

# Job crafting and boredom as mediators of the relationship between occupational self-efficacy and work engagement

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## **Abstract**

*Previous studies have examined the impact of occupational self-efficacy and work engagement, but studies investigating job crafting and boredom as mediators of the relationship between occupational self-efficacy and work engagement among traffic control officers are lacking. Therefore, the present study tested the indirect effects of job crafting and boredom on work engagement, alongside the sequential effects of occupational self-efficacy, job crafting, and job boredom on work engagement. Time-lagged data were collected at three points of measurement among 320 traffic control officers from South-eastern Nigeria. Results of the multiple serial mediation analysis indicated that occupational self-efficacy positively predicted higher work engagement by activating higher job crafting behaviours. We also found an indirect effect of job boredom, which suggests that a higher level of occupational self-efficacy reduces job boredom via job crafting which increased work engagement. Results of the study supported the sequential mediating effects of occupational self-efficacy, job crafting and job boredom on work engagement. These results imply that occupational self-*

*efficacy and job crafting are resources that can be used to relief employees' feeling of boredom about their job, which in turn enhances work engagement. The limitations of the study and suggestions for further research were highlighted.*

**Keywords:** *Job boredom, job crafting, Nigeria, occupational self-efficacy, traffic control officers, work engagement*

### Introduction

Over-dependence on machines in the workplace has created tedium in many jobs, thus making it an important area of study for organizational behaviour researchers (Cascio & Montealegre, 2016). One area where technology has influenced work methods is in the job of traffic control. In Nigeria, for example, technology has taken over a substantial volume of the work of traffic officers, exposing them to physical and cognitive under-stimulation, with possible implications for job boredom. Job boredom refers to a state of unpleasant passiveness, in which employees lack interest in their work activities, and have difficulties in concentrating on them (Reijseger et al., 2013). Now, the task before researchers and professionals is to find a way of reducing job boredom because of its destructive tendencies on desirable job behaviours (Harjuet al., 2014; Van Hooff & van Hooff, 2017). Whiteoak (2014) asserted that employees

who can better cope with boredom are likely to have higher levels of work engagement. Occupational self-efficacy appears to be one effective way by which employees can cope with job boredom to increase their levels of work engagement. Occupational self-efficacy is described as the assurance people have in their capacity to take appropriate actions that will lead to task accomplishment (Schyns & Sczensny, 2010). It is reasonable to suggest that because employees with high occupational self-efficacy are confident in future success (Breso et al., 2011), they are more likely to find some leeway in competing tasks by crafting their job to match their competencies, and this may create good momentum under the condition of boredom to make jobs more meaningful (van Woerkom et al., 2016). Job crafting is described as a bottom-up approach that involves employees actively customising their job features as opposed to a top-down

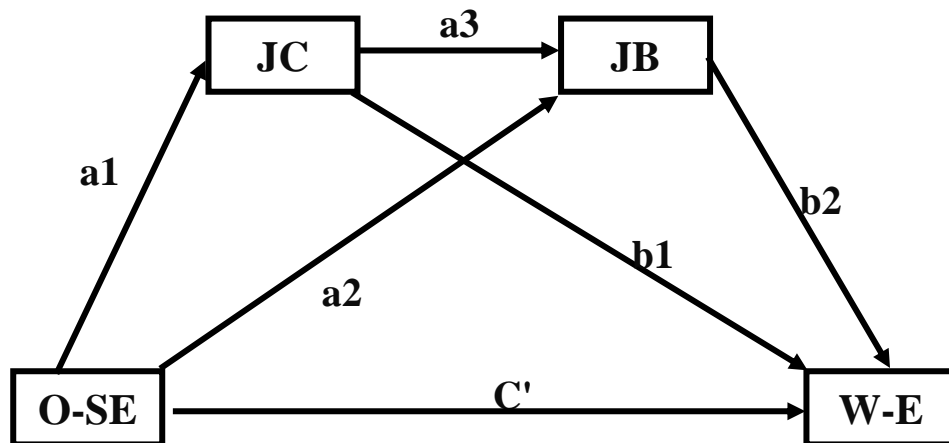
approach that is initiated by the organisation (Demerouti & Bakker, 2014).

