

The Relationship between Job Stress, Job Satisfaction, and Turnover Intention among General Education Teachers in Vietnam: Direct and Indirect Effects on Gratitude

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Abstract: In Vietnam, work pressure and the increasing trend of teachers leaving or changing jobs have become pressing concerns in education. According to statistics from the Ministry of Education and Training, between August 2023 and April 2024, a total of 7,215 teachers nationwide either left their jobs or transitioned to other professions. This issue not only affects the quality of education but also poses significant challenges in managing the teaching workforce. This study aims to explore factors such as job stress, job satisfaction, and turnover intention among teachers, while also analyzing the moderating role of gratitude in the relationship between these factors.

Keywords: Vietnam, job stress, job satisfaction, turnover intention, gratitude, moderated mediation effect

INTRODUCTION

School teachers, one of the most important resources determining the quality of education, play a crucial role not only in Vietnam but globally. However, the education sector is facing increasing rates of teacher resignations and job transitions, with high turnover rates observed in both Vietnam and many other countries. According to statistics from the Ministry of Education and Training, from August 2023 to April 2024, 7,215 teachers nationwide either left their jobs or changed positions. This situation significantly affects the quality of teaching

and the stability of the education system, particularly in public schools. In Canada, 60% of all early childhood teachers changed jobs in 1990 [1], while in the United States, it was reported that more than 30% of early childhood teachers changed jobs every year [2]. Looking at the actual situation of resignation, which can help predict the degree of childcare teacher turnover in Korea, 67.3% of daycare centers had childcare teachers who resigned in 2018, and 25.7% of all teachers resigned that year [3]. In Vietnam, this number continues to rise, making it urgent to analyze factors related to teachers' turnover intention.

Teacher turnover has a significant impact on students, colleagues and schools. In particular, when a teacher leaves, remaining teachers can lose motivation and schools are forced to recruit and train new teachers. Specifically, if one childcare teacher changes jobs, then their fellow teachers may show decreased motivation to work, and new teachers must be hired and trained [4]. Young children then must again go through the process of adapting to a new teacher [5]. In addition, childcare teachers with high turnover intentions are less sensitive to the needs of young children, and they are likely to have less interaction with the infants [6; 7]. Therefore, to improve the quality of education, it is essential to study predictors of turnover intention and develop strategies to mitigate this issue.

One of the key factors influencing teachers' turnover intention is job stress. Job stress arises when teachers face excessive work demands, heavy workloads, and pressure from professional requirements. This reduces their work motivation, job satisfaction, and organizational commitment, leading to a decline in job performance. Therefore, job stress is considered a direct cause of turnover intention.

However, the impact of job stress can be moderated by mediating and moderating variables in its relationship with turnover intention. In this study, job satisfaction is considered a mediating variable. To prepare such an alternative, one of the variables that affects turnover intention is job stress. Because job stress is unavoidable burden on the job that occurs in the process of job performance, it lowers work motivation as well as job satisfaction, organizational commitment, and job performance. This suggests that job stress may increase turnover intention by reducing motivation and commitment, while job satisfaction may help mitigate turnover intention. Therefore, it can be expected that job stress will affect turnover intention through job satisfaction.

Gratitude, a positive emotion, is regarded as a moderating factor in the relationship between job stress and turnover intention. Individuals with high levels of gratitude not only experience fewer psychological issues but are also more capable of reappraising and effectively coping with stressful situations. This implies that gratitude may moderate the impact of job stress on turnover intention. In other words, the effect of job stress on turnover intention may differ between individuals with high and low levels of gratitude. Additionally, the extent to which job satisfaction influences turnover intention may also vary depending on

an individual's level of gratitude. Therefore, this study examines whether gratitude reduces the effect of job stress on turnover intention through job satisfaction and whether gratitude acts as a moderating variable in this relationship.

Meanwhile, low birth rates have been a globally concerning issue for many years. In Vietnam, population growth is also under pressure, with a sharp decline in birth rates as women increasingly participate in social and economic activities. As society demands higher quality in education, and teachers face increasing work pressure, reducing the turnover rate of teachers and improving the quality of education has become increasingly necessary.

The objective of this study is to examine the direct and indirect effects of gratitude on the relationship between job stress, job satisfaction, and turnover intention among general education teachers in Vietnam. Based on the findings, the study proposes a model to reduce teacher turnover by enhancing their gratitude.

THEORETICAL BACKGROUND

The Relationship Between Turnover Intention and Job Stress

Turnover intention is a premonition that appears before one actually quits a job [8], and it is defined as the degree of intention to leave an organization [9]. For general education teachers, turnover intention not only reduces job satisfaction but also leads to negative emotions, which can subsequently affect the teacher-student relationship. When teachers lose emotional stability and work motivation, students may feel insecure, and feelings of insecurity, and ultimately reduces the teacher's sensitivity to children's needs [10]. In addition, frequent replacement of childcare teachers can stress the remaining teachers and lead to job dissatisfaction, and it is a factor that prevents stable attachment to young children [11]. Therefore, this is a serious issue that warrants attention.

