonomics, specializing in production engineering. She believes that adopting new processes and learning to adapt to the current trends is key to understanding how optimization of processes and organizations can happen, especially in the dynamic field of industrial engineering. She finished her secondary education at De La Salle Lipa, Philippines and has since then transferred to the University of Santo Tomas for her tertiary education. She has also prioritized her extracurricular activities by joining her university's Engineering Student Council. She has been the team head for the marketing team of the council during her third-year in university and has led a project that focused on holding a job fair for her college's department in the same year. Apart from this, she has also been an executive staff for the council's finance department during her first-year. For her internship experience, she has been exposed to SM Retail Inc.'s inventory management department making sure that stock levels are in place using the organization's internal data management system. She gained significant experience and has acquired a skillset that is directly related to an industrial engineer's core interests which is on process analysis and optimization.

Katrina Iris T. Sagana is a fourth-year undergraduate industrial engineering student at the University of Santo Tomas. With a strong interest in continuous improvement and a keen enthusiasm for Lean Six Sigma, she has chosen to specialize in quality engineering. Her academic journey began at St. Paul College of Bocaue, where she completed junior and senior high school under the Science, Technology, Engineering, and Mathematics (STEM) track. Beyond academics, she served as the Executive Associate for Team Secretariat in the Industrial Engineering Circle for two academic years, where she enhanced her communication skills, collaborated with other teams, and was able to be part

of the team that organized projects for the organization. She also completed her internship at Coca-Cola Beverages Philippines, Inc., Meycauayan Plant, where she gained firsthand experience in a globally recognized company's operations, processes, and practices. During her internship, she assisted the Environmental Occupational Safety and Health (EOSH) Department in ensuring workplace safety. Additionally, she observed industry practices focused on efficiency and quality, engaged with experienced professionals to deepen her industry knowledge, conducted site visits, interviewed operators, and gathered information to enhance her understanding of workplace processes which significantly improved her communication skills. She firmly believes that each day presents an opportunity to overcome challenges, acquire new knowledge and skills, and step beyond one's comfort zone. She strives to embrace these opportunities, recognizing their essential role in fostering personal and professional growth.