





LOCUS OF CONTROL AS CRITICAL MODERATOR OF THE RELATIONSHIP BETWEEN ROLE STRESSORS AND INTENTION TO QUIT

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Abstract. This research examines how employees' locus of control moderates the relationships between role conflict, role ambiguity, and intention to quit when assessing the mediation effects of counterproductive work behaviour and work engagement. A quantitative method (survey) was used for this study, with 348 questionnaires completed online. The research results reveal that, with a strong internal locus of control, work engagement mediates the relationship between role conflict and intention to quit and between role ambiguity and intention to quit. The higher the internal locus of control, the more both role conflict and role ambiguity affect work engagement, leading to intention to quit. Moreover, the manifestation of locus of control varies according to the employee's level of education, age, field of activity, and the organisation size. The study is the first to develop an integrative framework, which depicts how team-level factors comprehensively affect interrelations between role stressors and employee intention to quit. Our research delineates, explicates, and directs crucial aspects of human resource management in organisations. It also highlights that in studying the employee behaviour, scholars should inexorably assess situations in the complex manner that research demands to delineate employee workplace behaviour stemming from a combination of personal, contextual, and circumstantial factors.

Keywords: employee role conflict, role ambiguity, employee engagement, counterproductive work behavior, locus of control, intention to quit.

JEL Classification: M12, M14, O15.

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1. Introduction

In the contemporary economic climate, the concept of sustainability has become a fundamental consideration for businesses at various levels and in diverse operational contexts. This is because businesses are increasingly required to demonstrate consideration of their economic, social, and environmental impacts (Vrontis et al., 2023). The external environment has a profound influence on companies, which in turn exert a profound influence on the external environment. Consequently, the objectives of companies extend beyond mere profit-making to include the creation of value (Neves et al., 2023; Abou Ltaif & Mihail-Yiannaki, 2024). Amidst a shape-shifting workplace environment and practices, fuelled by transformative

technological, sociocultural, and other contextual advancements, scholars and executives alike strive to delineate the interrelationships of factors that ultimately facilitate or impair organisational human resource goals (Chatterjee et al., 2022).

In this context, the present research aims to assess the moderating influence of employees' locus of control on the relationships between role conflict, role ambiguity, and intention to quit when assessing the mediation effects of counterproductive work behaviour and work engagement. Currently, in addition to the challenges of employee engagement, adaptation, motivation, productivity stimulation, and other aspects of human resource management, organisations also face the issue of employee turnover, which forces companies to incur additional costs (Chhabra, 2016; Conley & You, 2014; Zhao et al., 2018). This prompts organisations to seek to understand what drives employees' intention to quit. Is it the case that the reasons always lie within the organisation, or do they depend on the employees' personal characteristics? In light of the fact that all employees of an organisation possess distinct personal characteristics, the locus of control variable was integrated into the study, which enabled the categorisation of these individuals into two distinct groups. This in turn facilitated the formulation of conclusions and suggestions that were more readily applicable to organisational contexts.

It is apparent from the research that, globally, scientists have explored the phenomenon of employee intention to quit and how the locus of control affects it. This research substantiates that the issue has not been adequately addressed and seeks to advance the understanding of the subject further. Therefore, it is essential to highlight the findings of various researchers who have concluded that employees' intention to quit is influenced by the presence of employee role conflict and role ambiguity (Zhao et al., 2018). According to the authors of the previous studies, this is one of the primary stressors. Furthermore, the workplace is a significant contributing factor to employee stressors, including a lack of employee engagement (Chhabra, 2016) and counterproductive behaviour at work (Tamunomiebi & Ukwuije, 2021). It is crucial to highlight that previous research has concluded that the emergence of generalised causes and consequences is influenced by employees' locus of control (Conley & You, 2014). However, there is a paucity of research on the influence of this factor on the relationships between the specified factors.

The study aims to contribute to the existing body of knowledge on the subject matter, particularly in those areas that lack research. A comprehensive review of the scientific literature identified no publications that aligned with the objectives of this study. Consequently, it is anticipated that the findings of this study will add novel insights to enrich the existing body of knowledge on the subject matter. An overview of scientific literature was conducted in order to analyse the concepts of employees' intention to quit, role conflict, role ambiguity, counterproductive behaviour at work, employee engagement, and locus of control. The influence of locus of control on the relationships between role conflict, role ambiguity, and intention to quit when assessing counterproductive behaviour at work, as well as its impact on work engagement, was also evaluated. To this end, a survey was conducted on employees of Lithuanian organisations. The mediating effects of counterproductive work behaviour and employee engagement were also assessed. The statistical analysis of the data obtained during the quantitative research enabled the formulation of the research conclusions and the presentation of both theoretical framework and practical insights. This study is structured as follows: Section 2 provides an overview of the theoretical framework, Section 3 outlines the methodological approach employed, and Section 4 presents, analyses and discusses the findings. The subsequent Section 5 presents the discussion and conclusions drawn from the study.

2. Theoretical research and hypotheses development

2.1. The relationship between employee role stressor and intention to quit

The implementation of a rigorous performance management framework is now a standard practice in contemporary organizations, with the objective of gaining a competitive advantage (Mihail-Yiannaki & Bakirli, 2024). It can be considered a strategic activity that must be perceived as fair and trusted by employees to encourage discretionary effort and continuous performance improvement (Cesário et al., 2023). Role conflict and role ambiguity represent extensively researched, central factors in terms of job performance stressors.

