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Moderating effects of personal resources on work engagement and work-family conflict

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Orientation: There is a growing concern about the dark side of work engagement. Recent research has shown that employees who are highly engaged at work are more likely to suffer from high work–family conflict. As employees' engagement is highly valuable to organisations, it would be useful to identify variables that mitigate this negative impact so that both employees and the organisation can benefit from this positive work behaviour.

Research purpose: The study examined the moderating roles of work-family conflict self-efficacy and resilience on the relationship between work engagement and work-family conflict among female nurses in Nigeria.

Motivation for the study: While prior research has established that work engagement is associated with higher work-family conflict, less research attention has been paid on the factors that can moderate or buffer this relationship. This study was therefore conducted in response to calls for empirical research on the potential moderators between engagement and work-family conflict.

Research approach/design and method: The study used a cross-sectional survey approach to gather data from a sample comprising 233 female nurses in four public hospitals in Ondo State, Nigeria. They responded to measures of work-family conflict, work engagement, work-family conflict self-efficacy and resilience. The study hypotheses were tested using moderated regression statistics.

Main findings: Findings indicated that work engagement positively predicted work-family conflict. Work–family conflict self-efficacy and resilience buffer the positive relationship between work engagement and work-family conflict.

Practical/managerial implications: These findings implicate the need for intervention programmes that would enhance self-efficacy and resilience among female nurses in Nigeria.

Contribution/value-add: This study is one of the first to examine the moderating roles of personal resources such as work-family conflict self-efficacy and resilience on the relationship between work engagement and work-family conflict within the framework of conservation of resources theory.

Keywords: work engagement; work–family conflict; self-efficacy; resilience; nurse; Nigeria.

Introduction

Nursing is a healthcare profession that focuses on the care of individuals and their families to help them recover from illness and maintain optimal health and quality of life. Nurses play a critical role in patient care. Nurses not only help and provide healthcare services to patients but also interact and spend considerable time with patients as compared to any other medical professionals in hospitals (Kim & Seo, 2021). Therefore, nurses have a significant influence on patients' safety and satisfaction (Szilvassy & Širok, 2022).

Work engagement is important for the quality of nursing services (Saad et al., 2022). For instance, nurses who are engaged at work are more likely to deliver high-quality, cost-effective care and pursue activities beyond their formal job descriptions (Kaissi, 2014; Szilvassy & Širok, 2022). Higher work engagement among nurses can lead to fewer errors, higher patient safety and patient satisfaction, and consequently result in better quality of nursing services (Keyko, 2014; Wu, 2010). Work engagement has been found to be associated with high creativity, organisational commitment and low burnout, absenteeism and turnover (Afsar et al., 2018; Gupta & Shaheen, 2017; Ismail et al., 2019; Joplin et al., 2019; Schaufeli et al., 2009). Prior research has also

demonstrated that organisations with a highly engaged workforce tend to have a competitive advantage over competitors (Smith & Bititci, 2017).

However, there is a growing concern about the dark side of work engagement (Balogun & Afolabi, 2019). Researchers have noted that highly engaged workers are more likely to suffer from a negative work–family interference (Bolino & Turnley, 2005; Halbesleben et al., 2009). Specifically, empirical studies (e.g., Balogun & Afolabi, 2020; Chernyak-Hai & Tziner, 2016; Hakanen & Peeters, 2015) have shown that employees who are highly engaged at work experienced high work–family conflict (WFC). As employee work engagement is highly valuable to the organisation, it would be useful to identify variables that mitigate this negative impact so that both the employee and the organisation can benefit from work engagement. Thus, Balogun and Afolabi (2020) echoed the need for researchers to empirically examined variables that can mitigate the negative effect of work engagement on WFC. Unfortunately, the potential moderators of engagement–WFC relationship have not been adequately investigated to date, thus necessitating the need for research in this area.