There is a growing consensus among organisational behaviour researchers that engagement can be defined in terms of "high levels of energy and high levels of involvement in work" (Bakker et al., 2011, p. 22). It has been demonstrated on several occasions that work engagement is linked to performance rating and several other desirable job outcomes (e.g., Bakker & Demerouti, 2014; Christian et al., 2011). These benefits derived from work engagement further validate why engaged employees tend to be in high demand. Studies (e.g., Liu & Huang, 2019; Stina et al., 2021) have demonstrated that occupational self-efficacy is related

to work engagement, but what remains unclear are the pathways through which this relationship occurs.

In this study, we considered job crafting and job boredom as possible sequential pathways through which occupational self-efficacy relates to work engagement. As far as we know, studies testing the sequential mediation effects of job crafting and job boredom on the relationship between occupational self-efficacy and work engagement tend to be scarce. The present study, therefore, examined job crafting and job boredom as possible sequential pathways through which occupational self-efficacy relates to work engagement among traffic control officers.

Figure 1: Study Model. O-SE = Occupational self-efficacy, JC = Job crafting, JB = Job boredom, W-E = Work engagement



## Theoretical background and development of hypotheses

The proposed relationships among occupational self-efficacy, job crafting, job boredom and work engagement in our study are underpinned by two separate theories – the Social Cognitive Theory (SCT; Bandura & Wood, 1989) and the Conservation of Resources Theory (COR; Hobfoll, 1989). The SCT posits that the choices individuals make in the attainment of goals are usually determined by the strength of their self-efficacy (Bandura & Wood, 1989). For the SCT, these choices also determine the amount of task-related effort that will be committed, and the level of persistence needed under unpleasant work conditions and unclear consequences (Bandura, 1997). Therefore, the SCT provides the theoretical background to link occupational self-efficacy with work engagement. On the other hand, the COR theory assumes that job crafting helps employees to conserve resources by seeking resources and challenges (Petrou et al., 2018) to motivate themselves at work; this mobilises energy that helps employees to reduce job boredom (Harju et al., 2016). When employees fail to acquire these resources, their well-being may be threatened. In this sense, traffic control officers who are self-efficacious

are more likely to craft their jobs, making them more excited rather than bored, which may translate to increased work engagement.

### *Occupational self-efficacy and work engagement*

Occupational self-efficacy is a personal resource defined as "the competence that a person feels concerning the ability to successfully fulfil the tasks involved in his or her job" (Rigotti et al., 2008, p.239). Previous studies (e.g., Xanthopoulou et al., 2007) reported that personal resources (including self-efficacy) partially mediated the impact of job resources on work engagement and is related to job performance and satisfaction (Judge & Bono, 2001; Judge et al., 2007). Research (e.g., Rigotti et al., 2008) has shown that both domain-specific and generalised self-efficacy are related to job performance, job, and career satisfaction (e.g., Abele & Spurk, 2009). Occupational self-efficacy is related to commitment (Schyns & von Collani, 2002) and employee engagement. This relationship was mediated by organisational and supervisory support (Pati & Kumar, 2010). Although a relatively new construct, numerous personal and organisational variables (e.g., organisational trust and

psychological empowerment – Ugwu et al., 2014 and calling and psychological meaningfulness – Ugwu & Onyishi, 2018) have been found to be related to work engagement. Despite the progress made in the study of work engagement, gaps still exist, thus calling for more studies to extend and broaden our knowledge of the construct. One important variable that has not been sufficiently examined in relation to work engagement is occupational self-efficacy. More importantly, studies that investigated the relationship between occupational self-efficacy and work engagement in Nigeria appear to be scarce. It therefore becomes imperative to examine whether occupational self-efficacy is vital to individual work engagement in Nigeria as found in developed countries (e.g., Liu & Huang, 2019; Stina et al., 2021). In view of these concerns, we hypothesise that:

*Hypothesis 1:* Occupational self-efficacy positively relates to work engagement.