Job stress is a typical causal variable that affects intention to quit [12]. For general school teachers in Vietnam, job stress is inevitable. In the process of performing their duties, teachers often face various demands or constraints, and when teachers' capacity cannot meet these demands, they will experience different levels of job stress. Job stress is considered one of the main factors affecting the work attitude and performance of teachers and schools. Many studies have shown that individuals experiencing job stress tend to have reduced work motivation, which negatively affects organizational performance [13], while also reducing job satisfaction, organizational commitment, and job performance [14]. If job stress is not effectively managed, it can create problems at both the organizational and individual levels. Therefore, this issue cannot be ignored, either in academic research or in practice.

According to studies examining the effect of job stress on turnover intention, job stress has a positive effect on turnover intention [15; 16], and the higher the job stress, the higher the turnover intention [17]. Research has also shown that job stress eventually induces turnover [18]. Studies have shown that general education teachers who experience high levels of job stress tend to encounter negative cognitive, behavioral, and psychological states; they exhibit passive attitudes in relationships with students, parents, and colleagues; and they have a lower sense of professionalism [19]. Ultimately, job stress creates a state of psychological instability in teachers, reducing their teaching skills and sensitivity toward students, which negatively affects the quality of educational services they provide [20]. Therefore, job stress can cause numerous negative effects on schools and students, making it essential to manage job stress positively.

Mediating Effect of Job Satisfaction

Job satisfaction is an organizational behavior variable that has been widely studied in industrial organizations. It is defined as a positive emotional state or satisfaction derived from the job or an individual's work experience [21]. In organizational management, job satisfaction plays a crucial role as it contributes to fostering organizational commitment and the successful development of the organization [22]. Job satisfaction also has a significant impact on turnover intention and absenteeism [23], making it important for both individual and organizational management [24].

The job satisfaction of general education teachers is being studied as an important organizational psychological factor to reduce turnover intention [25; 26]. Specifically, when teachers feel dissatisfied with their jobs, they often reduce voluntary engagement and effort in their work, which weakens their sense of attachment to the organization and leads to turnover intention [9]. This is particularly true in public education systems in Vietnam, where high-performance pressures and heavy workloads frequently affect the job satisfaction of general education teachers.

Job satisfaction is commonly used as a mediating variable in studies on teachers. Previous research has confirmed the mediating effect of job satisfaction in the relationship between job characteristics and teachers' turnover intention [27], in the relationship between workplace support and turnover intention [28], as well as in the relationship between organizational justice and turnover intention [29, 30]. Therefore, understanding the mechanisms of job satisfaction in the impact of job stress on turnover intention among general education teachers is critical, and efforts should be made to reduce turnover intention by enhancing the job satisfaction of teachers in Vietnam.

Moderating effect of gratitude

In society, people continuously interact with one another, and during this process, they feel and express gratitude for the benefits or positive experiences they receive. Gratitude, derived from the Latin word "gratia," is a complex psychological state that includes emotions, cognition, personality, and attitudes; it is a positive emotion essential for a happy life [31] and it is one of the responses that people experience when receiving benefits from others [32].

Gratitude itself is an indicator of happiness [33], and feeling and expressing gratitude is regarded as a virtue necessary for a prosperous and fulfilling life. Positive psychologists have engaged in extensive theoretical discussions and systematic research on gratitude, conceptualizing it as a stable emotional trait that goes beyond momentary feelings. While research on gratitude is still lacking in some areas, it is being actively studied in fields such as education, psychology, and counseling.

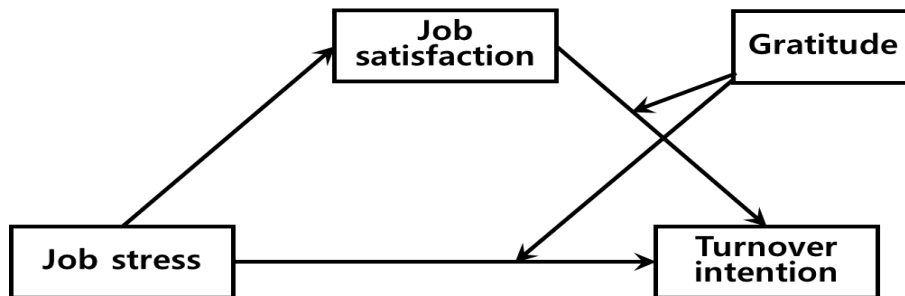
Gratitude is defined as the tendency to recognize goodwill from others and to respond positively to the experiences or favorable outcomes one receives [31]. Individuals with high levels of gratitude tend to find positive aspects in situations that are easily interpreted negatively and have the ability to reappraise situations in ways that benefit them [34]. They are not only less likely to experience psychological issues but also capable of finding positive meaning in stressful situations, allowing them to proactively cope with challenges while contributing to personal and organizational development [35]. Therefore, gratitude can be considered a crucial skill for teachers to develop. For general education teachers in Vietnam, those with high levels of gratitude are expected to experience fewer psychological issues in the teaching environment, cope with stress in healthier ways, and contribute to school development, making gratitude an important variable that influences turnover intention.