Personal resources (such as WFC self-efficacy and resilience) have been suggested as possible factors that can mitigate the negative impact of work engagement on WFC (cf. Balogun & Afolabi, 2020). However, a review of the literature on this topic shows that no attempt has been made to empirically investigate the moderating roles of self-efficacy and resilience in the engagement–WFC relationship. This is surprising because self-efficacy and resilience are important coping resources known for alleviating stress and strain resulting from negative job conditions, providing safety and protection against resource loss, and serving as protective factors against the development of burnout, emotional distress, mental health problems and poor quality of life (Balogun & Adebayo, 2016; Paul et al., 2016; Silverman et al., 2015).

Against this background, the current study examined whether WFC self-efficacy and resilience would moderate the relations between work engagement and WFC among female nurses in Nigeria. The study draws insight from the conservation of resources (COR) theory (Hobfoll, 1989, 2011). According to the COR theory, individuals invest their personal resources to protect them against resources loss, recoup lost resources and acquire additional resources (Hobfoll & Freedy, 1993). The theory further states that stress and exhaustion occur when personal resources are threatened, consumed or cannot be recouped (Afolabi & Balogun, 2017; Hobfoll, 2011). Based on the COR theory, the current research argued that WFC self-efficacy and resilience would serve as protective factors against resources loss for highly engaged employees, and consequently reduce their vulnerability to WFC. In other words, the positive relationship between work engagement and WFC is expected to weaken significantly for employees with high levels of WFC self-efficacy and resilience.

The current study advances extant literature in the following ways. Firstly, the study expands knowledge on the moderators between work engagement and WFC by examining WFC self-efficacy and resilience as potential moderators, which have not been empirically investigated to date (Balogun & Afolabi, 2019; Halbesleben et al., 2009). Secondly, this study applies the COR theory and proposes that WFC self-efficacy and resilience moderate the link between work engagement and WFC. This novel approach can inform researchers and managers regarding how the negative impact of work engagement on employees' work–family life can be managed and prevented in the workplace. Thirdly, most studies documenting a positive relationship between work engagement and WFC were conducted in advanced countries such as the United States of America (cf. George, 2011; Halbesleben, 2011; Halbesleben et al., 2009; Hakanen & Peeters, 2015; Listau et al., 2017). Moreover, these prior studies used samples mainly from the banking, manufacturing, telecommunications, educational and hairstyle industries. The concern here is that socio-economic, cultural and environmental variations may limit the generalisation of the findings of these studies beyond their countries. Given that the nursing profession is mostly dominated by females, the current research, therefore, extends the scope and external validity of these previous studies by using data from a sample of female nurses, especially in Nigeria where family role is highly important to women.

In Nigeria, though nursing is a rewarding occupation, it is characterised by excess work overload, emotional stress, staff shortages, lack of support, pressure from patients and their relations, difficult and high demanding patients, low pay, inadequate hospital equipment and conflict with physicians (Faremi et al., 2019). Female nurses who invest their limited resources (e.g., time and energy) being engaged in this stressful and demanding work environment may quickly become exhausted. This may limit the resources available to manage their family roles, and thus result in negative work–family interference. Female nurses in Nigeria are at greater risk of WFC, and factors such as negative job conditions (e.g., high job demands and low job resources) and lack of personal coping resources have been reported to be associated with WFC (Balogun, 2019; Ilo et al., 2020). However, less attention has been paid to the impact of work engagement on WFC among female nurses in Nigeria. More so, the moderating roles of WFC self-efficacy and resilience in the relationship remain elusive. The current study expands knowledge on the management of WFC among female nurses in Nigeria by examining how WFC self-efficacy and resilience mitigate the negative effect of work engagement on WFC.

Theory and hypotheses
Work Engagement and work–family conflict

Work engagement has been defined as 'a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption' (Schaufeli & Bakker, 2004, p. 295).