The effects of employee role conflict and role ambiguity on the intention to quit are the most pronounced and significant among the various factors that can cause employee role stress (Hang-Yue et al., 2005) as one of the fundamental reasons for their intention to quit (Bellamkonda & Pattusamy, 2024; Chhabra, 2016; Conley & You, 2014; Zhao et al., 2018). The following hypotheses have been formulated based on the preceding discussion:

H1: Role stressor has a positive effect on the intention to quit.

H1a: Role ambiguity has a positive effect on the intention to quit.

H1b: Role conflict has a positive effect on the intention to quit.

2.2. The relationship between employee role conflict, role ambiguity, counterproductive work behaviour, and intention to quit

Zhao et al. (2018) reported that role conflict significantly influences the occurrence of aggressive forms of counterproductive behaviour at work, including theft, sabotage, and hostility, which may drive the intention to quit. Aldea-Capotescu (2013) also emphasized the connection between counterproductive behavior and role stressors, suggesting that such behaviors often result from role conflict and ambiguity. Chiu et al. (2015) observed that counterproductive behaviors are often emotional responses to work-related stress, including that caused by role stress.

While role conflict and role ambiguity are often discussed alongside other factors like role overload, the latter has a less significant impact on counterproductive behavior compared to the former (Zhang et al., 2019). This view is supported by Chiu et al. (2015), who noted a negative correlation between role overload and behavior deviations, suggesting that role overload might be perceived positively by employees, enhancing organizational trust and responsibility. Bowling and Eschleman (2010) found that role conflict and role ambiguity are related to counterproductive work behavior, though this relationship is also influenced by employees' personal characteristics.

Research by Zhang et al. (2019) confirmed that role conflict and role ambiguity significantly influence counterproductive behavior, though the relative importance of these variables may vary depending on personal characteristics and context. Additional factors, such as locus of control, should be incorporated into further analyses to enhance the investigation of this issue, provide further insights into the relationship between the aforementioned variables, and contribute to a deeper understanding of the relationship. Xiong and Wen (2020) suggested that counterproductive behavior might also stem from a desire to leave the organization, a notion supported by Christian and Ellis (2014), who linked such behaviors to a breakdown in the psychological contract between employees and employers. However, the link between counterproductive behavior and the intention to quit is less frequently studied Tamunomiebi

and Ukwuije (2021) proposed that counterproductive behavior leads to reduced productivity and performance, fostering a culture of complacency that can culminate in the intention to quit. Therefore, counterproductive behavior can be seen as an outcome of role stressors, which, in turn, influences employees' decision to leave (Aldea-Capotescu, 2013; Islam et al., 2023; Kissi et al., 2024; Zhang et al., 2019; Tamunomiebi & Ukwuije, 2021).

In light of the divergent opinions of various authors regarding the existence of a relationship between the phenomena under investigation and the necessity for further research, this study seeks to elucidate the interrelationships between counterproductive work behaviour and the intention to quit in the context of employee stress within the organisational setting. Based on the presented conclusions of the researchers, the following hypotheses are proposed:

H2: Counterproductive work behaviour mediates the relationship between role stressor and the intention to quit.

H2a: Counterproductive work behaviour mediates the relationship between role ambiguity and the intention to quit.

H2b: Counterproductive work behaviour mediates the relationship between role conflict and the intention to quit.

2.3. The relationship between role conflict, role ambiguity, employee engagement, and intention to quit

Hang-Yue et al. (2005) found that role conflict and role ambiguity negatively affect employee engagement, a finding supported by Yan et al. (2021), who showed that role ambiguity is a significant detractor from employee engagement. Maden-Eyiusta (2019) further explored this relationship through the lens of the job demands-resources (JD-R) model, arguing that while some job demands might enhance engagement, stressors like role conflict and ambiguity tend to deplete employee energy and reduce engagement.

The consensus among scholars is that role conflict and role ambiguity at work adversely affect employee engagement, leading to disengagement and increasing the likelihood of turnover (Chhabra, 2016; Otoo, 2024). Research indicates that engaged employees are more committed to their organizations and exhibit better work results, including customer satisfaction. However, fewer studies have examined how varying levels of engagement influence employees' decisions to leave their current positions (Agarwal, 2016; Agarwal & Gupta, 2018; Saks & Gruman, 2014).

The relationship between engagement and intention to quit remains a subject of debate. While some researchers assert a strong connection between the two, suggesting that engaged employees are less likely to quit, others point to the need for further investigation, particularly with additional variables and larger samples (Agarwal, 2016; Saks & Gruman, 2014). This study aims to address these gaps by examining the mediating role of work engagement between role stressors and the intention to quit.

H3: Work engagement mediates the relationship between role stressor and the intention to quit.

H3a: Work engagement mediates the relationship between role ambiguity and the intention to quit.

H3b: Work engagement mediates the relationship between role conflict and the intention to quit.

2.4. Locus of control and its relationships with role conflict, role ambiguity, counterproductive behaviour, and intention to quit

Locus of control is a key personal characteristic influencing how employees experience and respond to role stressors. Ramamurthi et al. (2016) emphasized that the stress experienced by employees and its outcomes, such as the intention to quit, are heavily influenced by personal traits like locus of control. Conley and You (2014) highlighted the differing consequences of internal versus external locus of control in managing role stress, suggesting that locus of control significantly moderates the relationship between role stress and its outcomes.

Pitariu and Budean (2020) identified locus of control as a crucial factor in predicting counterproductive work behavior. Wei and Si (2013) hypothesized that employees with an external locus of control are more prone to counterproductive behaviors, a hypothesis confirmed by their findings. This underscores the importance of considering locus of control when examining counterproductive work behavior and its implications.