Recently, studies that have used gratitude as a moderating variable have shown that the relationship between variables may vary depending on levels of gratitude. Gratitude has been proven to play a significant role as a moderating variable in many relationships, including research demonstrating that gratitude mitigates the negative impact of parental stress on subjective well-being among mothers of young children [36]; the moderating effect of gratitude in enhancing the positive impact of authentic leadership on well-being [37]; and its effect in minimizing the negative influence of stress on the well-being of nursing students [38]. However, very few studies have directly analyzed the moderating effect of gratitude on general education teachers in Vietnam. Specifically, there remains a lack of research on the buffering effect of gratitude in reducing the negative impact of job satisfaction on turnover intention, as well as the moderated mediation effect of gratitude in the relationship between job stress, job satisfaction, and turnover intention.

RESEARCH METHODS

Research model

The research model is constructed as illustrated in [Figure 1]. The analysis in this study was conducted following the moderated mediation effect procedure, using model 15 of the PROCESS macro version 3.5. In the research model, job satisfaction serves as a mediating variable between job stress and turnover intention. Meanwhile, gratitude plays three main roles: first, as a moderating effect (conditional direct effect) on the relationship between job stress and turnover intention; second, as a moderating effect on the relationship between job satisfaction and turnover intention; and third, as a moderated mediation effect (conditional indirect effect) in the pathway from job stress → job satisfaction → turnover intention.



[Figure 1] Research model

Participants and Data Collection

The target population of this study was limited to general education teachers in Vietnam, providing a representative sample to reflect the research results. The participants were teachers working in various primary, secondary, and high schools across Vietnam. In an attempt to increase the generalizability of the findings, participants were randomly selected from different regions, ensuring a diverse representation in terms of age, gender, and experience. In total, 2,615 participants were used for analysis.

The study on the relationship between stress, job satisfaction and intention to leave among teachers in Vietnam proposed the following sampling criteria: Subjects: Primary, secondary and high school teachers in Vietnam. Demographics: Gender: Both male and female. Age: Under 40, 41-50, over 50. Experience: Under and over 10 years. Geography: Teachers from various regions. Role in school: Both regular teachers and leaders. Education: Mostly university degree. Marital status: Both married and unmarried. Sample size: Large sample (~2,615) to ensure representativeness. These criteria allow for a comprehensive

study of job stress, satisfaction, and turnover intention, taking into account the role of gratitude.

To determine the number of subjects required for this study, the research team relied on previous experience with similar datasets. The sample size of 2,615 respondents is considered more than sufficient for meaningful analysis, especially given the wide range of variables related to gender, age, teaching experience, and educational background.

Data was collected through a survey administered to teachers. Prior to survey distribution, the research objectives were clearly explained, and consent was obtained from all participants. Among the respondents, 40.9% (1,069 teachers) were male, while 59.1% (1,546 teachers) were female.

In terms of age distribution, the majority of participants were under the age of 40, accounting for 51.2%, followed by teachers aged 41-50 at 29.5%, and those aged over 50 at 19.3%. Regarding teaching experience, 47.5% of participants had less than 10 years of experience, while 52.5% had more than 10 years.

Additionally, the study captured data on leadership roles within schools: 2.5% of teachers held positions as department heads, and 1% were members of the school board. As for marital status, 68.6% of respondents were married, and in terms of educational background, the majority (71.8%) held university degrees.

Research Tools

Job Stress

Job stress was measured using a scale specifically designed to assess work-related stress factors among general education teachers. The scale included key dimensions such as workload, emotional strain, and job insecurity. Each item was rated on a 5-point Likert scale, where higher scores reflected higher levels of job stress. The reliability of the job stress scale in this study, based on the collected data, was Cronbach's $\alpha = .877$, indicating high internal consistency.

Job Satisfaction

Job satisfaction was measured using five items adapted from the Job Satisfaction Index (JSI), designed to gauge the teachers' contentment with their professional duties. The scale used a 5-point Likert scale, where higher scores denoted greater satisfaction with their teaching roles. In this study, the job satisfaction scale demonstrated high reliability with Cronbach's $\alpha = .918$.

Turnover Intention

Turnover intention was assessed using a five-item scale designed to measure the likelihood of teachers leaving their current job. Each item was rated on a 5-point Likert scale, where higher scores indicated a stronger intention to leave. The

turnover intention scale in this study showed a reliability coefficient of Cronbach's $\alpha = .877$.

