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# **The Moderating Role of Self-Sacrificing Disposition and Work Meaningfulness on the Relationship between Work-Family Conflict and Emotional Exhaustion**

## **Introduction**

Work-family conflict is the degree or level to which work demands conflict with satisfactory and enjoyable performance in nonwork or family roles (Taris et al., 2006). In recent years, work-family conflict has dramatically increased. This increase is mainly due to factors such as intensified work and family expectations and demands, changed composition of the workforce, changed employment conditions, and technological developments which, despite improving work flexibility, have placed more expectations on employees to work anywhere and anytime (O'Driscoll, Brough, & Kalliath, 2004; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Valcour, 2007).

The increased clash between work and family life has led to a proliferation of research on work-family conflict and employee outcomes, especially wellbeing. There is now substantial evidence that work-family conflict elicits severe undesirable consequences for individuals and causes reduced physical and mental health (Eby et al., 2005; Westring & Ryan, 2011). However, despite the growing number of studies examining the link between work-family conflict and employee wellbeing, not much is known about the boundary conditions of this relationship, especially among public sector workers (Grandey & Cropanzano, 1999; Wadsworth & Owens, 2007). This study seeks to address this issue by testing the moderating role of individual differences on the relationship between work-family conflict and emotional exhaustion among public sector employees. This will help answer the question, “*when and among whom* is work-family conflict related to emotional exhaustion?”

Emotional exhaustion refers to the depletion of emotional resources and energy (Greenglass, Burke & Fiksenbaum, 2001). It is an important aspect of employee wellbeing and is usually

associated with negative health outcomes (Alarcon, 2011; West, Dyrbye, Erwin, & Shanafelt 2016; Lo, Wu, Chan, Chu, & Li, 2018). It is also one of the main factors that help in understanding employee attitudes and behaviours in organizations (Swider & Zimmerman, 2010; Green, Miller, & Aarons, 2013; Deery, Walsh, Zatzick, & Hayes 2017). Therefore, assessing its antecedents and potential moderators is of big importance.

This study seeks to deepen our understanding of the relationship between work-family conflict and emotional exhaustion by testing whether this relationship is contingent on two interrelated factors that are of relevance to both the public sector and business ethics: self-sacrificing disposition and the experience of work meaningfulness. Self-sacrificing disposition refers to the willingness to postpone or abandon personal interests for the sake of others (McKenna & Brown, 2011). Ethical actions usually transcend self-interest and are aimed at promoting the common good. Therefore, self-sacrifice is viewed as a central component of people's moral structure and is regarded as the core of ethical decisions (Mostafa & Bottomley, 2018). Work meaningfulness, on the other hand, is the extent to which individuals perceive their jobs as worthwhile and valuable (Hu & Hirsh, 2017). It is of important concern for business ethics because work is a major source of identity, belongingness and purpose (Michaelson et al., 2014). Evidence suggests that many individuals decide to work in the public sector because they "aim to do meaningful work and contribute to society" (Tummers and Knies, 2013; 861). Work meaningfulness is believed to be experienced when people perceive "an authentic connection between work and a broader transcendent life purpose beyond the self" (Bailey & Madden, 2016; 55). Benefiting others and contributing to their welfare is also a source of meaningfulness and a core element of meaningful work (Michaelson et al., 2014). Thus, there is a strong connection between self-sacrificing disposition and work meaningfulness.

Drawing on conservation of resources (COR) theory, this study tests the moderating role of these two factors on the work-family conflict-emotional exhaustion relationship. COR theory

is one of the “most influential theories” explaining individual wellbeing (Ten Brummelhuis & Bakker, 2012; 547). The theory describes how individuals respond to the demands they face in their environment and how such demands affect their exhaustion levels. According to COR theory, people have a strong desire to gain and protect resources (Hobfoll, 2002). The theory proposes that work-family conflict results in exhaustion because of resource loss during the handling of the roles of both work and family. It further postulates that individual differences are resources that influence reactions to demands and conflicts, and consequently people’s exhaustion levels (Grandey & Cropanzano, 1999). Based on COR theory, this study proposes that self-sacrificing disposition and the experience of work meaningfulness are resources that strengthen individuals' capacity to better cope with demands and conflicts, and, therefore, could weaken the influence of work-family conflict on emotional exhaustion. Besides testing the individual moderating role of self-sacrificing disposition and work meaningfulness, this study also considers the interdependency of both factors and examines their combined moderating effect.

By examining the individual and joint moderating roles of self-sacrificing disposition and experienced work meaningfulness, this study offers two main contributions. First, it responds to calls for research on the role of dispositional variables or personality traits along with work-related resources on work-family conflict and its consequences (Witt and Carlson, 2006; Valcour, 2007; Allen et al., 2012; Allen, 2013; Lin et al., 2015). Second, it addresses calls for research integrating self-sacrifice and meaningfulness. This is important especially that, even though real meaning is believed to come only from personal sacrifice, self-sacrifice and work meaningfulness have been mostly studied in isolation (Thompson & Christensen, 2018).

### **Work-Family Conflict and Emotional Exhaustion**

Work-family conflict is “a form of interrole conflict in which the general demands of time devoted to, and strain created by the job interfere with performing family-related

responsibilities” (Netemeyer, Boles & McMurrian, 1996; 401). As mentioned before, work-family conflict has been shown to be related to a variety of negative employee outcomes such as reduced job, career and family satisfaction, increased turnover intentions, and increased burnout (see Eby et al., 2005). This study will focus on the link between work-family conflict and the “central quality” of burnout, emotional exhaustion (Maslach, Schaufeli, and Leiter, 2001; 402).