### **Mediating role of job crafting**

Job crafting is described as a bottom-up approach that involves employees actively customising their job features to create job activities that are more meaningful for themselves rather than relying only on the top-down job

activities prescribed by the organisation (Demerouti & Bakker, 2014) in order to achieve person-job fit. Tims et al. (2012) conceptualised job crafting as increasing social job resources, increasing structural job resources, increasing challenging job demands, and decreasing hindering job demands to stimulate employees' desire for work. Tims et al. (2014) reported that self-efficacy fuels job crafting behaviours because employees with a strong belief in their capabilities feel more confident to remodel parts of their job tasks. In support of this line of study, a meta-analysis (Rudolph et al., 2017) indicated that general self-efficacy predicts job crafting. Based on these, we argue that occupational self-efficacy will indirectly predict work engagement via job crafting behaviours.

Based on the COR perspective (Hobfoll, 1989), it is likely that when employees craft their jobs by increasing their challenging job demands and by accepting to take more jobs than initially allocated, their motivation increases, which may result in higher levels of work engagement (Petrou et al., 2018) and in-role and colleague-rated performance (Bakker et al., 2012). Job crafting behaviours have also been linked to job satisfaction and person-job fit (Tims et al.,

2016) and low job burnout (Tims et al., 2013). Further, Mäkikangas (2018) found that when employees concurrently employ multiple job crafting strategies, their work engagement is enhanced. It is expected that when traffic officers experience boredom in their job, they may try to craft their job such as assisting in crowd management duties during large events (that is, increasing challenging job demands). Following from the arguments above, we hypothesise that:

**Hypothesis 2: Occupational self-efficacy**

positively relates to job crafting.

*Hypothesis 3:* Job crafting relates positively to work engagement.

*Hypothesis 4:* Job crafting positively mediates the relationship between occupational self-efficacy and work engagement.

**Mediating role of job boredom**

Job boredom, which is described as an objectionable state engendered by the under-utilisation of a person's competence at work (Loukidou et al., 2009), is usually investigated in relation to monotonous jobs (Marcolin et al., 2016). The present study anchors the mediating association of perceived job crafting and boredom on the relationship

between occupational self-efficacy and work engagement in Bruursema et al.'s (2011) study. Bruursema et al.'s (2011) study states that automation has exacerbated the traditionally unchallenging task of traffic control, creating quantitative underload in the process (Bruursema et al., 2011). Research has found that job boredom decreases employee morale (van Hooff & van Hooft, 2017), reduces workability and effectiveness (Harju et al., 2014), and reduces work performance (e.g., Whiteoak, 2014). Despite the difficulty that traffic control officers appear to experience, no research, to our knowledge, has yet considered these workers.

Besides the negative consequences of job boredom, other researchers have viewed job boredom through a positive lens. For example, Velasco (2017) observed that job boredom has positive effects on job behaviours among frontline employees such as traffic officers. Belton and Priyadharshini (2007) stated that boredom is an important tool in learning and creativity. However, available empirical evidence (e.g., Tims et al., 2013; van Hooff & van Hooft, 2014) suggests that employees amass resources by adjusting their job activities to deal

with job boredom. It is suggested that job crafting helps employees to cope with job boredom (van Hooff & van Hooff, 2014). For instance, Harju et al. (2016) found that job crafting negatively predicted job boredom and positively predicted work engagement. Based on these findings, it is suggested that when individuals craft their job which promotes motivation, the impact of boredom would be reduced, and work engagement may be increased. We therefore hypothesize that:

*Hypothesis 5:* Occupational self-efficacy is negatively related to job boredom.

*Hypothesis 6:* Job boredom positively relates to work engagement.

*Hypothesis 7:* Job boredom mediates the relationship between occupational self-efficacy and work engagement.

*Hypothesis 8:* Job crafting and job boredom sequentially and positively mediate the relationship between occupational self-efficacy and work engagement.