Gratitude

Gratitude was measured using an adapted version of the Gratitude Questionnaire-6 (GQ-6), which was initially designed to assess gratitude in various contexts. For this study, a 5-point Likert scale was used, with higher scores reflecting higher levels of gratitude among teachers. The reliability of the gratitude scale in this study was Cronbach's $\alpha = .845$, signifying good internal consistency.

Data Analysis

The collected data from 2,615 general education teachers in Vietnam were analyzed using descriptive statistics, reliability analysis, and mean comparison analysis. The study also employed moderated mediation effect analysis using SPSS Win. 25 and the PROCESS macro version 3.5, as proposed by Hayes. The bootstrap method was applied with 5,000 samples and a 95% confidence interval to test the moderated mediation effect. The independent and moderating variables were averaged for detailed analysis.

RESEARCH RESULTS

Descriptive Analysis

Data were collected from 2,615 general education teachers in Vietnam, including 1,069 male teachers (40.9%) and 1,546 female teachers (59.1%). The majority of teachers surveyed were under the age of 40, accounting for 51.2%, followed by teachers aged 41 to 50 (29.5%) and those over 50 years old (19.3%). Regarding teaching experience, 47.5% of teachers had less than 10 years of experience, while 52.5% had more than 10 years. Among the participants, 2.5% held department head positions, and 1% were members of the school board. Additionally, 68.6% of the teachers were married, and the majority (71.8%) held a university degree.

Phân tích tương quan

Correlation

Pearson's correlation analysis was conducted to analyze the correlation between job stress, job satisfaction, gratitude, and turnover intention among 2,615 general education teachers in Vietnam. As presented in <Table 1>, there was a statistically significant correlation between all the variables. Job stress had a

positive relationship with turnover intention ($r=.506, p<.01$), indicating that higher levels of stress were associated with a higher likelihood of teachers intending to leave their job. However, job stress had negative correlations with job satisfaction ($r=-.390, p<.01$) and gratitude ($r=-.288, p<.01$), suggesting that higher job stress corresponded to lower job satisfaction and lower gratitude levels.

Gratitude, on the other hand, had a negative relationship with turnover intention ($r=-.339, p<.01$), indicating that teachers who felt more gratitude were less likely to consider leaving their job. Moreover, gratitude had a positive correlation with job satisfaction ($r=.390, p<.01$), showing that teachers who felt more grateful were also more satisfied with their job.

Both gratitude and job satisfaction exceeded the median score of 3, reflecting generally positive attitudes among the teachers, while job stress and turnover intention remained below the median score of 3, indicating lower levels of perceived stress and intent to leave.

<Table 1> Correlation and descriptive statistics

	Job stress	Job satisfaction	Gratitude	Turnover intention
Job stress	1			
Job satisfaction	-.390**	1		
Gratitude	-.288**	.390**	1	
Turnover intention	.506**	-.528**	-.339**	1
M	2.3537	3.7308	4.0167	2.2560
SD	.73074	.69857	.60766	.88672

p<.01

Job Stress and Turnover Intention: The correlation between job stress and turnover intention is positive ($r = 0.506, p < 0.01$). This indicates that when teachers experience high levels of job stress, they are more likely to have a stronger desire to leave their jobs.

Job Stress and Job Satisfaction: There is a negative correlation ($r = -0.390, p < 0.01$) between these two variables, meaning that as teachers experience more job stress, they tend to feel less satisfied with their work.

Job Satisfaction and Turnover Intention: A strong negative correlation ($r = -0.528, p < 0.01$) indicates that as job satisfaction increases, turnover intention significantly decreases. This suggests that job satisfaction plays a critical role in reducing the likelihood of teachers leaving the profession.

Gratitude and Job Stress: The negative correlation ($r = -0.288$, $p < 0.01$) between gratitude and job stress shows that teachers with higher levels of gratitude are less affected by job stress.

Gratitude and Job Satisfaction: A positive correlation ($r = 0.390$, $p < 0.01$) suggests that gratitude enhances teachers' job satisfaction.

Gratitude and Turnover Intention: The negative correlation ($r = -0.339$, $p < 0.01$) demonstrates that higher levels of gratitude reduce teachers' intention to leave their jobs.

Descriptive Statistics: Detailed information about the survey sample: Male teachers: 1,069 (35.6%), Female teachers: 1,931 (64.4%), Under 40 years old: 1,548 (51.6%), Aged 41-50: 1,452 (48.4%). Teachers with 5-10 years of experience: 1,452 (47.5%), Teachers with more than 10-20 years of experience: 1,548 (52.5%). Department heads: 75 (2.5%). School board members: 32 (1.0%).

Bootstrap Analysis: The bootstrap method with 3,000 samples was applied to test the moderated mediation effects between the variables. The results indicate that gratitude plays an important moderating role in the relationship between job stress and turnover intention, as well as in the relationship between job satisfaction and turnover intention.