Emotional exhaustion represents the stress dimension of burnout, and reflects feelings of being emotionally overextended, drained and worn out by one’s work (Maslach, Schaufeli, and Leiter, 2001; Ito & Brotheridge, 2003; Greenglass et al., 2001). It mainly results from intensive affective, cognitive and physical strain due to continued experience of specific job demands (Demerouti, Mostert & Bakker, 2010). Emotional exhaustion is regarded as the principal component of burnout and has been found to act as the precursor of its two other dimensions or components, reduced personal accomplishment and depersonalization (Ito & Brotheridge, 2003). It is the “most obvious manifestation” of burnout, and because of its strong identification with this syndrome, scholars argue that the other two dimensions of burnout are “incidental or unnecessary” (Maslach, Schaufeli, and Leiter, 2001; 403). Recent research and meta-analytic findings have shown that exhaustion is associated with increased absenteeism and turnover, and reduced job performance (Swider & Zimmerman, 2010; Green et al., 2013; Deery et al., 2017). Research has also shown that exhaustion is high among physicians (the survey respondents in this study) and is usually connected with adverse effects on physicians’ health and safety, as well as patient care (West et al., 2016; Lo et al., 2018).

There are three different perspectives in the literature regarding the work–family conflict–emotional exhaustion link: (1) that work-family conflict is an antecedent of exhaustion, (2) that work-family conflict is a consequence of exhaustion, and (3) that work-family conflict is both an antecedent and outcome of exhaustion (known as the reciprocity approach)

(Voydanoff, 2002; Westman, Etzion, & Gortler, 2004; Rantanen et al., 2008). The three views have been supported by both cross-sectional and longitudinal studies (Demerouti, Bakker, & Bultersb, 2004; Westman, Etzion, & Gortler, 2004; Rantanen et al., 2008). However, the view that has received the widest support and is considered the “classical hypothesis” in the literature is that work-family conflict predicts exhaustion (Demerouti, Bakker, & Bultersb, 2004; 133). This is the view adopted in this study.

COR theory (Hobfoll, 1989) helps explain the linkage between work-family conflict and emotional exhaustion. The COR model posits that people strive to attain and retain resources. Such resources could be objects (e.g. home, car or other material goods), conditions (e.g. employment or marriage), energy (e.g. knowledge, money or time) or personal characteristics (i.e. individual traits and skills). Such resources could be categorized as internal (i.e. owned by the self) or external (i.e. not owned by the self; Hobfoll, 1998). According to the model, when individuals face actual or potential resource loss, they will experience burnout (Grandey & Cropanzano, 1999).

The COR model postulates that interrole conflict, such as work-family conflict, will lead to depletion of resources which, in turn, will result in exhaustion. The more the demands and conflict experienced by an individual in one domain, the less will be the resources available to satisfy his/her role in another domain. Individuals undergoing high degrees of demand and conflict at work will use most of their available resources and will have less resources available for their family demands (Hobfoll, 2002). In turn, this will result in exhaustion, since resources are lost in the process of coping with work and family roles (Grandey & Cropanzano, 1999; Hall et al., 2010). Findings of empirical studies and meta-analytic reviews support these assumptions and demonstrate that work-family conflict is positively associated to emotional exhaustion (Mauno & Kinnunen, 1999; Karatepe & Tekinkus, 2006; Hall et al., 2010; Amstad et al., 2011).

The next section explains how both self-sacrificing disposition and work meaningfulness could moderate the link between work-family conflict and exhaustion.

### **The Moderating Role of Self-Sacrificing Disposition**

Self-sacrifice involves “forgoing self-interest and taking on personal costs for the benefit of others” (Mostafa & Bottomley, 2018; 1). It is viewed as a personal resource that helps in coping with work and family related problems, dealing with work-related stress and stimulating high levels of work engagement (Bakker, 2015; Borst et al., 2017). Individuals who are willing to make sacrifices for the good of others are usually better able to handle different organizational demands and stressors since they know that dealing with these demands and stressors will serve the higher goal of helping others (Bakker, 2015).

A central principle of the COR model is that people need to invest resources so as to attain resources or safeguard against resource loss or recover from resource loss (Hobfoll, 2001). Thus, resources like love, money and self-efficacy could be instrumental in the attainment and preservation of other required resources. These resources, therefore, are both, desired in their own right and essential because of their contribution to the maintenance of strong resource reservoirs. The same applies to willingness to self-sacrifice, where abandoning personal interests for the welfare of others could be viewed as an investment that helps in the attainment of other resources such as high quality relationships, respect, love and support from others (Totenhagen et al., 2013; Mostafa & Bottomley, 2018). This, in turn, should help individuals’ better respond to the demands they face in their environment and enhance their wellbeing.

Previous research findings provide some support for these suppositions. For instance, Borst et al. (2017) found a significant positive relationship between people’s desire to benefit and serve others and their dedication and energy at work (i.e. work engagement). Liu et al. (2014) also found that the negative impact of work related stressors, such as work-family conflict, on physical and mental wellbeing was reduced when individuals had a strong desire to do good

for others. Accordingly, it is proposed that self-sacrifice weakens the positive association between work-family conflict and exhaustion.