Employees with high work engagement are emotionally, cognitively and behaviourally attached to work (Hakanen et al., 2012). They also invest more effort, energy and time in their work, and persevere in the face of stressors or difficult situations (Bakker & Bal, 2010). Moreover, they are more inspired, very proud of their work and fully concentrated and happily engrossed in work rather than being less engaged (Hakanen & Peeters, 2015).

Early research has clearly demonstrated that work engagement is associated with several desirable individual and organisational outcomes, such as increased employee performance (Bakker & Bal, 2010), organisational commitment (Hakanen et al., 2008) and well-being (Schaufeli et al., 2008), employee retention and organisational citizenship behaviour (Gupta & Shaheen, 2017; Schaufeli et al., 2006).

However, despite these positive consequences, scholars have argued that high work engagement can threaten employees' work–family lives (Bolino & Turnley, 2005). Some extant studies have provided evidence for this line of thought. For example, in the United States of America, Halbesleben et al. (2009) reported a positive association between work engagement and WFC. Chernyak-Hai and Tziner (2016) also found that employees' engagement at work increases WFC among employees in Israel. In Nigeria, studies conducted by Balogun and Afolabi (2019, 2020) showed that working mothers in the Nigerian banking industry who are highly engaged at work reported negative work–family interference. However, there are no prior studies establishing the positive link between work engagement and WFC among female nurses in Nigeria. In order to better understand how work engagement predicts WFC across work settings, Listau et al. (2017) echoed the need for more empirical research on this topic to better understand how work engagement predicts WFC across work settings. The current research, therefore, responded to this call, and thus proposed that:

> **Hypothesis 1:** Female nurses who are highly engaged at work will express higher WFC.

Work–family conflict self-efficacy as a moderator in engagement–work–family conflict relationship

Based on the COR theory (Hobfoll, 1989, 2001), the current study surmises that WFC self-efficacy mitigates the negative impact of work engagement on WFC. Work–family conflict self-efficacy is a specific domain of self-efficacy that refers to individuals' confidence in their ability and competence to manage conflict between work and family roles (Balogun & Afolabi, 2019; Cinamon, 2003). Work–family conflict self-efficacy has also been defined as the perceived capability to negotiate conflicts between work and family roles (Hennessy & Lent, 2008). High WFC self-efficacy enhances self-confidence, coping ability and perseverance in the face of work–family stress (Cinamon, 2003). Employees with high self-efficacy are more proactive and tend to appraise stressors positively (Afolabi & Balogun, 2017). Therefore, highly engaged individuals who have high levels of WFC

self-efficacy may picture WFC as a challenge to be tackled rather than a threat to be avoided. Consequently, constructive ways to manage conflicting situations need to be developed, which may reduce the risk of stress and burnout (Balogun, 2019).

However, highly engaged employees with low levels of WFC self-efficacy may doubt their capabilities and give up more easily when they face WFC. This low efficacious belief may negatively influence their thought, coping ability, motivation and affective states (Evers et al., 2002). In other words, highly engaged employees who score low on WFC self-efficacy may be adversely affected by WFC, which may put them at a high risk of stress and burnout (Erdwins et al., 2001; Hennessy & Lent, 2008).

Extant studies, though still very scanty, have supported the moderating capacity of WFC self-efficacy. For example, Abdul Rauf (2013) found that WFC self-efficacy buffers the positive relationship between organisational citizenship behaviour and WFC among employees in India. Another study by Balogun (2019) showed that WFC self-efficacy mitigates the negative impact of WFC on burnout among working mothers in the Nigerian banking industry. Based on the evidence from these previous studies, the researcher expects WFC self-efficacy to modify the relationship between work engagement and WFC among female nurses. Therefore, the present study proposed that:

> **Hypothesis 2:** Highly engaged female nurses with high levels of WFC self-efficacy will express low levels of WFC.