The concept of locus of control is frequently analyzed as a moderator in various organizational contexts. Studies by Galvin et al. (2018) and Ng et al. (2006) suggest that employees with an internal locus of control typically experience lower levels of role ambiguity and conflict, whereas those with an external locus of control are more likely to face these stressors. The research consistently indicates that locus of control not only influences how employees experience role stress but also how they react, particularly in terms of counterproductive behavior and the intention to quit.

Based on this understanding, the following hypotheses are proposed:

H4: Locus of control moderates the indirect relationship between role stressor and the intention to quit through counterproductive work behaviour.

H4a: Locus of control moderates the indirect relationship between role ambiguity and the intention to quit through counterproductive work behaviour.

H4b: Locus of control moderates the indirect relationship between role conflict and the intention to quit through counterproductive work behaviour.

2.5. Locus of control, role conflict, role ambiguity, work engagement, and intention to quit

A synthesis of the research suggests that employees with an internal locus of control are more likely to be engaged in their work, while those with an external locus of control are less engaged.

Previous studies have indicated that an employee's locus of control at work is a significant factor influencing their levels of engagement. Employees with an external locus of control tend to display a low level of engagement, while employees with an internal locus of control are demonstrably more engaged in their work. This has been evidenced in studies by Fiabane et al. (2013), Turksoy and Tutuncu (2021), Srivastava et al. (2024), Gara Bach Ouerdian et al. (2024) and Xu et al. (2020). Although there is some disagreement on whether internal or external locus of control is more closely related to the intention to quit, all authors agree on the existence of a relationship between locus of control, engagement, and the intention to quit. For example, Srivastava (2009) argued that an external locus of control is more likely to lead to the intention to quit, especially when employees are dissatisfied with their work situation. Conversely, Conley and You (2014) found that an internal locus of control is generally

associated with positive workplace outcomes, including higher engagement and lower turnover intentions. Despite these differing perspectives, it is evident that locus of control plays a significant role in determining employee engagement and, consequently, their decision to stay or leave an organization. Based on the presented conclusions of the researchers, the following hypotheses are proposed:

H5: Locus of control moderates the indirect relationship between role stressor and the intention to quit through work engagement.

H5a: Locus of control moderates the indirect relationship between role ambiguity and the intention to quit through work engagement.

H5b: Locus of control moderates the indirect relationship between role conflict and the intention to quit through work engagement.

2.6. Conceptual research model

The literature reveals diverse opinions regarding the influence of locus of control on the intention to quit. Some researchers argue that an external locus of control is more closely associated with turnover intentions, while others suggest that this characteristic is more prevalent among those with an internal locus of control. This divergence of views highlights the need for further research, particularly studies that consider the role of locus of control in conjunction with other variables like counterproductive behavior and work engagement.

No studies were found that directly examine the effect of locus of control on employees' intention to quit while considering the consequences of role conflict and role ambiguity. This research seeks to fill that gap, offering new insights into the role of locus of control in the workplace. The conceptual research model presented in Figure 1 integrates these insights, guiding the subsequent stages of this research.

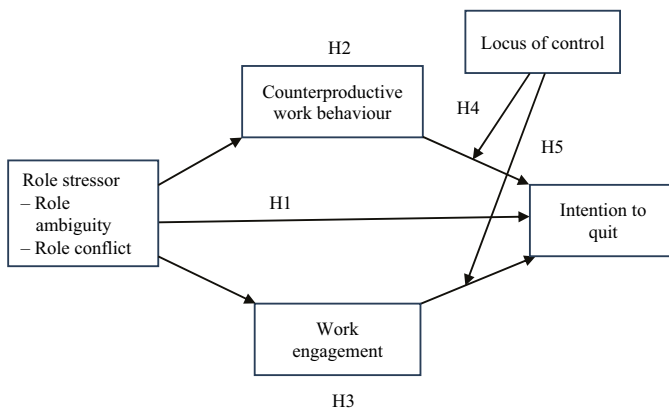


Figure 1. Conceptual research model (source: authors' compilation based on Hayes (2013) and literature review)

The conceptual research model presented in Figure 1 integrates the insights gleaned from the literature review on the individual research variables, delineating the subsequent trajectory of this research.

3. Methodology

3.1. Sample and profile of respondents

A simple, non-probability sampling method was used, targeting individuals aged 18 to 65 who are employed. Following Hair et al. (2019), a minimum sample size of 260 was calculated based on the 52 variables in the study, excluding sociodemographic questions. Ultimately, 348 completed questionnaires were analyzed after excluding invalid responses. The survey utilized an online platform, (www.apklausa.lt), to gather responses from Lithuanian workers. The questionnaire comprised two sections: 52 statements related to six constructs and eight sociodemographic questions covering age, gender, education, tenure, managerial role, organizational area, company size, and sector.

The final sample included 348 respondents, with 70.1% female and 29.9% male, averaging 30.72 years of age ($SD = 10.069$). Educationally, 54.0% held a university degree, while 46.0% had lower qualifications. The average tenure was 5.22 years ($SD = 6.799$ years). Regarding roles, 23.6% were managers, and 76.4% were non-managers. Respondents worked across various areas, including service (17.2%), sales (14.9%), and manufacturing (11.2%). The organizational sizes ranged from micro (15.8%) to large enterprises (30.7%). The respondents were predominantly from manufacturing (21.6%), trading (17.5%), services (13.8%), finance (8.6%), and education (8.6%).

3.2. Measures

The first construct of 16 statements assessed respondents' locus of control at work, based on Spector's (1988) scale, which measures both external and internal locus of control. Responses were rated on a 6-point scale from "completely disagree" to "strongly agree," with higher scores indicating a more external locus of control. Internal locus of control items were reverse-scored.