## Method

### Participants and Procedure

A total number of 320 traffic officers sampled from South-east Nigeria participated in the study. The respondents consisted of 207 male and 113 female officers; ( $M_{\text{age}}=45.68$ ,  $SD_{\text{age}}=4.75$ ), with relatively short organisational tenure

( $M_{\text{years}}=6.48$ ,  $SD=1.60$ ). We collected data at three points of measurement with a two-month interval between Time 1 and Time 2, and between Time 2 and Time 3. Before the administration of the measures, code numbers were assigned to the respondents, requiring them to record these numbers in their private diaries so as to be able to provide them in their subsequent responses. At Time 1, we collected data on the control variables (age, gender, and organisational tenure) as well as on the antecedent variable (occupational self-efficacy). At Time 2, we collected data on the mediator variables (job crafting and job boredom) only from participants that provided information in Time 1. Finally, at Time 3, we collected data on the outcome variable (work engagement). Overall, out of 653 participants that were initially contacted to provide data on the control and antecedent variables, only 553 (84.7%) responses were received at Time 2. At Time 3, we contacted only respondents that provided data at Time 2, and only 327 (59.1%) responses were received. The attrition rate of the participants sampled from Time 1 to Time 3 was 50.1%. We subsequently used the code numbers to match the data from the three points of measurement and observed that 320 responses only were

used for data analysis. Our three-wave data collection method is appropriate because a good mediation analysis in time-lagged models requires data from at least a three-wave study from the same respondents (Maxwell & Cole, 2007). Besides, we assumed that our time intervals are reasonable because smaller measurement intervals or the inclusion of multiple waves show greater power to detect an effect and lead to more accurate estimates of population parameters (Taris & Kompier, 2014).

### **Measures**

**Occupational self-efficacy:** Six-item measure by Rigotti et al. (2008) was used to assess occupational self-efficacy. Participants were asked to indicate the extent to which the statements are true using a six-point format that ranges from 1 = not at all true to 6 = completely true. A sample item is: "I can remain calm when facing difficulties in my job because I can rely on my abilities". A higher score indicates higher levels of occupational self-efficacy. To show the reliability of the measures, a reliability test was conducted on all the measures, and a Cronbach's  $\alpha$  score of 0.88 of the instrument was established for this measure. A reliability index of greater

than 70 indicates a satisfactory scale.

**Job crafting:** Fifteen items selected from twenty-one items of the Job Crafting Scale (JCS; Tims et al., 2012) were used to measure job crafting. We considered three dimensions of job crafting only: increasing social job resources (e.g., 'I ask my supervisor to coach me'), increasing structural job resources (e.g., 'I try to develop my capabilities'), and increasing challenging job demands (e.g., 'when an interesting project comes along, I offer myself proactively as project co-worker'). Six items of decreasing hindering job demands were left out because employees who feel bored at work may be less likely to use decreasing hindering job demands (Harju et al., 2016). A previous study (Harju et al., 2016) also dropped these items in their cross-lagged panel study. Items were rated on a 5-point scale, ranging from 1 ('never') to 5 ('often'). Cronbach's  $\alpha$  coefficient of the scale was 0.79. A higher score indicates higher job crafting behaviours.

**Job boredom:** Job boredom was assessed with the adapted version of the Dutch Boredom Scale (DUBS; Reijseger et al., 2013). It is a uni-dimensional scale developed on a five-point rating scale that ranged from 1 = never to 5 = always.



It is made up of six statements (e.g., "At my work, there is not so much to do"). The scale has a reported Cronbach's  $\alpha$  of 0.83 for the current study. A higher score indicates higher levels of job boredom.

*Work engagement* was assessed with nine-item Utrecht Work Engagement Scale UWES-9; Schaufeli et al., 2006). The scale is a three-dimensional scale that includes vigour, dedication, and absorption. It follows a seven-point rating format that ranged from 0 = never to 6 = always. Examples of items are: 'At my work, I feel bursting with energy' and 'I feel happy when I am working intensely'. Cronbach's  $\alpha$  of 0.87 of the scale was obtained for the current study. The scores of these dimensions were summed up to represent the overall work engagement behaviour. A higher score indicates higher levels of work engagement.

### ***Control variables***

Age, gender, and organisational tenure were controlled for because they are related to satisfaction and other positive job behaviours.

### ***Strategy for analysis***

The data were analyzed using bivariate correlation (for correlation among variables) and HAYES' Process model 6 for testing the serial mediation analysis. AMOS 25 was used to test for model fit. The following indices were observed: the Chi-square, Comparative Fit Index (CFI), Global Fit Indices (GFI), and Root Mean Square Error of Approximation (RMSEA). The CFA was performed using AMOS 25.