*Hypothesis 1: Employees self-sacrificing disposition will moderate the relationship between work-family conflict and emotional exhaustion, such that the positive association between work-family conflict and exhaustion will be attenuated when employees are higher on willingness to self-sacrifice.*

### **The Moderating Role of Work Meaningfulness**

The current study also proposes that the relationship between work-family conflict and emotional exhaustion could be moderated by work meaningfulness. Work meaningfulness refers to the extent to which work assignments have positive significance and help attain objectives that are consistent with a person's values and principles (Mostafa & Abed El-Motalib, 2018). It encompasses fit or congruence between work role demands and people's beliefs and values, and reflects intrinsic interest in work (Spreitzer, 1995). Thus, individuals who experience work meaningfulness usually find a purpose in work that is more than its extrinsic outcomes (Turner, Barling, Kelloway & McKee, 2007).

Because of the central role of work in human life, the experience of work meaningfulness helps individuals feel that they have a meaningful life in general. This experience of meaningful life is regarded as a "central component" of individual wellbeing (Hu & Hirsh, 2017; 2). Furthermore, the more individuals believe they have a sense of meaning at work, the more they could depend on their sense of direction and purpose in coping with job demands and difficulties (Mishra & Spreitzer, 1998). Therefore, work meaningfulness is regarded as an important resource that helps in coping with the difficulties associated with any job (Taylor Kemeny, Reed, Bower & Gruenewald 2000; Clausen & Borg, 2011; Windsor, Curtis & Luszcz, 2015).



As mentioned before, one of the main assumptions of the COR model is that individuals need to invest resources so as to gain more resources or protect against resource loss (Hobfoll, 2001). Work meaningfulness as a resource is usually associated with the development of more resources. The experience of work meaningfulness encourages the investment of energies into one's work (Kahn, 1990). This investment enables individuals to better manage their social relationships and integrate into the wider organizational context, which in turn, should help in dealing with different job demands and improving employee wellbeing (Fletcher, 2016).

Previous research findings provide support for the view that work meaningfulness is likely to improve wellbeing and reduce emotional exhaustion. For example, several studies (e.g. May, Gilson & Harter, 2004; Aryee, Walumbwa, Zhou & Hartnell, 2012; Demirtas, Hannah, Gok, Arslan & Capar, 2017; Mostafa & Abed El-Motalib, 2018) have reported a significant positive relationship between work meaningfulness and work engagement, which is the “hypothetical antipode” of exhaustion (Demerouti et al., 2010; 209). Treadgold (1999) also reported that engaging in meaningful work is associated with reduced levels of stress and depression. Neveu (2007) also found that lack of professional worth, which relates to the intrinsic value of an individual's activity, is positively related to exhaustion. Furthermore, Arnold et al. (2007) reported a significant positive relationship between work meaningfulness and psychological wellbeing. Finally, Allan et al. (2018) also recently found a significant positive relationship between work meaningfulness and mental health. Accordingly, it is expected that work-family conflict will have a reduced impact on exhaustion when individuals experience high, rather than low, levels of work meaningfulness.

*Hypothesis 2: Work meaningfulness will moderate the association between work-family conflict and emotional exhaustion, such that the positive association between work-family conflict and exhaustion will be weakened when employees experience higher levels of work meaningfulness.*

### **Joint Moderating Role of Self-Sacrificing Disposition and Work Meaningfulness**

This study also hypothesizes that the moderating role of work meaningfulness may be augmented when individuals are high in self-sacrificing disposition. This suggests a three-way interaction between work-family conflict, work meaningfulness and willingness to self-sacrifice. Both work meaningfulness and self-sacrificing disposition could be viewed as complementary in understanding how the impact of work-family conflict on emotional exhaustion could be reduced (Thompson and Christensen, 2018). Peoples concern for the welfare of others and serving their needs are regarded as essential elements of work meaningfulness (Lips-Wiersma & Wright, 2012). Sacrificing personal interest for a higher cause has also been suggested as a means for enhancing the experience of meaning in one's work (Lips-Wiersma, Haar & Wright, 2018). Prior research findings suggest that perceptions of work meaningfulness are associated with self-sacrifice (Bunderson & Thompson, 2009; Dempsey & Sanders, 2010). Recent research has also shown that individuals could be willing to make personal sacrifices for meaningful work opportunities (Hu & Hirsh, 2017). This means that meaningful work is more likely to attract individuals with a strong desire to serve others (Thompson & Christensen, 2018). In this case, besides work meaningfulness, self-sacrificing disposition will constitute an extra resource that is likely to foster increased persistence in the face of competing work and home life demands and shield employees from exhaustion. This is in line with COR theory, which, as mentioned before, suggests that when individuals possess more resources, they will be better able to cope with demands in their environment and will be less prone to burnout (Grandey & Cropanzano, 1999). Hence, it is more likely that, when individuals are high in self-sacrificing disposition, the role of work meaningfulness in weakening the relationship between work-family conflict and exhaustion will be more pronounced.

*Hypothesis 3: The moderating effect of work meaningfulness on the relationship between work-family conflict and emotional exhaustion will be stronger when employees are higher on willingness to self-sacrifice.*

Figure 1 presents the conceptual model of this study.

-Insert Figure 1 Here-

## **Method**

### **Procedure and sample**

Data were collected from physicians working in 21 public hospitals in Egypt. Access to hospitals was obtained via personal contacts. Pen-and-paper questionnaires were handed to physicians during working hours. A cover letter which informed respondents of the voluntary nature of the study and assured them confidentiality and anonymity was attached to each questionnaire.