The second construct included 12 statements evaluating role conflict and role ambiguity, using a 7-point scale, based on Bowling et al. (2017). Higher scores reflected greater role conflict or ambiguity.

The third construct measured intention to quit using five statements from Kuvaas (2006), rated on a 7-point scale from "completely disagree" to "completely agree," with higher scores indicating a stronger intention to quit.

The fourth construct, adapted from Koopmans et al. (2013), assessed counterproductive work behavior through 10 statements rated on a scale from 0 ("never") to 4 ("often"). Higher scores indicated more frequent counterproductive behaviors.

The fifth construct used nine statements to measure work engagement, based on Schaufeli and Bakker's (2004) scale, covering energy, devotion, and immersion in work. Responses were rated on a 7-point frequency scale, with higher scores indicating higher levels of engagement. The scale defined engagement levels as very low, low, medium, high, and very high.

4. Results and analyses

4.1. Means, standard deviations, and correlations

The mean locus of control was 2.81 ($SD = 0.69$) on a 6-point scale, indicating a tendency toward internal locus of control, suggesting respondents are more self-reliant. Role stressor

averaged 3.35 (SD = 0.96) on a 7-point scale, with role conflict (M = 3.57, SD = 1.04) slightly higher than role ambiguity (M = 3.13, SD = 1.13). Counterproductive behavior had a mean of 2.20 (SD = 0.82) on a 5-point scale, indicating infrequent occurrences. Work engagement was high (M = 4.80, SD = 1.33), and the intention to quit was moderate (M = 2.95, SD = 1.15) (Table 1).

Table 1. Means, standard deviations, and Pearson correlations (source: authors' own work)

	Mean	SD	Min	Max	1	2	a	b	3	4	5
Locus of control	2.81	0.69	1	5	1	.441**	.365**	.408**	.460**	-.340**	.286**
Role stressor	3.35	0.96	1	6.33	.441**	1	.868**	.889**	.433**	-.358**	.420**
a. Role conflict	3.57	1.04	1	6.83	.365**	.868**	1	.544**	.342**	-.206**	.306**
b. Role ambiguity	3.13	1.13	1	7	.408**	.889**	.544**	1	.415**	-.414**	.426**
Counter-productive behaviour at work	2.20	0.82	1	5	.460**	.433**	.342**	.415**	1	-.270**	.368**
Work engagement	4.80	1.33	1	7	-.340**	-.358**	-.206**	-.414**	-.270**	1	-.438**
Intention to quit	2.95	1.15	1	5	.286**	.420**	.306**	.426**	.368**	-.438**	1

Note: ** Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis shows that locus of control moderately correlates with role stressor ($r = .441$), counterproductive behavior ($r = .460$), and intention to quit ($r = .286$). A moderate negative correlation exists between locus of control and work engagement ($r = -.340$), suggesting an external locus of control may reduce engagement. Role stressor positively correlates with counterproductive behavior ($r = .433$) and intention to quit ($r = .420$), but negatively with work engagement ($r = -.358$). Lower engagement correlates with a higher intention to quit ($r = -.438$).

4.2. Regression analysis

Two regression models were conducted to assess the impact of the independent variables on the intention to quit. Model 1, without control variables, explained 29.9% of the variance ($R\text{-sq} = .299$; $F = 28.938$; $p < .001$), with significant effects for role ambiguity ($B = .188$, $p = .002$), counterproductive behavior ($B = .248$, $p = .001$), and work engagement ($B = -.260$, $p < .001$). Model 2, which included control variables, improved explanatory power to 34.1% ($R\text{-sq} = .341$; $F = 15.654$; $p < .001$), revealing that gender also significantly influenced the intention to quit ($B = -.268$, $p = .020$), indicating that females were more likely to intend to quit (Table 2).

Table 2. Summary of regression models (source: authors' own work)

	Model 1					Model 2				
	B	Std. Er.	Beta	t	p	B	Std. Er.	Beta	t	p
(Constant)	2.759	.397				2.269	.477		4.757	<.001
Locus of control	-.011	.091	-.006	-.118	.906	.004	.091	.003	.049	.961
Role ambiguity	.188	.061	.185	3.070	.002	.207	.060	.205	3.452	<.001
Role conflict	.091	.061	.083	1.494	.136	.101	.060	.092	1.678	.094
Counterproductive behaviour at work	.248	.076	.177	3.286	.001	.247	.076	.176	3.273	.001
Work engagement	-.260	.044	-.301	-5.864	<.001	-.213	.046	-.246	-4.608	<.001
Age						-.003	.008	-.024	-.337	.737
Tenure						-.010	.012	-.058	-.848	.397
Size						.087	.050	.081	1.758	.080
Gender						-.268	.115	-.106	-2.336	.020
Education						.221	.118	.085	1.876	.062
Position						-.218	.126	-.080	-1.724	.086
	R-sq = .299; F = 28.938; p < .001					R-sq =.341; F = 15.654; p < .001				

4.3. Moderated mediation analysis

The moderated mediation analysis, conducted using IBM SPSS 29 and PROCESS v4.2 by Hayes (2013), examined the influence of role stressors on intention to quit through the mediators of counterproductive work behavior (CWB) and work engagement (ENG), with locus of control (LOC) as a moderator. This analysis utilized Model 14 from PROCESS, applied three times: first with the overall role stressor as the independent variable (IV), and then separately with its components – role ambiguity (RA) and role conflict (RC).