Resilience as a moderator in the engagement–work–family conflict relationship

Consistent with the COR theory, Hobfoll (1989) also contends that resilience can help highly engaged employees regain or recover quickly from resources loss and thus put them at a lower risk of WFC. Resilience refers to an individual's capacity to cope and rebound from stress and difficult situations (Tugade & Fredrickson, 2004; Youssef & Luthans, 2007). Resilience provides protection and safety against resource loss by enhancing one's resistance to stressors (Xu et al., 2013). Research has shown that resilient individuals recover quickly from stressors that appear to weaken other people (García & Calvo, 2012; Wang & Zhang, 2011). This may be because resilient individuals have effective problem-solving skills to handle and manage stressors and challenging situations (Popa-Velea et al., 2017).

Previous studies have demonstrated that resilience is negatively related to WFC, work stress and burnout (Akgemci et al., 2013; Balogun & Afolabi, 2020; Hao et al., 2015; Taku, 2014). Moreover, research has shown that resilience is a protective factor against developing mental health problems and poor quality of life (Silverman et al., 2015). Other studies have supported that resilience can be a moderator or buffer in the strain–well-being relationship. For example, Palm-fischbacher and Ehlert (2014) found that resilience reduced the effect of chronic stress on the physical health of women.

Balogun and Afolabi, (2020) reported that the relationships between work–family and family–work interference and burnout were weaker for resilient working mothers. Another study by Khadem et al. (2017) reveal that resilience mitigated the negative effect of maladaptive schema on anxiety and depression among firefighters. Based on these previous studies, resilience is expected to moderate the relationship between work engagement and WFC. Therefore, it is proposed that:

> **Hypothesis 3:** Highly engaged female nurses with high resilience levels will express low WFC levels.

Research methods and design
Study population and sampling strategy

This study utilised a cross-sectional survey approach to gather data from 233 female nurses in Ondo State, Nigeria. The participants were selected from a teaching hospital in Akure, a general hospital in Ondo town, a Federal Medical Centre (FMC) in Owo and a state specialist hospital in Ikare using an accidental sampling technique. A random sampling method (e.g., a simple random sampling technique) could not be utilised because of the busy schedule of the nurses and the emergencies in the hospitals. Female nurses in Ondo town, Akure, Owo and Ikare were targeted because they tend to face more stressful and demanding situations at work because of the cosmopolitan natures of the cities.

The participants' ages ranged between 28 years and 41 years (M = 34.50; SD = 3.98). The participants worked full-time and they had at least one dependent child. The ages of the children ranged between 9 months and 7 years. The response of the participants on marital status indicated that 173 (74.5%) were married, 28 (12.0%) were separated, 21 (9.0%) were divorced and 11 (4.72%) were widowed. Their response on job position indicated that 157 (67.4%) were at the junior level while 76 (32.6%) were at the senior level. About 111 (47.6%) had Bachelor's degree in Nursing, 91 (39.1%) had Diploma in Nursing and 31 (13.3%) had Master's degree in Nursing. The participants' working experience ranged between 4 years and 17 years with a mean of 27.85 years and a standard deviation of 10.75 years.

Measures
Work engagement

Work engagement was measured by the Utrecht Work Engagement Scale (UWES-9) (Schaufeli et al., 2006). The UWES contains three components of work engagement: vigour, dedication and absorption. The components were each measured by three items. However, the total score of work engagement was utilised in this study. The three subscales were combined into an aggregate measure of work engagement because prior research has shown that the three dimensions of engagement were highly intercorrelated (Bal & Kooij, 2011; Balogun & Afolabi, 2019). For example, Halbesleben et al. (2009) reported that inter-subscale correlations were over 0.50. Items were rated on a 7-point

Likert-type format ranging from 0 ('never') to 6 ('everyday'). The Cronbach's alpha of UWES for the current study is 0.90. High scores on the scale indicate high work engagement, whereas low scores imply low work engagement.