The questionnaires were distributed to 750 physicians and 484 were returned (64.5% response rate). More than half of the responding physicians were male (62.5%); 29% of them were aged between 20 and 30, 40% were aged between 31 and 40, and the remainder were more than 40 in age. With regard to tenure, 31% had been working in their hospital for less than 5 years, 42% had been working for between 5 and 10 years, and the rest for above 10 years.

### **Measures**

Arabic was the language in which the questionnaire was administered. Therefore, following the recommendations of Brislin (1980), after being translated from English into Arabic, the questionnaire items were back translated into English to ensure the correspondence of measures. The Arabic questionnaire was then pretested by five physicians and no issues were

found. All the items of the questionnaire were measured on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

### ***Work-family conflict***

A five-item scale developed by Haslam et al. (2015) was used to measure work-family conflict. A sample item is “My family misses out because of my work commitments”. Cronbach’s alpha for this scale was 0.778.

### ***Emotional exhaustion***

Three items from the Oldenburg Burnout Inventory (OLBI; Demerouti & Bakker, 2008) were used to measure emotional exhaustion. The exhaustion subscale of the OLBI includes negatively and positively worded questions. Only negatively worded questions were used because, as argued by Halbesleben and Demerouti (2005), mixing the wording of a scale items can result in the emergence of artificial factors and emanate common method bias. A sample item is “After my work, I usually feel worn out and weary”. The alpha coefficient was 0.710.

### ***Self-sacrificing disposition***

A four-item scale developed by Perry (1996) was used to measure self-sacrificing disposition. A sample item is “Serving citizens would give me a good feeling even if no one paid me for it”. The alpha reliability coefficient for this scale was 0.805.

### ***Work meaningfulness***

To measure work meaningfulness, Spreitzer’s (1995) three-item scale was used. A sample item is “The work I do is very important to me”. Cronbach’s alpha was 0.826.

### ***Controls***

Physicians’ gender, age and tenure were controlled for in the analysis, where previous studies have shown that these variables are related to burnout (Morgan et al., 2002; Carlson et al., 2003; Garner et al., 2007; Griffin et al., 2010). Research has also shown that individuals who are overburdened at work experience increased levels of emotional exhaustion (Maslach,

Schaufeli, and Leiter, 2001). Accordingly, work overload was also controlled for using a single item from the Effort-Reward Imbalance scale (Siegrist et al., 2004): “I am often pressured to work overtime”. The use of a single item measure of work overload has been recommended, especially when overload is assessed as a control variable in the analysis (Gilbert & Kelloway, 2014).

### ***Data Analysis***

Physician responses were nested within hospitals and the Intraclass Correlation (ICC) for emotional exhaustion was 0.37. This suggests that a significant amount of variance (37%) in exhaustion was explained by the employing hospital. Therefore, hierarchal linear modelling (HLM) with Stata was used to test the hypotheses. HLM breaks down the variable variances into within group and between group components and, thus, provides unbiased standard error and regression parameter estimates (Raudenbush & Bryk, 2002).

Congruent with the recommendations of Hofmann et al. (2000), all study variables were grand-mean centred. Three different regression models were tested. The first two models assessed the two-way interactions, whereas as the third assessed the three-way interaction. In the first model, the control variables were first entered, followed by work-family conflict and then self-sacrificing disposition, and finally the interaction term of work-family conflict and self-sacrificing disposition. In the second model, work-family conflict was entered after the control variables, followed by work meaningfulness and then the interaction term of work-family conflict and work meaningfulness. Finally, in the third model, work-family conflict and the two moderators, self-sacrificing disposition and work meaningfulness, were entered after the control variables. This was followed by entering the interaction terms of work-family conflict with each of the moderators, the interaction term of the two moderators and, finally, the three-way interaction term (work-family conflict × work meaningfulness × self-sacrificing

disposition; Aiken & West, 1991). The analysis was conducted using the maximum likelihood estimation technique with robust standard errors (Braun & Nieberle, 2017).

## **Results**

### **Confirmatory Factor Analysis**

Before testing the hypotheses, a confirmatory factor analysis was conducted using AMOS 24 to assess convergent and discriminant validity. Three indices were used to assess model fit: the comparative fit index (CFI), the Tucker-Lewis index (TLI) and the root mean square error of approximation (RMSEA). CFI and TLI values of 0.90 or more and RMSEA values of 0.08 or less suggest good fit (Williams, Vandenberg and Edwards, 2009).

The factor loadings of almost all items on their corresponding constructs were 0.50 or more and were significant at the 0.01 statistical level, providing support for convergent validity (Anderson & Gerbing, 1988). Discriminant validity was assessed by comparing the fit of the hypothesized four-factor measurement model with other possible alternative models. The four-factor measurement model had a good fit ( $\chi^2$  (df = 128) = 336.326,  $p < 0.01$ ; CFI = 0.934, TLI = 0.903 and RMSEA = 0.057). Moreover, the fit of this model was significantly better than other possible models with less factors such as a three-factor model which included work meaningfulness, self-sacrificing disposition, and combined work-family conflict and exhaustion into one factor ( $\Delta\chi^2 = 838.291$ ,  $\Delta df = 7$ ,  $p < 0.01$ ), a two-factor model in which work meaningfulness and self-sacrificing disposition were combined into one factor and both work-family conflict and exhaustion were combined into another ( $\Delta\chi^2 = 1309.136$ ,  $\Delta df = 13$ ,  $p < 0.01$ ), and a one-factor model in which the four study variables were combined ( $\Delta\chi^2 = 1574.561$ ,  $\Delta df = 18$ ,  $p < 0.01$ ). Thus, the study constructs are distinct from each other and discriminant validity was achieved.