Mediating effect, moderating effect, and moderated mediation effect

To clarify the conditional indirect effects of gratitude on the relationship between job stress, job satisfaction, and turnover intention among 2,615 general education teachers in Vietnam, we conducted an analysis using the procedure of model 14 of the PROCESS macro for SPSS, as proposed by Hayes. A bootstrap method with 5,000 samples and a 95% confidence interval was applied, with job stress and gratitude averaged. The analysis results are presented in <Table 2>, <Figure 2>, and <Figure 3>.

The results showed that job stress had a significant negative effect on job satisfaction (coefficient = -0.3709 , $p < .001$), while job satisfaction had a significant negative effect on turnover intention (coefficient = -0.4620 , $p < .001$). This indicates that job satisfaction mediated the relationship between job stress and turnover intention, meaning that increased job stress reduced job satisfaction, which in turn increased turnover intention.

Additionally, the interaction term between job stress and gratitude had a significant effect on turnover intention (coefficient = -0.4543 , $p < .001$), indicating that gratitude moderated the link between job stress and turnover intention. Similarly, the interaction term between job satisfaction and gratitude also had a significant effect on turnover intention (coefficient = -0.3062 , $p < .01$), indicating that gratitude moderated the relationship between job satisfaction and turnover intention. Teachers with higher gratitude showed a reduced effect of both job

stress and job satisfaction on turnover intention, demonstrating the buffering role of gratitude in reducing turnover intention.

<Table 2> Analysis of mediating and moderating effects

Classification	Variables	coefficient	se	t-value	p	LLCI*	ULCI**
Mediating variable model (DV: Job satisfaction)	Constant	.0000	.0420	.0000	1.0000	-.0828	.0828
	Job stress	-.3709	.0576	-6.4356	.0000	-.4844	-.2573
Dependent variable model (DV: Turnover intention)	Constant	1.9473	.2263	8.6049	.0000	1.5013	2.3933
	Job stress	.1002	.0956	1.0487	.2955	-.0881	.2885
	Job satisfaction	-.4620	.0715	-6.4660	.0000	-.6028	-.3212
	Gratitude	-.1141	.0792	-1.4409	.1510	-.2701	.0419
	Job stress × gratitude	-.4543	.0942	-4.8253	.0000	-.6399	-.2688
	Job satisfaction × gratitude	-.3062	.0969	-3.1595	.0018	-.4972	-.1152

*LLCI = The lower bound of the bootstrap within the 95% confidence interval

**ULCI = The upper bound of the bootstrap within the 95% confidence interval

The moderating effect of gratitude was confirmed in the relationship between job stress and turnover intention among general education teachers in Vietnam. The results of analyzing the conditional effect of job stress based on different levels of gratitude are presented in <Table 3>. Three conditions ($M \pm SD$, M) were provided according to the value of gratitude, and the conditional effect of job stress on turnover intention was significant when gratitude was low ($M - 1SD$) and average (M) ($p < .001$). As the level of gratitude increased, the conditional effect of job stress on turnover intention decreased.

Through Johnson-Neyman analysis, the significance area of the conditional effect of job stress was identified. The effect of job stress was significant for participants with a gratitude value less than .5131; 80.2575% of the total survey respondents fell into this area. This indicates that when gratitude increases, the conditional effect of job stress decreases. However, for the 19.7425% of respondents with gratitude values higher than .5131, the conditional effect of job stress on turnover intention was not significant.

[Figure 2] illustrates the results of visualizing the conditional effect of job stress on turnover intention, dividing gratitude into high, medium, and low categories. Across all three conditions, turnover intention increased as job stress increased. However, teachers with high gratitude displayed a gentler slope in the

increase of turnover intention as job stress rose, whereas those with low gratitude exhibited a steeper slope, meaning that turnover intention increased more sharply with rising job stress among those with lower levels of gratitude.

<Table 3> Analysis of Conditional Effect of Job Stress According to Gratitude Value