Work–family conflict

Work–family conflict was tapped with a 5-item Work–Family Interference Scale developed by Netemeyer et al. (1996). Participants were asked to rate their agreement on a 5-point Likert scale, ranging from 1 ('strongly disagree') to 5 ('strongly agree'). Sample items include 'My family dislikes how often I am preoccupied with my work while at home'. The Work–Family Interference Scale had a Cronbach's alpha coefficient of 0.87 in the present research. High scores on the scale imply high levels of work–family interference whereas low scores indicate low levels of work–family interference.

Work–family conflict self-efficacy

Work–family conflict self-efficacy was measured using the work–family conflict self-efficacy scale (WFCSE). This is a 22-item self-report scale developed by Balogun (2019). Work–family conflict self-efficacy scale was developed to measure employee's confidence in their ability to handle or manage WFC. Sample item includes 'I am confident that I can handle situations where my work role interferes with family responsibilities'. This scale was rated on a 5-point Likert-type format ranging from 1 ('strongly disagree') to 5 ('strongly agree'). Balogun (2019) reported a reliability coefficient of 0.93 for the scale. In the present study, a Cronbach's alpha of 0.91 was obtained for the scale. High scores on the scale imply high self-efficacy in managing WFC, while low scores indicate otherwise.

Resilience

Resilience was tapped using a Brief Resilience Scale (BRS) designed by Smith et al. (2008). The scale which consists of six items was rated on a 5-point scale ranging from 1 ('strongly disagree') to 5 ('strongly agree'). Smith et al. (2008) reported a reliability coefficient of 0.80 for the scale. In the current research, a Cronbach's alpha of 0.72 was obtained. **A** high score on the scale suggests that the participants are highly resilient whereas a low score suggests that participants have a low level of resilience.

Control variables

Participants' age, marital status, job position, work experience and the number of dependants formed the controlled variables, as in the present study they have been found to influence WFC (Balogun & Afolabi, 2019).

Procedure

The purpose of the study was presented to the authorities of the hospitals to seek their permission to conduct the study. The questionnaires were distributed to the participants after the hospital management approved them. The participants ranted informed consent. They were assured of the anonymity

and confidentiality of their responses, and that data would be used only for academic purposes. The participants were also informed that they could opt out of the study at any point. Using an accidental sampling technique, questionnaires were distributed to the participants who consented to participate. Although 241 questionnaires were retrieved, only 233 (93%) of the questionnaires were filled correctly and were usable for the analysis.

Ethical consideration

Ethical clearance was obtained from the Ethics Committee of the Department of Pure and Applied Psychology, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria (EA23/06/2022). Permission to conduct the study and ethical clearance were sought and approved by the authorities of the hospitals.

Data analysis

Data were analysed using descriptive statistics, Pearson correlation and moderated regression analyses. Descriptive statistics were performed to describe the participants' socio-demographic variables (cf. the 'Study population and sampling strategy' sub-section under the 'Research methods and design' section). Pearson correlation was used to determine the relationships among the variables of the study whereas moderated regression statistics was utilised to test the study hypotheses. The procedure and guidelines of Aiken and West (1991) were followed to conduct the analyses. The independent variable was centred before interactions were calculated (Aiken & West, 1991). In the regression analyses, age, marital status, job position, work experience and the number of dependants were entered in the first model. The main and interaction terms of the independent and moderating variables were added in the second and third models, respectively.

Results

Descriptive and correlation analyses

Results in Table 1 indicate that work engagement had a moderate positive relationship with WFC ($r = 0.27$; $p < 0.01$). This suggests that WFC increases with high work engagement. Work–family conflict self-efficacy had a small but negative relation to WFC ($r = -0.11$; $p < 0.05$). This implies that as self-efficacy to manage WFC increases, negative work–family

interference decreases. There was also a moderate negative relationship between resilience and WFC ($r = -0.23$; $p < 0.05$), thus suggesting that high resilience is associated with low levels of WFC.