### **Common Method Bias**

Since the same respondents provided data for all the study variables at one single point in time, the likelihood of common method bias affecting the study relationships might exist. Accordingly, common method bias was examined using the common method factor technique (Chang, Van Witteloostuijn & Eden, 2010). This involved the estimation of a measurement model wherein items were allowed to load on their theoretical construct as well as a common factor. The fit of the model was very good ( $\chi^2$  (df = 69) = 199.41,  $p < 0.01$ ; CFI = 0.950, TLI = 0.913 and RMSEA = 0.062) but the average variance explained by the common factor was 0.20, which is considerably lower than the 0.50 criterion, which has been suggested as indicative of a substantive construct (Fornell & Larcker, 1981). Hence, in this study, common method bias is not a main concern.

### **Descriptive Statistics, Correlations and Composite Reliability Estimates**

Table 1 presents the means, standard deviations, correlations among variables and the composite reliability scores. As shown in the table, work-family conflict was positively but not significantly correlated with emotional exhaustion ( $r = 0.03$ , ns). However, both self-sacrificing disposition and work meaningfulness were negatively correlated with exhaustion ( $r = -0.51$ ,  $p < 0.01$  and  $r = -0.25$ ,  $p < 0.01$ , respectively). Self-sacrificing disposition and work meaningfulness were also positively correlated ( $r = 0.39$ ,  $p < 0.01$ ). In addition, as shown in Table 1, all the composite reliability scores were above 0.70. Thus, all constructs also possessed high internal consistency (Bagozzi & Yi, 2012).

-Insert Table 1 Here-

### **Hypotheses Testing Results**

The HLM results for the hypotheses testing are presented in Table 2. As the table shows, in Model 1, work-family conflict had a significant positive relationship with emotional exhaustion

( $\beta = 0.164$ ,  $SE = 0.068$ ,  $t = 2.42$ ,  $p < 0.05$ ) while self-sacrificing disposition had a significant negative relationship with exhaustion ( $\beta = -0.209$ ,  $SE = 0.040$ ,  $t = -5.19$ ,  $p < 0.01$ ). This suggests that work-family conflict enhances emotional exhaustion whereas self-sacrificing disposition reduces exhaustion. More importantly, the interaction between work-family conflict and willingness to self-sacrifice was significant and negative ( $\beta = -0.105$ ,  $SE = 0.020$ ,  $t = -5.31$ ,  $p < 0.01$ ). This negative interaction indicates that, as self-sacrificing disposition increased, the strength of the positive relationship between work-family conflict and exhaustion decreased. Thus, Hypothesis 1 is supported.

Table 2 also shows that in Model 2, work-family conflict had a significant positive relationship with emotional exhaustion ( $\beta = 0.175$ ,  $SE = 0.079$ ,  $t = 2.22$ ,  $p < 0.05$ ), and work meaningfulness had a significant negative relationship with exhaustion 2 ( $\beta = -0.163$ ,  $SE = 0.046$ ,  $t = -3.58$ ,  $p < 0.01$ ). Moreover, the interaction between work-family conflict and meaningfulness was significant and negative ( $\beta = -0.072$ ,  $SE = 0.025$ ,  $t = -2.84$ ,  $p < 0.01$ ). This suggests that, as the experience of meaningfulness increased, the positive association between work-family conflict and exhaustion decreased. Therefore, Hypothesis 2 is also supported.

-Insert Table 2 Here-

Figures 2 and 3 show the moderating role of both self-sacrificing disposition and the experience of work meaningfulness on the work-family conflict-emotional exhaustion link. Using Aiken & West's (1991) procedure, simple slope tests were conducted so as to provide better understanding of the interactions. In particular, the slopes were computed when physician scores on the moderators (i.e. self-sacrificing disposition and work meaningfulness) were one standard deviation above the mean, at the mean and one standard deviation below the mean. The association between work-family conflict and exhaustion was significant and positive



when employees were low in willingness to self-sacrifice ( $\beta = 0.277$ ,  $SE = 0.077$ ,  $t = 3.62$ ,  $p < 0.01$ ) and at the mean ( $\beta = 0.164$ ,  $SE = 0.068$ ,  $t = 2.42$ ,  $p < 0.05$ ). However, this relationship became non-significant when employees were high in readiness to self-sacrifice ( $\beta = 0.059$ ,  $SE = 0.065$ ,  $t = 0.91$ ). This suggests that work-family conflict is related to emotional exhaustion only among physicians at low and average levels of willingness to self-sacrifice. However, when self-sacrificing disposition is high, work-family conflict is not associated with exhaustion. The same was found when work meaningfulness was the moderator, where the association between work-family conflict and exhaustion was significant and positive when experienced meaningfulness was low ( $\beta = 0.247$ ,  $SE = 0.093$ ,  $t = 2.66$ ,  $p < 0.01$ ) and at the mean ( $\beta = 0.176$ ,  $SE = 0.079$ ,  $t = 2.22$ ,  $p < 0.05$ ), and was non-significant when meaningfulness was high ( $\beta = 0.104$ ,  $SE = 0.072$ ,  $t = 1.45$ ). Thus, work-family conflict is related to exhaustion only among physicians at low and average levels of experienced meaningfulness, but not among physicians with high levels of experienced meaningfulness<sup>1</sup>.