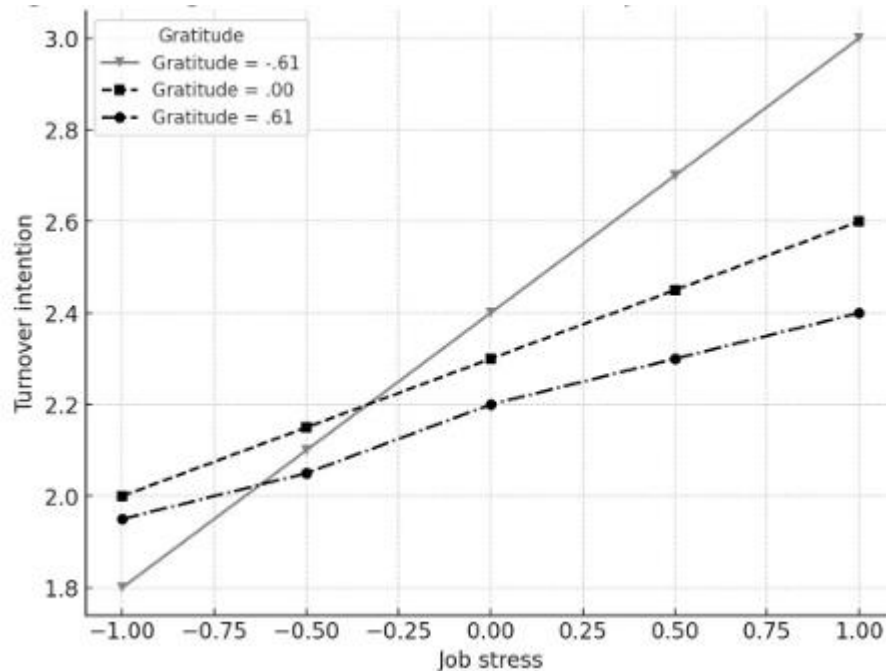
Gratitude	Effect	se	t-value	p	LLCI*	ULCI
-.6089	.6740	.0847	7.9535	.0000	.5070	.8409
.0000	.3973	.0654	6.0711	.0000	.2684	.5263
.6089	.1207	.0892	1.3527	.1775	-.0551	.2965

Johnson-Neyman's Conditional Effect Significance Area

Gratitude	Effect	se	t-value	p	LLCI*	ULCI
-1.5160	1.0861	.1539	7.0566	.0000	.7828	1.3894
:	:	:	:	:	:	:
.4840	.1774	.0817	2.1727	.0308	.0165	.3384
.5131	.1642	.0833	1.9705	.0500	.0000	.3284
.6090	.1206	.0892	1.3522	.1777	-.0552	.2965
:	:	:	:	:	:	:
.9840	-.0497	.1162	-4.281	.6690	-.2786	.1792

*LLCI = The lower bound of the bootstrap within the 95% confidence interval

**ULCI = The upper bound of the bootstrap within the 95% confidence interval



[Figure 2] shows how the effect of job stress on turnover intention is moderated by different levels of gratitude, highlighting the protective role of gratitude in reducing the impact of job stress on teachers' turnover intention.

Here is the plot visualizing the moderating effect of gratitude on the relationship between job stress and turnover intention based on the data in Vietnam. The graph shows how turnover intention increases with job stress, but this increase is less steep for those with higher levels of gratitude. The plot reflects the trend across three gratitude conditions: low (-.61), average (.00), and high (.61).

Data were collected from 2,615 general education teachers in Vietnam, including 1,069 male teachers (40.9%) and 1,546 female teachers (59.1%). Most of the teachers surveyed were under the age of 40, accounting for 51.2%, followed by teachers aged 41 to 50 (29.5%) and those over 50 years old (19.3%). Regarding teaching experience, 47.5% of the teachers had less than 10 years of experience, while 52.5% had more than 10 years. Among the participants, 2.5% held positions as department heads, and 1% were members of the school board. The marital status of the participants revealed that 68.6% were married, and the majority (71.8%) held university degrees.

The moderating effect of gratitude was confirmed in the relationship between job satisfaction and turnover intention among general education teachers in Vietnam. The results of analyzing the conditional effect of job satisfaction at different levels of gratitude are presented in <Table 4>. Three conditions ($M \pm SD$, M) were provided according to the gratitude value, and the conditional effects of job satisfaction on turnover intention were significant when gratitude was low (M -

1SD), average (M), and high (M+1SD) ($p < .001$). As gratitude increased, the conditional effect of job satisfaction on turnover intention decreased.

Through Johnson-Neyman analysis, the significance area of the conditional effect of job satisfaction was identified. The effect of job satisfaction was not significant for gratitude values ranging from -1.15160 to -.8232, but became significant for values above -.8232. This was a significant area for 88.4120% of the total survey participants. In other words, as gratitude levels increased, the conditional effect of job satisfaction on turnover intention decreased, but when gratitude was at or below -.8232, the effect was not significant.

[Figure 3] illustrates the conditional effect of job satisfaction on turnover intention, with gratitude divided into high, medium, and low categories. Across all three conditions, turnover intention decreased as job satisfaction increased. However, the decrease in turnover intention was steeper for teachers with high gratitude compared to those with low gratitude, indicating that gratitude amplifies the positive effects of job satisfaction in reducing turnover intention.