The results indicated (Table 3) that the role stressor significantly affected both CWB ($B = .3723$, $p < .001$) and ENG ($B = -.4964$, $p < .001$), explaining 18.72% of the variance in CWB and 12.80% in ENG. When examining the components separately, role ambiguity was found to positively influence CWB ($B = .3016$, $p < .001$) and negatively affect ENG ($B = -.4851$, $p < .001$), accounting for 17.25% and 17.15% of the variance, respectively. Similarly, role conflict positively influenced CWB ($B = .2698$, $p < .001$) and negatively impacted ENG ($B = -.2621$, $p < .001$), though with lower explanatory power, capturing 11.71% of the variance in CWB and 4.25% in ENG (Table 3).

Table 3. The effects of independent variables on mediator variables (source: authors' own work)

IV	DV	R-sq	F	B	SE	T
Role stressor	CWB	.1872	79.7134***	.3723	.0417	8.9282***
	ENG	.1280	50.7665***	-.4964	.0697	-7.1251***
RA	CWB	.1725	72.1147***	.3016	.0355	8.4920***
	ENG	.1715	71.6066***	-.4851	.0573	-8.4621***
RC	CWB	.1171	45.9044***	.2698	.0398	6.7753***
	ENG	.0425	15.3458***	-.2621	.0669	-3.9174***

Note: *** $p < .001$.

In the second stage of the analysis, multiple regression models were employed to assess how these independent variables, along with the moderator effects of LOC, impacted the intention to quit (Table 4). When role stressor was used as the independent variable, the model explained 31.02% of the variance in intention to quit ($R\text{-sq} = .3102$; $F = 25.5590$, $p < .001$). Role stressor demonstrated a significant positive effect ($B = .2526$, $p = .0002$), while ENG had a significant negative effect ($B = -.5625$, $p = .0007$). The interaction between ENG and LOC approached significance ($B = .1018$, $p = .0536$), suggesting that LOC may moderate the relationship between ENG and intention to quit.

In a similar analysis with role ambiguity as the independent variable, the model explained 30.94% of the variance ($R\text{-sq} = .3094$; $F = 25.4568$, $p < .001$). Role ambiguity significantly predicted intention to quit ($B = .2084$, $p = .0002$), with ENG continuing to be a significant negative predictor ($B = -.5583$, $p = .0008$). The interaction between ENG and LOC was significant ($B = .1055$, $p = .0455$), indicating a moderation effect.

When role conflict was examined as the independent variable, the model explained 29.49% of the variance ($R\text{-sq} = .2949$; $F = 23.7698$, $p < .001$). Role conflict had a significant positive effect on intention to quit ($B = .1489$, $p = .0087$), and ENG had a significant negative effect ($B = -.6034$, $p = .0003$). The interaction between ENG and LOC was again significant ($B = .1065$, $p = .0459$), confirming that LOC moderates the relationship between ENG and intention to quit across all models.

Table 4. Multiple regression analyses examining the effects of independent variables and the moderating effect of locus of control (source: authors' own work)

	Independent variable	B	SE	T	p	R2-chng
1.	$R\text{-sq} = .3102$ $F = 25.5590^{***}$					
	constant	3.8530	1.3936	2.7648	.0060	
	Role stressor	.2526	.0659	3.8334	.0002	
	Counterproductive work behaviour	.4330	.4068	1.0644	.2879	
	Work engagement	-.5625	.1648	-3.4143	.0007	
	Locus of control	-.3430	.4341	-.7901	.4300	
	Int_1 (CWB x Locus)	-.0596	.1245	-.4787	.6324	.0005
	Int_2 (Eng x Locus)	.1018	.0526	1.9365	.0536	.0076
2.	$R\text{-sq} = .3094$ $F = 25.4568^{***}$					
	constant	3.8095	1.3953	2.7302	.0067	
	Role ambiguity	.2084	.0552	3.7754	.0002	
	Counterproductive work behaviour	.5109	.4038	1.2652	.2067	
	Work engagement	-.5583	.1650	-3.3833	.0008	
	Locus of control	-.2908	.4332	-.6712	.5026	
	Int_1 (CWB x Locus)	-.0829	.1239	-.6689	.5040	.0009
	Int_2 (Eng x Locus)	.1055	.0526	2.0077	.0455	.0082
3.	$R\text{-sq} = .2949$ $F = 23.7698^{***}$					
	constant	4.0591	1.4071	2.8848	.0042	
	Role conflict	.1489	.0564	2.6402	.0087	

End of Table 4

	Independent variable	B	SE	T	p	R2-chng
	Counterproductive work behaviour	.5339	.4104	1.3007	.1942	
	Work engagement	-.6034	.1659	-3.6364	.0003	
	Locus of control	-.2878	.4388	-.6559	.5123	
	Int_1 (CWB x Locus)	-.0803	.1259	-.6374	.5243	.0008
	Int_2 (Eng x Locus)	.1065	.0532	2.0032	.0459	.0083

Note: Dependent variable: intention to quit, ***Significant at the 0.001 level.

These analyses consistently revealed that LOC moderates the relationship between ENG and intention to quit. Specifically, the interaction effects indicated that higher internal LOC (lower scores on the scale) strengthened the negative impact of ENG on intention to quit, while higher external LOC (higher scores) diminished this effect. The R-squared change due to the interaction ranged from .0076 to .0083, underscoring the significant but relatively small impact of LOC on this relationship.

Further analysis of the conditional effects (Table 5) showed that as LOC shifts from internal ($M = 2.1182$) to external ($M = 3.4956$), the negative impact of ENG on intention to quit weakens. For instance, at an LOC of 2.1182, the effect of ENG on intention to quit was significant and substantial ($B = -.3468$, $p < .001$). However, at an LOC of 3.4956, this effect was reduced to $B = -.2065$ ($p < .001$). This finding suggests that individuals with a more internal LOC are more likely to have their intention to quit influenced by their level of work engagement.