-Insert Figure 2 Here-

-Insert Figure 3 Here-

Hypothesis 3, which proposed a three-way interaction between work-family conflict, work meaningfulness and self-sacrificing disposition in predicting emotional exhaustion was not supported. The three-way interaction term was not significant ( $\beta = 0.004$ ,  $SE = 0.030$ ,  $t = 0.12$ ; see Model 3 in Table 2). This suggests that the interaction between work meaningfulness and

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<sup>1</sup> Moderated curvilinear effects were also tested and no curvilinear moderation by self-sacrificing disposition and work meaningfulness was found.

self-sacrificing disposition does not moderate the association between work-family conflict and emotional exhaustion.

Finally, as regards control variables, only age was significantly related to emotional exhaustion. In line with Brewer & Shapard (2004) and Randall (2007), age was negatively related to exhaustion in all 3 Models (see Table 2), suggesting that older employees are less likely to experience exhaustion than younger ones. This could be mainly because older workers have learned how to better pace themselves at work and are able to develop better coping skills and strategies (Brewer & Shapard 2004; Randall, 2007).

## **Discussion**

There have been calls for research on the role of dispositional variables or personality traits along with work-related resources on work-family conflict and its consequences (Witt and Carlson, 2006; Valcour, 2007; Allen et al., 2012; Allen, 2013; Lin et al., 2015). There have also been calls for research integrating self-sacrifice and meaningfulness. This study sought to address these calls by testing the moderating role of self-sacrificing disposition and the experience of work meaningfulness on the link between work-family conflict and emotional exhaustion among public sector employees. This helped answer the question, “when and among whom is work-family conflict related to emotional exhaustion?”

In line with prior research (e.g. Karatepe et al., 2010; Mansour & Tremblay, 2018), the study found that individual differences are important in the relationship between work-family conflict and emotional exhaustion. In particular, the study found that self-sacrificing disposition moderated the work-family conflict-emotional exhaustion relationship. When self-sacrificing disposition was high, work-family conflict was not associated with exhaustion. Thus, in line with COR theory, the willingness to abandon personal interests for the welfare of others, as a resource, helps in the attainment of other resources, such as high quality relationships, respect and support. These resources, in turn, could help individuals’ better respond to the demands

they face in their environment and enhance their wellbeing (Totenhagen et al., 2013; Mostafa & Bottomley, 2018). This also suggests that, as argued by Bakker (2015), individuals who are willing to make sacrifices for the good of others are able to better deal with different demands because they know that dealing with these demands will serve the higher goal of helping others (Bakker, 2015).

Similarly, the study found that when individuals experienced high levels of work meaningfulness, there was no association between work-family conflict and exhaustion. This finding confirms that work meaningfulness is an important resource that helps in coping with the job difficulties (Taylor et al., 2000; Windsor et al., 2015). It also suggests that, consistent with COR theory, a sense of meaning at work helps in the development of additional resources, such as improved social relationships, which will consequently help in dealing with different job demands and improving employee wellbeing (Fletcher, 2016).

However, it is worth noting that, when the moderating role of both self-sacrificing disposition and work meaningfulness was tested simultaneously, the results showed that, while self-sacrificing disposition was a significant moderator, work meaningfulness no longer moderated the work-family conflict-exhaustion relationship (see Model 3 in Table 2). Thus, self-sacrificing disposition crowded-out the moderating role of meaningfulness, which was the weaker moderator of the two (see Models 1 and 2 in Table 2).

Finally, the findings did not support the expected three-way interaction between work-family conflict, work meaningfulness and self-sacrificing disposition. This could be because other more significant individual characteristics and work related factors or perceptions come into play when this interaction is considered, or simply because the interactions in the model have cancelled each other out (Kohler & Mathieu 1993; Golden, 2012). Future research should assess whether this finding is specific to this study and the sample examined, or whether this finding applies to other contexts and types of jobs.

## **Practical Implications**

The findings of this research indicate that self-sacrificing disposition attenuates the link between work-family conflict and emotional exhaustion. Therefore, organizations need to develop employees' inclination to self-sacrifice. This could be achieved through developing procedures for the recruitment and selection of individuals high in self-sacrifice. Some dispositional characteristics or traits are relatively stable, while others are more malleable and subject to change (Judge et al., 1999; Roberts, Walton and Viechtbauer, 2006). Prior research suggests that, even though an individual's self-sacrificing disposition could be shaped before he or she enters an organisation, workplace factors could still influence and change this disposition (Mostafa, Gould-Williams and Bottomley, 2015). Therefore, training and development programs that develop an appreciation of others interests could also help employees understand the benefits of self-sacrifice on others, and motivate them to be inclined to abandon personal interests for the sake of others (De Cremer, Mayer, van Dijke, Schouten & Bardes 2009; Li, Zhang & Tian 2016). Also, value-based leadership that articulates public service values could be useful in this regard. Leaders should consistently model self-sacrificing behaviours and lead by example through displaying values that transcend self-interest (Mostafa & Bottomley, 2018).

The findings also indicate that work meaningfulness weakens the positive association between work-family conflict and emotional exhaustion. Therefore, organizations need to give more attention to increasing individuals' experience of work meaningfulness. Several approaches could help achieve this such as: (1) improving leadership quality, (2) involving individuals in work-related decisions, (3) constantly and clearly communicating to individuals the importance of their work and its impact on others, (4) continuously revising career development programs to enable employees achieve their long-term career goals, and (5) developing stronger links

between workers and the public to help workers gain a better understanding of their impact on others (Clausen & Borg, 2011; Fairlie, 2011; Mostafa & Abed El-Motalib, 2018).