### ***Results***

Table 1 below shows the outcome of the descriptive and correlational analysis, where the variables reported the following mean scores, occupational self-efficacy:  $M = 30.54$ ,  $SD = 4.44$ ; job crafting:  $M = 30.03$ ,  $SD = 5.14$ ; job boredom:  $M = 22.99$ ,  $SD = 2.94$ ; and work engagement:  $M = 26.80$ ,  $SD = 5.79$ . Occupational self-efficacy and job crafting were positively related to work engagement ( $r = .45$ ,  $p < .001$ ;  $r = .41$ ,  $p < .001$  respectively), while job boredom was negatively related to work engagement ( $r = -.54$ ,  $p < .001$ ). None of the control variables was significant in our preliminary analysis, thus we dropped them in our subsequent analysis.

Table 1. Descriptive Statistics (M, SD), Zero-order Correlations for all Variables

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
M	30.542	30.034	22.987	26.798
SD	4.442	5.140	2.936	5.793
1 Occupational self-efficacy	1			
2 Job crafting	.388**	1		
3 Job boredom	-.124**	-.153**	1	
4 Work engagement	.454**	.407**	-.535**	1

Note: \* $P < .05$ , \*\* $p < .001$

The result of the serial mediating effect of job crafting and job boredom in the relationship between occupational self-efficacy and work engagement as reported in Table 2 showed that job crafting mediated the relationship between occupational self-efficacy and work engagement. The first indirect path of the O-SE affects WE (O-SE  $\rightarrow$  JC  $\rightarrow$  WE), which was denoted as Indirect 1 (Ind1) (Table 3) and exhibited statistically significant positive effects. Accordingly, the obtained values of  $R^2$  and  $F(1, 319)$  for (JC =  $-22.084 + .3550$ -SE) were respectively .337 and 143.492 at .001

level, which reaffirmed the mediating effect of job crafting in the relationship between occupational self-efficacy and work engagement. The obtained results on the bootstrap lower limit confidence interval (BootLLCI = .065) and bootstrap upper limit confidence interval (BootULCI = .120) did not include zero and indirect effect of .090 (see Table 3), thus supporting H1. In other words, those who possess a higher level of occupational self-efficacy ( $a_1 = .355$ ) demonstrate higher work engagement by investing in higher job crafting ( $b_1 = .254$ ).

Table 2: Summary of serial mediation model results with occupational self-efficacy as a predictor variable (O-SE→JC→JB→WE)

Variables	Consequent											
	Job crafting, JC (M1=Mediator 1)			Job boredom, JB (M2=Mediator 2)			work engagement, WE (Y)					
	Coeff.	SE	t-value	Coeff.	SE	t-value	Coeff.	SE	t-value			
X (occupational self-efficacy, O-SE)	a1	.355	.029	12.384**	a2	-.052	.021	-2.479*	c'1	.406	.031	13.283**
M1 (job crafting, JC)	-	-	-	-	a3	-.037	.020	-2.479	b1	.254	.030	8.548**
M2 (job boredom, JB)	-	-	-	-	-	-	-	-	b2	-.919	.043	-21.262**
Y (work engagement, WE)	iM1	-	1.343	-	iM2	3.146	1.028	3.061*	iY	.695	1.499	.464
		22.084		16.444**								
		R <sup>2</sup> = .337				R <sup>2</sup> = .039				R <sup>2</sup> = .480		
		F(1, 319) = 143.492**				F(2, 318) = 9.267**				F(3, 317) = 173.486		

Note: \*p<.05, \*\*p<.01; Coeff = Regression coefficient, SE = Standard errors

Likewise, the second indirect path of O-SE affects WE (O-SE→JB→WE), which was denoted as Ind2 (Table 3), also revealed statistically significant positive effects based on the obtained bootstrap lower limit confidence interval (BootLLCI = .009) and bootstrap upper limit confidence (BootULCI = .086), thus supporting H2. The obtained value of R<sup>2</sup> computed was .039, whereas F(2, 318)