Table 5. Conditional effects of work engagement on intention to quit at values of locus of control (source: authors' own work)

Locus of control	Effect	se	T	p
Role stressor				
2.1182	-.3468	.0645	-5.3798	.0000
2.8069	-.2767	.0450	-6.1444	.0000
3.4956	-.2065	.0502	-4.1122	.0000
Role ambiguity				
2.1182	-.3348	.0652	-5.1377	.0000
2.8069	-.2621	.0460	-5.7005	.0000
3.4956	-.1894	.0510	-3.7122	.0002
Role conflict				
2.1182	-.3778	.0644	-5.8691	.0000
2.8069	-.3045	.0448	-6.8033	.0000
3.4956	-.2311	.0504	-4.5840	.0000

The moderated mediation analysis further explored the direct and indirect effects of the independent variables on intention to quit through CWB and ENG, moderated by LOC (Table 6). When role stressor was the independent variable, the direct effect on intention to quit was significant ($B = .2526$, $p = .0002$). The conditional indirect effect through CWB was not moderated by LOC, as indicated by the non-significant moderated mediation index

(index = $-.0222$, BootLLCI = $-.1113$, BootULCI = $.0632$). However, the conditional indirect effect through ENG was moderated by LOC (index = $-.0506$, BootLLCI = $-.1133$, BootULCI = $-.0030$), suggesting that higher LOC attenuates the negative impact of ENG on intention to quit.

A similar pattern emerged when role ambiguity was used as the independent variable. The direct effect of role ambiguity on intention to quit was significant ($B = .2084$, $p = .0002$). The conditional indirect effect through CWB was again not moderated by LOC (index = $-.0250$, BootLLCI = $-.0947$, BootULCI = $.0483$), while the conditional indirect effect through ENG was moderated (index = $-.0512$, BootLLCI = $-.1130$, BootULCI = $-.0048$). This finding indicates that ENG consistently mediates the relationship between role ambiguity and intention to quit, with LOC moderating this mediation.

Table 6. Direct and indirect effects of independent variable on dependent variable (source: authors' own work)

Locus of control	Effect	SE/ BootSE	t	p	BootLLCI	BootULCI
Direct effect of role stressor on intention to quit						
	.2526	.0659	3.8334	.0002		
Conditional indirect effect: role stressor (CWB) quit Index of moderated mediation: index = $-.0222$ (BootLLCI = $-.1113$; BootULCI = $.0632$)						
2.1182	.1142	.0592			.0005	.2324
2.8069	.0989	.0399			.0229	.1803
3.4956	.0836	.0399			.0039	.1630
Conditional indirect effect: role stressor (ENG) quit Index of moderated mediation: index = $-.0506$ (BootLLCI = $-.1133$; BootULCI = $-.0030$)						
2.1182	.1722	.0353			.1096	.2471
2.8069	.1373	.0303			.0825	.2016
3.4956	.1025	.0364			.0329	.1772
Direct effect of role ambiguity on intention to quit						
	.2084	.0552	3.7754	.0002		
Conditional indirect effect: role ambiguity (WB) quit Index of moderated mediation: index = $-.0250$ (BootLLCI = $-.0947$; BootULCI = $.0483$)						
2.1182	.1012	.0466			.0072	.1920
2.8069	.0840	.0310			.0234	.1464
3.4956	.0667	.0317			.0041	.1302
Conditional indirect effect: role ambiguity (ENG) quit Index of moderated mediation: index = $-.0512$ (BootLLCI = $-.1130$; BootULCI = $-.0048$)						
2.1182	.1624	.0328			.1056	.2325
2.8069	.1271	.0273			.0781	.1850
3.4956	.0919	.0336			.0260	.1572
Direct effect of role conflict on intention to quit						
	.1489	.0564	2.6402	.0087		

End of Table 6

Locus of control	Effect	SE/ BootSE	t	p	BootLLCI	BootULCI
Conditional indirect effect: role conflict (CWB) quit Index of moderated mediation: index = $-.0217$ (BootLLCI = $-.0884$; BootULCI = $.0425$)						
2.1182	.0982	.0439			.0127	.1877
2.8069	.0832	.0294			.0277	.1428
3.4956	.0683	.0290			.0116	.1255
Conditional indirect effect: role conflict → ENG → quit Index of moderated mediation: index = $-.0279$ (BootLLCI = $-.0648$; BootULCI = $-.0020$)						
2.1182	.0990	.0294			.0455	.1616
2.8069	.0798	.0250			.0346	.1324
3.4956	.0606	.0252			.0176	.1150

When examining role conflict as the independent variable, the direct effect on intention to quit was significant ($B = .1489$, $p = .0087$). The conditional indirect effect through CWB remained unmoderated by LOC (index = $-.0217$, BootLLCI = $-.0884$, BootULCI = $.0425$), whereas the conditional indirect effect through ENG was moderated (index = $-.0279$, BootLLCI = $-.0648$, BootULCI = $-.0020$). This pattern aligns with the previous analyses, demonstrating that higher LOC reduces the negative impact of ENG on intention to quit.

Across all analyses, LOC consistently moderated the indirect effect of ENG on intention to quit, while CWB mediated the relationship between role stressors and intention to quit independently of LOC. These findings underscore the importance of considering both direct and mediated pathways in understanding how role stressors influence employees' intentions to quit. While the direct effects of role stressors are significant, the mediation by ENG and the moderation by LOC reveal more nuanced dynamics in employees' quitting intentions. Specifically, individuals with a higher internal LOC are more influenced by their work engagement levels when considering quitting, whereas those with a more external LOC are less affected by their engagement levels.