### **Limitations**

There are several limitations that need to be noted in this study. First, the study data is cross-sectional which prevents definitive conclusions about causality. For example, it is possible that individuals who experience high levels of emotional exhaustion perceive that their work interferes with their family roles (Hall et al., 2010). Future longitudinal or experimental studies are needed so as to help address this issue. Second, since the study findings are based on data provided from the same respondents and at one point in time, common method bias may be a concern. The results of the common method factor test showed that common method bias is not a serious issue in this study. Furthermore, common method bias “cannot inflate but does deflate” interaction effects (Podsakoff, MacKenzie & Podsakoff 2012; 564), which were the focus of this study. Nevertheless, collecting data from more than one source and at more than one point in time would further reduce common method bias concerns. Third, the study examined the moderating role of only two factors (i.e. work meaningfulness and self-sacrificing disposition). Future research may wish to assess the moderating role of other personality and work related factors, such as professional efficacy, job complexity, or work autonomy and control (Valcour, 2007). Finally, the findings of this study are based on Egyptian public sector physicians and cannot not be generalized to other settings. More empirical evidence is required to identify whether the results apply in other contexts.

Despite these limitations, the study has demonstrated that self-sacrificing disposition and the experience of work meaningfulness are important variables to consider in the work-family conflict-emotional exhaustion relationship.

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**Table 1. Descriptive Statistics, Intercorrelations and Composite Reliability Estimates**

Construct	1	2	3	4	5	6	7	8
1. Work-Family Conflict	(.80)							
2. Emotional Exhaustion	.03	(.73)						
3. Self-Sacrificing Disposition	.03	-.51***	(.81)					
4. Work Meaningfulness	-.03	-.25***	.39***	(.84)				
5. Work Overload	.46***	-.05	-.02	.02	-			
6. Gender (1 = Male and 2 =Female)	-.15***	.32***	-.14***	-.14***	-.19***	-		
7. Age	-.06	-.53***	.35***	.17***	.07	-.14***	-	
8. Hospital Tenure	-.17***	-.23***	.20***	.15***	-.16***	.03	.65***	-
Mean	5.43	2.97	5.24	5.49	5.32	1.38	3.07	2.01
SD	1.02	1.28	1.07	1.00	1.50	.53	.89	.92

*Note:*  $N = 484$ . Sub-diagonal entries are the latent construct inter-correlations. The entry on the diagonal (in parentheses) is the composite reliability score. Age and tenure were measured as multichotomous variables (For age: under 20 years = 1, 20-30 years = 2, 31-40 years = 3, 41-50 years = 4, 51-60 years = 5, and more than 60 years = 6, whereas for tenure: under 5 years = 1, 5-10 years = 2, 11-15 years = 3, and more than 15 years = 4).

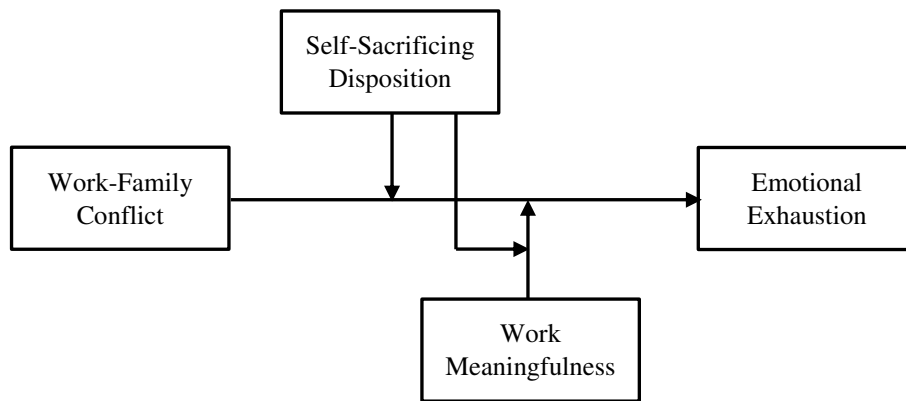
\*\*\*  $p < .01$ .