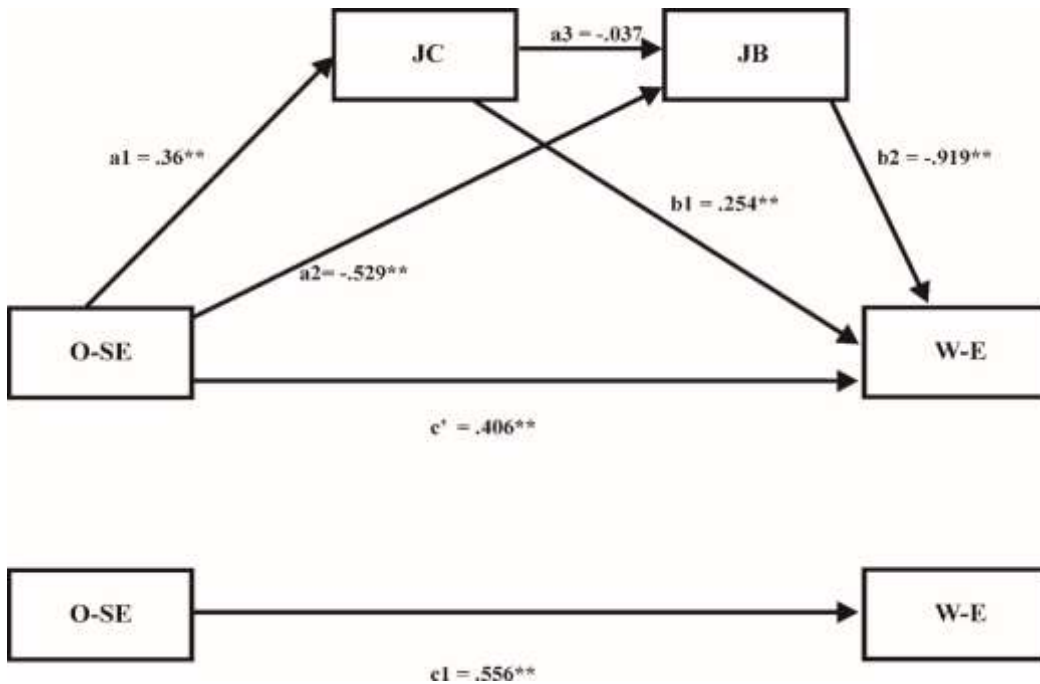
recorded 9.267 at the .001 level, which further reaffirmed the mediating effects of job boredom in the relationship between occupational self-efficacy and work engagement (see Table 2). The indirect effects of this path recorded .048. In other words, a higher level of occupational self-efficacy produces less job boredom (a2 = -.052), which can be translated into higher work engagement (b2 = -.919).

Table 3: indirect, direct, and total effects of occupational self-efficacy and work engagement

	Effect	BootSE	BootLLCI	BootULCI	t-value	p-value
Total Indirect	.150	.023	.105	.197		
O-SE → JC → WE (Ind1)	.090	.014	.065	.120		
O-SE → JB → WE (Ind2)	.048	.019	.009	.086		
O-SE → JC → JB → WE (Ind3)	.012	.007	.001	.025		
Direct Effect	.406	.031	.346	.466	13.283	.000
Total Effect	.556	.035	.488	.624	15.971	.000

Note: Ind1= indirect effect 1; Ind2= indirect effect 2; Ind3= indirect effect 3;

**Figure 2:** serial mediation model with occupational self-efficacy as a predictor variable (O-SE → JC → JB → WE). Global fit indices:  $\chi^2=10.365(8)$ ,  $p=0.240$ ,  $GFI = .987$ ,  $CFI=0.986$ ,  $RMSEA=0.039$  (0.01, 0.094). \* $P<0.05$ , \*\* $P<0.001$ . CFI, Comparative Fit Index; RMSEA, root mean square error of approximation.



## Discussion

The present study examined the mediating role of job crafting and job boredom in the relationship between occupational self-efficacy and work engagement. The results showed that occupational self-efficacy positively predicts work engagement, and increases job crafting behaviours, which in turn helps employees to feel less bored in their jobs, all of which eventually enhance work engagement. Occupational self-efficacy reflects an individual's confidence that they can produce appropriate behaviours relevant to their own work (Schyns & Sczesny, 2010). This result emphasizes that because of employees' self-confidence which helps them to cope with job challenges, they are more likely to remodel parts of their job tasks to be motivated to achieve desirable job outcomes (Tims et al., 2014). The significant positive relationship between occupational self-efficacy and work engagement is supported by the SCT (Bandura & Wood, 1989), which posits that employees with a strong belief in their capabilities to 'weather the storm' despite challenging conditions to have choices to make in relation to the amount of effort they are to exert in order to achieve high(er) levels of engagement. This finding is in line with

prior studies (e.g., Liu & Huang, 2019; Stina et al., 2021) which reported that occupational self-efficacy is positively related to high levels of employee engagement.