5. Discussion and conceptualisation: an integrative framework of team and individual level variables

This paper also proposes a preliminary framework (Figure 2) which depicts how team-level factors such as work engagement and counterproductive work behaviour integratively affect interrelations between role stressors and employee intention to quit. The aforementioned variables are characterised by a number of attributes that have been identified by researchers in previous studies (Bowling et al., 2017; Koopmans et al., 2013; Kuvaas, 2006; Schaufeli & Bakker, 2004; Spector, 1988).

The presented framework constitutes a substantial theoretical and practical addition. At the theoretical level, it establishes the foundation upon which further empirical research can be built, investigating theories related to role stressors and employee intention to quit within a variety of team-level contexts (Bowling et al., 2017; Koopmans et al., 2013; Kuvaas, 2006; Schaufeli & Bakker, 2004; Spector, 1988). The framework illustrates the potential moderators, attributes, and characteristics associated with these interrelations. By doing so, it

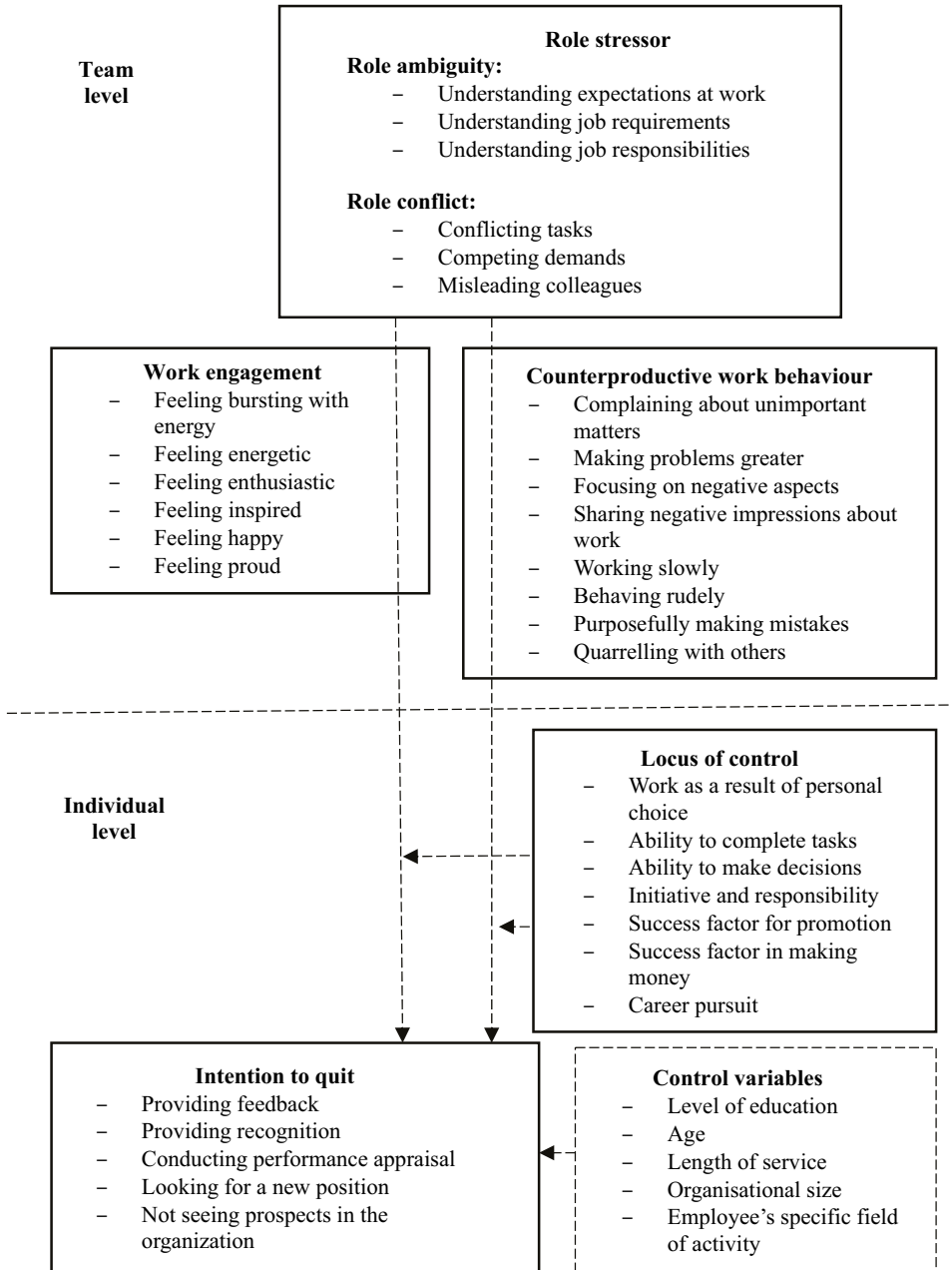


Figure 2. An integrative framework of team level and individual level variables (source: authors own work based on literature review)

provides insight into how role stressors – role ambiguity and role conflict – act in moderating team-level contexts, and helps to answer a number of pertinent questions. The framework enables investigation of the influence of both team-level and individual factors on the relationship between role stressors and employee intention to quit. Additionally, it permits the examination of the patterns by which managers can adapt their managerial behaviours, as well as investigation of the interconnection between role stressors and employees' intention to quit within the context of team-level and individual factors.

6. Conclusions

6.1. Theoretical contributions

A review of the literature suggests that employees with an external locus of control are more likely to experience role conflict, role ambiguity, and engage in counterproductive behavior, while those with an internal locus of control are more likely to be engaged at work. However, there is no consensus on the relationship between locus of control and the intention to quit. Some researchers argue that an internal locus of control reduces turnover intentions, while others believe that individuals with an internal locus of control are more likely to leave unsatisfactory situations in search of better opportunities. Based on the tested hypotheses, the following theoretical conclusions can be drawn.