Hypotheses testing

Table 2 provides results for the moderating role of WFC self-efficacy and resilience on the relationship between work engagement and WFC among female nurses. The regression analysis contained three models. Socio-demographic variables (age, marital status, job position, work experience and the number of dependents) were controlled by including them in Step 1. The predictor (i.e., work engagement) and moderators (i.e., WFC self-efficacy and resilience) were added in Step 2. The interaction terms between the predictor and moderating variables were added in Step 3.

Table 2 shows that age was negatively related to WFC, such that as the age of female nurses increases, their level of WFC decreases ($\beta = -0.20$; $p < 0.05$). Marital status positively predicted WFC ($\beta = 0.14$; $p < 0.05$). This suggests that WFC is higher in married than unmarried female nurses. Work experience negatively predicted WFC ($\beta = -0.17$; $p < 0.05$). This implies that female nurses with more experience reported lower levels of WFC. Job position ($\beta = 0.09$; $p < 0.05$)

TABLE 2: A presentation of the results depicting the moderating role of personal resources on the relations between work engagement and work-family conflict.

Variables	Step 1	Step 2	Step 3
	β	β	β
Socio-demographic variables			
Age	-0.20*	-0.18*	-0.20*
Marital status	0.14*	0.10*	0.16*
Job position	0.19*	0.13*	0.11*
Work experience	-0.17*	-0.15*	-0.10*
Number of dependent children	0.15*	0.15*	0.19*
Predictors and moderators			
Work engagement	-	0.27*	0.20**
WFC self-efficacy	-	-0.18*	-0.13*
Resilience	-	-0.23**	-0.19*
Interaction terms			
Work engagement × WFC self-efficacy	-	-	-0.10*
Work engagement × resilience	-	-	-0.13*
R^2	0.07	0.18	0.22
ΔR^2	0.07	0.11	0.14
F	6.34*	17.59*	20.66*

WFC, work–family conflict.
*, $p < 0.05$; **, $p < 0.01$

TABLE 1: A presentation of the mean, standard deviations and correlations among study variables.

Variables	Mean	SD	1	2	3	4	5	6	7	8
1. Age	34.50	3.98	-	-	-	-	-	-	-	-
2. Job position	-	-	0.00	-	-	-	-	-	-	-
3. Work experience	-	-	0.19*	0.01	-	-	-	-	-	-
4. Dependent children	7.34	3.87	0.23*	0.03	0.09	-	-	-	-	-
5. Work engagement	23.95	18.21	0.14*	0.31*	0.11*	-0.05	-	-	-	-
6. Work–family conflict self-efficacy	57.32	9.56	0.30*	0.25*	0.37*	-0.02	0.10*	-	-	-
7. Resilience	32.45	12.45	0.29*	0.13*	0.20*	0.11*	0.22*	0.16*	-	-
8. Work–family conflict	16.07	2.34	-0.20*	0.19*	0.17*	0.15**	0.27**	-0.11*	-0.23*	-

*Correlation is significant at the 0.05 level.
**Correlation is significant at the 0.01 level.

and the number of dependants (β = 0.15; $p < 0.05$) positively predicted WFC. The variables accounted for 7% of the variance in WFC ($R^2 = 0.07$; $p < 0.05$).

Results in Step 2 indicated that work engagement positively predicted WFC, such that female nurses who are highly engaged at work reported higher levels of WFC (β = 0.27; $p < 0.05$). Work–family conflict self-efficacy (β = -0.18; $p < 0.05$) and resilience (β = -0.23; $p < 0.01$) negatively predicted WFC. This implies that female nurses with high WFC self-efficacy and resilience levels are less likely to experience WFC.

In Step 3, results showed that WFC self-efficacy (β = -0.10; $p < 0.05$) and resilience (β = -0.13; $p < 0.05$) significantly moderated the relationship between work engagement and WFC among female nurses. This implies that the positive relationship between work engagement and WFC weakens significantly for female nurses with higher WFC self-efficacy and resilience levels. The interaction patterns are presented in Figure 1 and Figure 2.