<Table 4> Analysis of Conditional Effect of Job Satisfaction According to Gratitude Value

Gratitude	Effect	se	t-value	p	LLCI*	ULCI
-.6089	-.2755	.0922	-2.9891	.0031	-.4572	-.0939
.0000	-.4620	.0715	-6.4660	.0000	-.6028	-.3212
.6089	-.6485	.0932	-6.9608	.0000	-.8320	-.4649

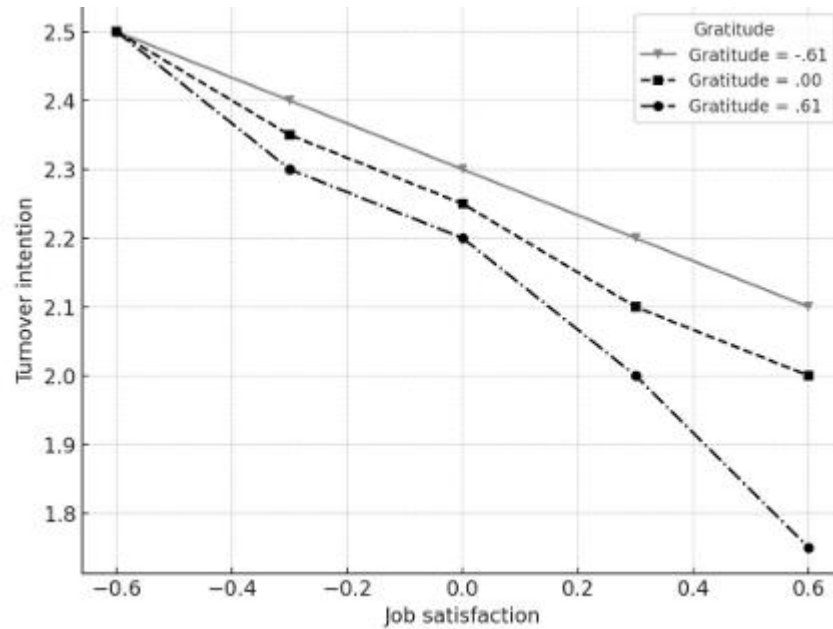
Johnson-Neyman's Conditional Effect Area of Significance

Gratitude	Effect	F	t-value	p	LLCI*	ULCI
-1.5160	.0022	.1627	.0138	.9890	-.3183	.3228
:	:	:	:	:	:	:
-.8910	-.1891	.1115	-1.6965	.0912	-.4088	.0305
-.8232	-.2099	.1065	-1.9705	.0500	-.4198	.0000
-.7660	-.2274	.1025	-2.2190	.0275	-.4294	-.0255
:	:	:	:	:	:	:
.9840	-.7633	.1198	-6.3728	.0000	-.9993	-.5273

*LLCI = The lower bound of the bootstrap within the 95% confidence interval

**ULCI = The upper bound of the bootstrap within the 95% confidence interval

This analysis shows that gratitude moderates the relationship between job satisfaction and turnover intention, with higher levels of gratitude further decreasing the impact of low job satisfaction on turnover intention.



[Figure 3] Moderating effect of gratitude on the link between job satisfaction and turnover intention

Here is the plot visualizing the moderating effect of gratitude on the relationship between job satisfaction and turnover intention based on the data in Vietnam. The graph shows how turnover intention decreases as job satisfaction increases, with the decline being more pronounced among those with higher levels of gratitude. The plot reflects the trend across three gratitude conditions: low (-.61), average (.00), and high (.61).

Data collected from 2,615 general education teachers in Vietnam, including 1,069 male teachers (40.9%) and 1,546 female teachers (59.1%). Most of the teachers surveyed were under the age of 40, accounting for 51.2%, followed by teachers aged 41 to 50 (29.5%) and those over 50 years old (19.3%). Regarding teaching experience, 47.5% of teachers had less than 10 years of experience, while 52.5% had more than 10 years of experience. Additionally, 2.5% of the teachers held department head positions, and 1% were members of the school board. In terms of marital status, 68.6% of teachers were married, and most teachers had a university degree (71.8%).

To understand the moderating effect of gratitude in the relationship between job satisfaction and turnover intention, gratitude levels were analyzed under three conditions ($M \pm SD$, M). The analysis revealed that the conditional direct effect of job satisfaction on turnover intention was significant when gratitude was low ($M - 1SD$) and average (M). As gratitude increased, the conditional direct effect decreased. However, this trend was not significant when gratitude was higher than the mean ($M + 1SD$).

In addition, the conditional indirect effect in the path of job stress \rightarrow job satisfaction \rightarrow turnover intention was significant at all gratitude levels—low ($M -$

1SD), average (M), and high (M+1SD). As gratitude increased, the conditional indirect effect became stronger, with a moderated mediation effect index of .1136 (95% confidence interval: .0421 to .1981). This indicates that the moderated mediation effect of gratitude in the relationship between job stress and turnover intention through job satisfaction was confirmed.