First, *Role Stressors and Intention to Quit (H1, H1a, H1b)*: The study confirms that role stressors, including role ambiguity and role conflict, significantly increase employees' intention to quit. Role ambiguity ($B = .2084$, $p = .0002$) and role conflict ($B = .1489$, $p = .0087$) both contribute to a heightened desire to leave the organization. These findings align with existing literature, reinforcing the idea that unclear or conflicting role expectations lead to dissatisfaction and increased turnover intentions.

Second, *Mediating Role of Counterproductive Work Behavior (H2, H2a, H2b)*: The study demonstrates that counterproductive work behavior mediates the relationship between role stressors and the intention to quit. This mediation is evident for both role ambiguity and role conflict, with significant indirect effects (BootLLCI = .0005 to .0127; BootULCI = .2324 to .1877). The findings underscore the importance of addressing role stress to mitigate counterproductive behaviors and reduce turnover.

Third, *Mediating Role of Work Engagement (H3, H3a, H3b)*: Work engagement is also a significant mediator between role stressors and the intention to quit. Higher levels of engagement can buffer the negative effects of role stress, thereby reducing the likelihood of quitting (BootLLCI = .0329 to .0455; BootULCI = .2471 to .1616). However, when engagement is low, role stressors more directly contribute to turnover intentions. This finding highlights the critical role of fostering employee engagement as a strategy to counteract the negative impact of role stress.

Forth, *Moderating Role of Locus of Control on Counterproductive Behavior (H4, H4a, H4b)*: Contrary to expectations, the study did not find evidence that locus of control moderates the indirect relationship between role stressors and the intention to quit through counterproductive work behavior. The lack of significant moderation (index = $-.0222$ to $-.0217$; BootLLCI = $-.1113$ to $-.0884$, BootULCI = .0632 to .0425) suggests that the influence of counterproductive behavior on turnover intentions operates independently of an individual's locus of control. This challenges the notion that locus of control plays a crucial role in moderating the effects of negative behaviors on quitting decisions.

Fifth, *Moderating Role of Locus of Control on Work Engagement (H5, H5a, H5b)*: The study finds that locus of control significantly moderates the relationship between role stressors and the intention to quit through work engagement. Individuals with a strong internal locus of control are more likely to remain engaged despite role stressors, reducing their intention to quit (index = $-.0506$ to $-.0279$; BootLLCI = $-.1133$ to $-.0648$, BootULCI = $-.0030$ to $-.0020$). This indicates that fostering an internal locus of control can enhance the effectiveness of engagement strategies in retaining employees under stressful conditions.

These findings contribute to the theoretical understanding of how role stressors influence turnover intentions. The research highlights the dual pathways through which role ambiguity and role conflict can lead to quitting – either by fostering counterproductive behaviors or by diminishing work engagement. Moreover, the moderating role of locus of control in the engagement pathway provides insights into how personal characteristics can alter the impact of role stressors on employee retention. This study offers a nuanced perspective on the interplay between role stress, individual differences, and organizational outcomes, suggesting that targeted interventions focusing on both role clarity and personal empowerment could effectively reduce turnover rates.

6.2. Practical implications

The study suggests several practical recommendations for organizations:

- *Reducing Role Ambiguity and Conflict*: Clearer job expectations, well-defined roles, and better communication can lower turnover intentions by helping employees understand their roles and experience less conflict.
- *Addressing Counterproductive Behavior*: Organizations should tackle both the symptoms and causes of counterproductive behavior. By resolving sources of role ambiguity and conflict, they can reduce such behaviors and the likelihood of employees leaving.
- *Enhancing Work Engagement*: Investing in professional development, fostering a supportive work environment, and recognizing employee contributions can mitigate the effects of role stress on turnover intentions. These efforts keep employees engaged and reduce their intention to quit.
- *Considering Locus of Control in Retention Strategies*: Engagement initiatives are particularly effective for employees with a strong internal locus of control. Personalized approaches that account for individual psychological traits can enhance retention efforts.
- *Directly Addressing Role Stressors*: Organizations should focus on managing role stressors and counterproductive behaviors directly, ensuring all employees receive the support they need to reduce the likelihood of quitting.

However, this study has several limitations. First, the sample was skewed toward younger employees (72.7% aged 18–35), which may have influenced the results, as younger employees are more likely to consider quitting. Second, there was a gender imbalance (70.1% female, 29.9% male), potentially affecting the detection of gender-based differences. Despite these limitations, the study offers new insights into the relationship between work engagement, role stressors, and intention to quit under the influence of locus of control. Contrary to the assumption that engagement reduces turnover intentions, the study suggests that engagement driven by role stressors can increase quitting likelihood. Further research is needed to explore these dynamics, incorporating additional variables. Locus of control is a key factor in organizational outcomes. This study confirmed its influence on quitting intentions and revealed novel findings, warranting further exploration of its role in organizational behavior.

Author contributions

The authors of this article personally developed the work and are directly responsible for the contributions as follows: conceptualization, R. P, V. T., D. D., M. L., A. T.; methodology, R. P., V. T., A. T.; validation, R. P., V. T., A. T.; formal analysis, R. P., V. T., M. L.; investigation, R. P. and V. T., data curation, V. T. and R. P.; writing – original draft preparation, R. P, V. T., D. D., M. L., A. T.; writing – review and editing, R. P and V. T.; visualization, V. T.; supervision, R. P. All authors have read and agreed to the published version of the manuscript.

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