To check if common method bias is present in our study, Harman's single factor score was used to analyse all items used in the current study. All items are loaded into one common factor, and a total variance of 36.89% was obtained. As the value of the total variance (36.89%) is less than 50%, this suggests that the common method bias did not affect the data (Podsakoff et al., 2003).
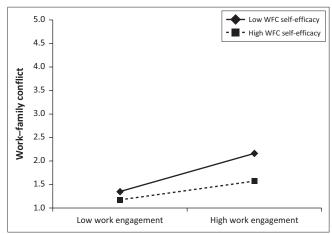
Discussion

Using the COR theory as a theoretical guide (Hobfoll, 1989, 2001), the current research bridges a gap in the engagement–WFC literature by investigating the moderating roles of two important personal resources (i.e., WFC self-efficacy and resilience) on the relationship between work engagement and WFC among a sample of female nurses in Nigeria. In line with the first hypothesis, work engagement positively predicted WFC. This implies that female nurses who are highly engaged at work are more likely to experience high WFC. The finding is in accordance with prior research (Balogun & Afolabi, 2019; Chernyak-Hai & Tziner, 2016; Halbesleben et al., 2009) that reported a positive association between work engagement and WFC. In other words, the current finding contradicts early research that established that work engagement is always associated with positive outcomes (Bakker & Bal, 2010; Gupta & Shaheen 2017; Listau et al., 2017). One primary reason for this finding could be that female nurses who are highly engaged at work tend to find it difficult to detach themselves from work-related activities. For instance, highly engaged female nurses may take work home. According to job demands and resources model, female nurses who find it difficult to detach from work may experience excessive job demands (Bakker et al., 2005). Consistent exposure to excessive job demands without corresponding job resources may deplete female nurses' resources (e.g., energy), thereby resulting in high WFC. The finding, therefore, lends credence to the resource investment

principle of the COR theory (Hobfoll, 1989) by indicating that highly engaged female nurses suffer high WFC because they put too much of their limited resources to work at the expense of their family role.
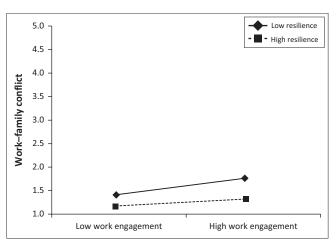
The findings of the present study also provide support for the second hypothesis. Consistent with the COR theory, the results showed that WFC self-efficacy significantly moderated the relationship between work engagement and WFC. This suggests that highly engaged female nurses with high WFC self-efficacy expressed low WFC. A higher level of WFC suggests that the job has taken too much of an employee's limited resources. In line with the COR theory, female nurses' confidence in their ability to control and manage WFC could protect them against resource loss or help conserve their limited resources, reducing their vulnerability to WFC.

In accordance with the third hypothesis, resilience was found to moderate the positive relationship between work engagement and WFC, thus suggesting that female nurses who are highly engaged at work but are highly resilient

WFC, Work–family conflict.

FIGURE 1: The interaction pattern between work engagement and work-family conflict for female nurses. Work–family conflict decreases for female nurses who have a high level of work–family conflict self-efficacy.

FIGURE 2: The interaction pattern between work engagement and work-family conflict for female nurses with a high level of resilience. Work–family conflict decreases for female nurses with a high level of resilience.

reported a low level of WFC. This is not surprising because resilience helps people to bounce or recover quickly from stressful and difficult situations (Hao et al., 2015; Xu et al., 2013). As reported earlier, female nurses who are highly engaged at work tend to invest a greater amount of their limited resources into work, which may negatively affect family responsibilities. However, consistent with the COR theory, high resilience could have helped female nurses to recoup or replenish the lost resources, thereby reducing their vulnerability to WFC.