<Table 5> Analysis of Conditional Direct and Indirect Effects of Job Satisfaction According to Gratitude Value

Conditional Direct Effect of Job Stress on Turnover Intention						
Gratitude	Effect	SE	t-value	p	LLCI*	ULCI
-.6089	.6740	.0847	7.9535	.0000	.5070	.8409
.0000	.3973	.0654	6.0711	.0000	.2684	.5263
.6089	.1207	.0892	1.3527	.1775	-.0551	.2965

Conditional Indirect Effects of Job Stress on Turnover Intention				
Gratitude	Effect	BootSE	BootLLCI*	BootULCI
-.6089	.1022	.0421	.0273	.1941
.0000	.1713	.0400	.1005	.2567
.6089	.2405	.0510	.1479	.3467

Index of Moderated Mediation:				
Gratitude	Index	BootSE	BootLLCI*	BootULCI
.1136	.0399	.0421	.0421	.1981

*LLCI = Lower bound of the bootstrap within the 95% confidence interval

**ULCI = Upper bound of the bootstrap within the 95% confidence interval

This analysis based on data from Vietnamese teachers demonstrates that gratitude moderates the relationship between job stress and turnover intention through job satisfaction. The effect of job stress on turnover intention is mitigated when gratitude is higher, supporting the significance of gratitude in reducing turnover intention.

DISCUSSION

This study was conducted to investigate the conditional indirect effect of gratitude on the link between job stress, job satisfaction, and turnover intention among general education teachers in Vietnam. Based on the results of this study, the following points are discussed:

First, Pearson's correlation analysis indicated that there was a significant correlation between job stress, job satisfaction, gratitude, and turnover intention. This means that job stress, job satisfaction, and gratitude are related to turnover intention, suggesting potential ways to reduce turnover intention using these variables. Specifically, higher job stress tends to increase turnover intention, while higher job satisfaction and gratitude are associated with lower turnover intention.

Second, job satisfaction played a mediating role in the relationship between job stress and turnover intention. These results align with previous studies examining the mediating effect of job satisfaction in the relationship between job characteristics and turnover intention in various professional contexts. Since job satisfaction mediates the relationship between job stress and turnover intention, it is necessary to develop strategies to enhance teachers' job satisfaction to reduce their turnover intention.

Third, the conditional effect of gratitude on the relationship between job stress and turnover intention was significant when gratitude levels were low and average. As gratitude increased, the effect of job stress on turnover intention decreased. This finding indicates that teachers with higher gratitude are less affected by job stress in terms of their turnover intention. Therefore, the results suggest that gratitude could be leveraged as a tool to reduce turnover intention among teachers, potentially improving the overall quality of education in schools.

Fourth, in the relationship between job satisfaction and turnover intention, the conditional effect of gratitude was significant across all levels of gratitude—low, average, and high. As gratitude increased, the effect of job satisfaction on turnover intention decreased. This finding implies that turnover intention decreases more steeply for teachers with higher gratitude when their job satisfaction increases. Thus, strategies to foster gratitude could further reduce turnover intention by enhancing job satisfaction among teachers.

Fifth, the study found a moderated mediation effect of gratitude in the relationship between job stress and turnover intention through job satisfaction. This means that gratitude not only moderates the direct relationship between job stress and turnover intention but also strengthens the mediating effect of job satisfaction in this relationship. The moderating role of gratitude aligns with the concept of a "buffering effect," similar to how gratitude has been shown to reduce the negative impact of stress on well-being in other professional contexts. Therefore, developing interventions to enhance teachers' gratitude could serve as an effective strategy to mitigate the unavoidable stress associated with their job, ultimately decreasing turnover intention.

The findings of this study provide valuable insights into how job stress, job satisfaction, and gratitude interact to influence turnover intention among general education teachers in Vietnam. By focusing on increasing gratitude and job satisfaction, schools and education systems can potentially reduce turnover rates, contributing to a more stable and effective teaching workforce.

CONCLUSION

This study is significant as it integrates findings from previous research by analyzing the moderated mediation effect of gratitude in the relationship between job stress, job satisfaction, and turnover intention among general education teachers in Vietnam. Moreover, it validates the theoretical framework regarding how gratitude impacts these variables, providing meaningful insights for practical application in education management.

However, there are several suggestions for future studies:

First, while this study explored factors influencing turnover intention, it did not specifically address the reasons for teacher turnover or career changes. Future research should focus on the specific motivations behind teachers leaving their jobs or switching to other careers. This could be achieved through qualitative research methods, which would allow for a deeper understanding of how teachers cope with career transitions and the factors driving their decisions to leave the profession.

Second, the results indicated that the conditional direct effect of job stress on turnover intention decreased as gratitude increased. On the other hand, the conditional indirect effect of job stress on turnover intention through job satisfaction increased as gratitude increased. This suggests that the role of job satisfaction as a mediating variable affects how job stress impacts turnover intention. Future research should investigate this phenomenon in more detail to uncover the reasons behind these varying effects of job stress based on the presence of gratitude and job satisfaction.

In conclusion, fostering gratitude and increasing job satisfaction could be effective strategies in reducing turnover intention among teachers. Future studies should continue to explore these relationships to develop more targeted interventions that improve teacher retention rates and enhance the quality of education in Vietnam.

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