However, the significant mediating role of job crafting on the relationship between occupational self-efficacy and work engagement agrees with the COR theory which posits that job crafting is employees' technique for building job resources which inspire them to enhance their work goals (Tims et al., 2012). Job crafting is one way through which employees gain resources that protect them from job boredom to enhance their work engagement (Tims et al., 2016). This result agrees with earlier findings (e.g., Rogala & Cieslak, 2019; Rudolph et al., 2017; Tims et al., 2014) which indicated that general self-efficacy predicts job crafting. Because efficacious individuals are motivated by their capabilities, they demonstrate task-related skills, which in turn manifest in high work engagement levels. This result tends to be consistent with Erli and Jiatao (2019) who showed that organisational commitment mediated the relationship between occupational self-efficacy and work engagement.

The sequential effects of occupational self-efficacy, job crafting, and job boredom on work engagement in our model were significant. The results revealed that self-efficacious individuals amass resources through job crafting behaviours to deal with job outcomes (Tims et al., 2013). When individuals craft their jobs, job boredom tends to be reduced (Tims et al., 2013; van Hooff & Van Hooff, 2014), and when job boredom is reduced, work engagement is enhanced.

### **Theoretical contributions**

To our knowledge, this study is the first to examine the mediating effects of job crafting and job boredom in the relationship between occupational self-efficacy and work engagement among traffic control officers. The present study makes a significant contribution to the literature. For example, the current study has extended our knowledge that occupational self-efficacy and job crafting as resources to relief employees' feeling of job boredom about their job, which in turn enhances work engagement. The current study also extends our understanding of work engagement, which is a relatively new construct with occupational self-efficacy as a predictor. Moreover, there is a

scarcity of literature on work engagement from developing economies such as Nigeria and so the findings of the present study have lent support for the usefulness of SCT and COR theories in the field of work engagement from the perspective of developing countries.

### **Practical implications of the findings**

The findings of the present study indicate that employers can manage individuals' psychological states at work (i.e., work engagement and job boredom) in two important ways: by increasing personal resources (occupational self-efficacy) and by implementing interventions to enhance job crafting. Leveraging a study by Lally and Gardner (2013) which sees job crafting as an employee-initiated approach that warrants customising job structure that helps them cope with adversity, we propose that to provide more enduring impacts, job crafting should serve as a proactive work and organizational citizenship behaviour approaches for achieving organizational goals. If such a culture is developed, it would allow these employees to adequately respond to their early instances of job boredom, make proper adjustments, and improve their well-being (George, 2009; Harju et al., 2016). Our results also suggest that due to the

confidence in the capabilities of traffic control officers, they can deal with difficult work conditions to be (more) work-engaged. This is possible because occupational self-efficacy as a personal resource is flexible, i.e., it can be improved with organisational intervention programmes such as supervisor coaching. More so, being efficacious has proven to be a sure way for traffic control officers to remodel their job tasks and be more lively rather than bored in order to maintain high engagement levels.

### **Limitations and suggestions for further research**

Some shortcomings are of concern in the current study and are highlighted to guide future research. First, we adopted self-report measures with its associated dangers of common method bias (Podsakoff et al., 2003). Usually, this has

the possibility of artificially inflating scores of examined constructs. But correlations among the assessed constructs and the estimates are not so high as to expect that this is a serious threat in the present result. Meanwhile, researchers (e.g., Harju et al., 2016) have assured that using self-report questionnaires does not jeopardise studies on job boredom and job crafting. Occupational self-efficacy can be found under a similar category of constructs that are subjective, which does not allow for external rating. We therefore feel that our self-report measure does not undermine our results. Second, the current study focused on one professional group – traffic control officers, consisting mostly of men most of whom were relatively old, implying that the results of the study can only be used to describe this particular sample of employees.

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