Theoretical implication

The current study made some crucial contributions to the COR theory. Firstly, the study further strengthened and lent credence to the resource investment principle of the COR theory (Hobfoll, 1989, 2001, 2011) by showing that highly engaged female nurses who invest their limited resources e.g., energy and time) are more likely to experience high WFC. Secondly, given that no studies have examined the moderating roles of WFC self-efficacy and resilience in the relationship between work engagement and WFC, this study is among the first to test these relationships within the tenet of the COR theory. By doing so, the present study contributes to the COR theory by indicating that WFC self-efficacy and resilience WFC self-efficacy and resilience are crucial personal resources that can reduce the negative impact of work engagement on WFC among female nurses in Nigeria.

Practical implication

Firstly, the study indicates that female nurses who are highly engaged at work reported high WFC. This finding necessitates hospital management to pay close attention to why highly engaged employees experience high WFC. Organisations can encourage employees to delineate clear priorities, be well-organised and improve time-management skills. On the individual level, this study implicates the need for engaged female nurses to always detach themselves from work-related activities when at home. This would not only conserve their resources, but also enable them to deploy the necessary resources needed for their family responsibilities, and therefore reduce their WFC.

Secondly, the study showed that highly engaged female nurses with high levels of WFC self-efficacy and resilience reported low WFC. Therefore, the hospital management should organise intervention programmes (e.g., workshops and seminars) that would enhance the WFC self-efficacy and resilience of female nurses. Moreover, the hospital management can enhance female nurses' self-efficacy and resilience through guided experience, mentoring and role modeling. For instance, organisational managers can assign a team leader who exemplifies self-efficacious behaviour within the team. Managers and team leaders can also be encouraged to engage in supportive leadership activities within the team to increase the self-efficacy and

resilience of the individuals and team. Both small and large successes should be acknowledged and rewarded. These will enhance self-efficacy and lead to greater achievements. There is a need for human resources departments of public hospitals, especially in Nigeria where this study is conducted, to include psychological assessment in their training policy.

Limitations and future direction

This study has a few deficiencies. Firstly, this study adopted a correlational method, limiting knowledge on how the study variables relate to one another over time. Therefore, time-lag studies are needed to ascertain how WCF self-efficacy and resilience modulate the relationship between work engagement and WFC over time. Secondly, the sample size ($n = 233$) is too small for generalisation. Research on larger sample sizes is therefore needed to increase the external validity of the present findings. Thirdly, this study focused mainly on the moderating of two crucial personal resources (WFC self-efficacy and resilience) in the relationship between work engagement and WFC. The moderating roles of other personal resources e.g., personality traits, hardiness and distress tolerance) were not captured in this study. Future studies may need to pay close attention to these potential moderators. In addition, the moderating role of job resources (e.g., family supportiveness and decision authority or job control) on the relations between work engagement and WFC may be considered by future studies.

Conclusion

The present study showed that WFC increases with high work engagement. Nevertheless, WFC self-efficacy and resilience were found to attenuate the positive relationship between work engagement and WFC. Therefore, although being highly engaged at work may increase WFC, WFC self-efficacy and resilience can mitigate this positive relationship. Hence, it is important for government and hospital management to design and organise intervention programmes that would enhance WFC self-efficacy and resilience among female nurses.

Acknowledgements

Competing interests

The author declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Author's contributions

A.G.B. collected and analysed the study data, conducted the literature search and prepared the final manuscript.

Ethical considerations

Ethical clearance was obtained from the Ethics Committee of the Department of Pure and Applied Psychology, Adekunle Ajasin University, Akungba-Akoko, Ondo State, Nigeria. Informed consent was obtained from all institutional authorities, hospitals and individual participants involved in the study.

Funding information

Data availability

Derived data supporting the findings of this study are available from the corresponding author, A.G.B., upon reasonable request.

Disclaimer

The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any affiliated agency of the author.

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