**Table 2. Hierarchical Linear Modelling Analysis of Emotional Exhaustion**

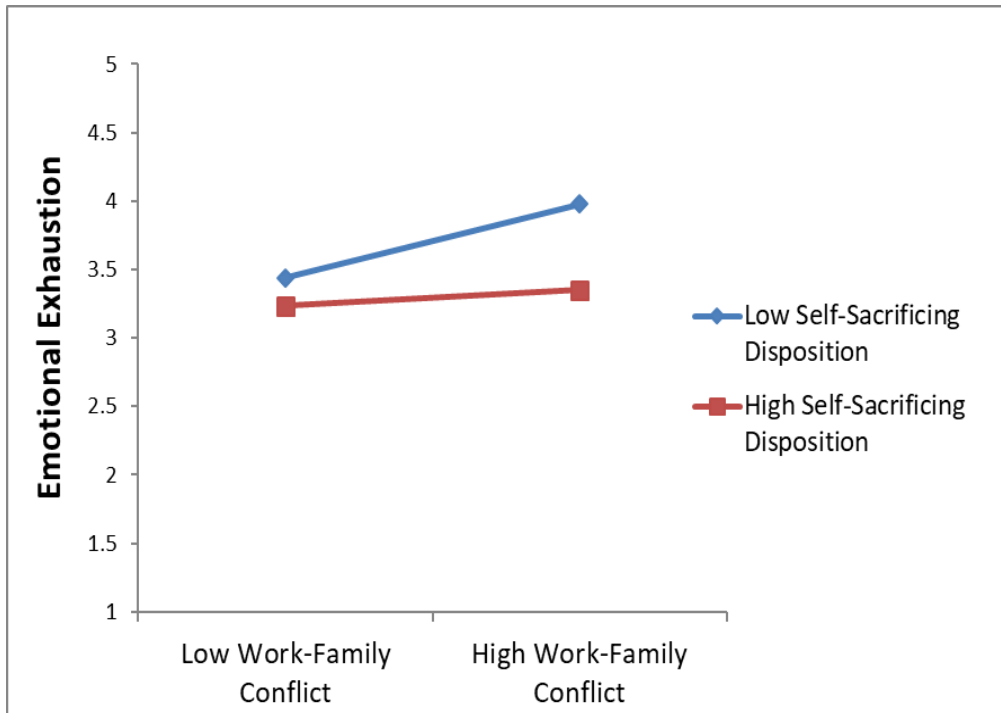
Variables	Model 1			Model 2			Model 3		
	Estimate	SE	t	Estimate	SE	t	Estimate	SE	t
Gender	.257	.164	1.60	.208	.145	1.44	.226	.149	1.52
Age	-.139	.042	-3.34***	-.128	.046	-2.80***	-.128	.043	-3.00***
Hospital Tenure	-.011	.067	-.17	-.013	.061	-.22	-.004	.068	-.06
Work Overload	-.024	.021	-1.10	-.013	.024	-.54	-.021	.021	-.99
Work-Family Conflict	.164	.068	2.42**	.175	.079	2.22**	.164	.078	2.11*
Self-Sacrificing Disposition	-.209	.040	-5.19***	-	-	-	-.176	.027	-6.60***
Work Meaningfulness	-	-	-	-.163	.046	-3.58***	-.090	.037	-2.43**
Work-Family Conflict × Self-Sacrificing Disposition	-.105	.020	-5.31***	-	-	-	-.082	.021	-3.94***
Work-Family Conflict × Work Meaningfulness	-	-	-	-.072	.025	-2.84***	-.034	.034	-.99
Work-Meaningfulness × Self-Sacrificing Disposition	-	-	-	-	-	-	.003	.052	-.06
Work-Family Conflict × Work Meaningfulness × Self-Sacrificing Disposition	-	-	-	-	-	-	.004	.030	-.12

Note:  $N = 484$ .  $SE$  = standard error

\*  $p < .10$ . \*\*  $p < .05$ . \*\*\*  $p < .01$ .

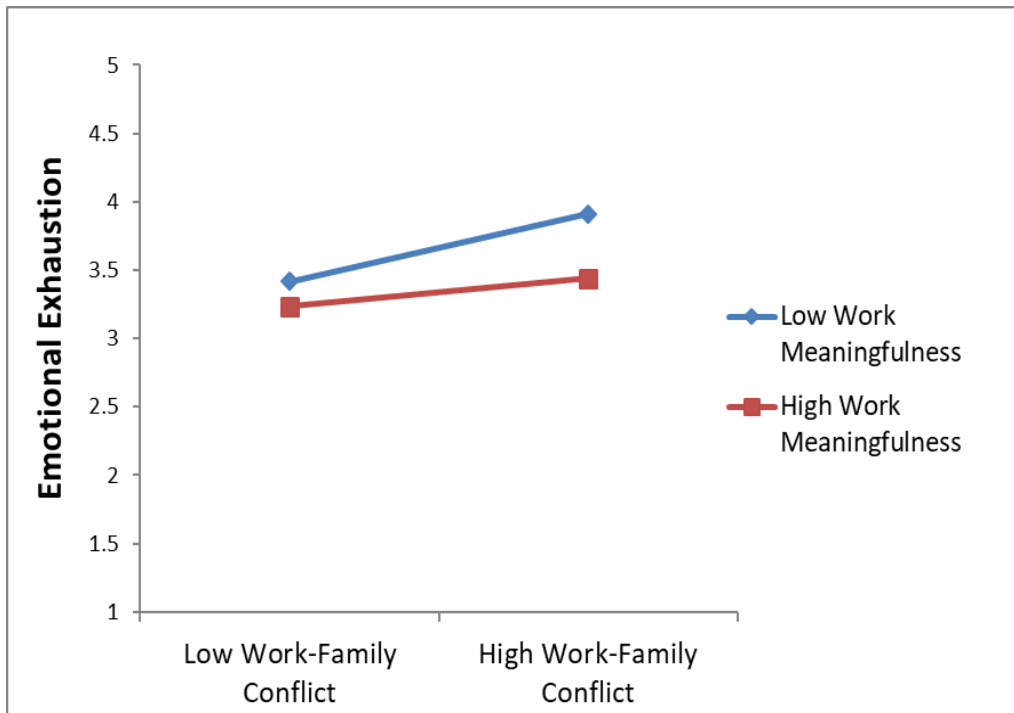


**Figure 1: Conceptual Model of the Moderating Role of Self-Sacrificing Disposition and Work Meaningfulness on the Work-Family Conflict-Emotional Exhaustion Relationship**



**Figure 2: The Moderating Role of Self-Sacrificing Disposition on the Relationship between Work-Family Conflict and Emotional Exhaustion**





**Figure 3: The Moderating Role of Work Meaningfulness on the Relationship between Work-Family Conflict and Emotional Exhaustion**