Two in Distress Make Sorrow less: A Work-Life Conflict Moderated Mediation Model

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ABSTRACT

Drawing on the Job Demand-Resource model this paper examines the influence of the social comparison orientation personality trait. It is hypothesized that high social comparison orientation will moderate the negative effect of job demands in the health impairment process on work engagement, mediated by a work-nonwork conflict. A total of 510 nurses from different healthcare centres participated in this study. PROCESS macro was used to test simple and moderated mediation. Results demonstrate that the negative indirect effect of job demands on work engagement via work-non work conflict appears only with low levels of social comparison orientation. Theoretical insights from social comparison literature and the work-nonwork interface into JD-R theory are integrated. The strengths of social comparison orientation employees are highlighted to reduce the depletion of resources needed to cope with non-work demands and promote work engagement.

The relation between work and family generates very complex interactions, especially in dual-income couples. The relevance of studying this phenomenon has recently come to the fore with increasing job demands in health care workers due to the COVID-19 pandemic. Numerous media pieces have addressed issues arising from balancing family and work in the context of mandatory confinement. Negative work-family interaction occurs through a process known as work-nonwork conflict (WNWC), defined as a “process whereby demands in one domain deplete personal resources, resulting in diminished outcomes in the other domain” (ten Brummelhuis & Bakker, 2012, p. 549). WNWC is a well-known risk factor specifically for those who work in professional sectors of the economy, in a full-time job with highly demanding work environments (Demerouti et al., 2013). There is a vast body of research addressing this relation. The most extensive set of research has focused on identifying work resources – e.g., social support, work-family policies – that reduce WNWC (Martinez-Corts & Demerouti, 2017). Yet, organizations do not always provide enough resources to deal with WNWC experiences. A second body of research has focused on examining how some personal resources make the difference between people experiencing higher or lower levels of WNWC. Allen et al.’s (2012) meta-analysis demonstrates that some personality factors – i.e., positive affect, self-efficacy, and optimism – explain the low vulnerability of individuals to WNWC. As Allen et al. (2012) outline,
the scarce empirical evidence has focused on traditional personality traits, such as the Big Five (Goldberg, 1983). However, questions remain as to the role played by different personality aspects beyond traditional traits (Martínez-Corts et al., 2015) in reducing WNWC.

Expanding on this second body of research, we aim at analyzing in depth the role played by social comparison orientation (SCO) in reducing WNWC, where SCO is defined as “individual differences in the inclination to compare one's accomplishments, one's situation, and one's experiences with those of others” (Buunk & Gibbons, 2006, p. 16). Individuals high in SCO are more self-contentious; they tend to learn about themselves and test their opinions and skills by comparing with others when coping with stressful circumstances (Gibbons & Buunk, 1999).

Specifically, individuals high in SCO self-evaluate and compare with others in order to know whether they are doing well and how they should feel or think about a stressful situation. By so doing, they have a comparative advantage against those who do not self-evaluate because they have, in theory, the possibility of learning from other people's behavior, thereby increasing their personal resources.

The Job-Demand-Resource (JD-R) theory (Bakker & Demerouti, 2007, 2014) suggests that having personal resources – i.e., personal characteristics that allow individuals to successfully accomplish work goals and personal development – explains why some people are better than others at coping with stressful circumstances. First, the model proposes that job demands deplete employees' well-being through a health impairment process. While the JD-R theory (Bakker & Demerouti, 2007, 2014) initially asserts that this depletion occurs through a burnout process, other psychological mechanisms could also explain the relationship between job demands and employees' well-being (Schaufeli & Taris, 2014). There is wide empirical evidence demonstrating that job demands increase WNWC, specifically in nurses (e.g., Colombo et al., 2013). By making employees feel anxious and stressed, job demands deplete the resources needed to deal with non-work demands – such as time and energy (Greenhaus & Boellett, 1985). Recently, drawing on the job-demands-control model (Karasek, 1979) and the extended job-demands-control-support model (Johnson & Hall, 1985), Chamberl et al. (2017) have demonstrated how WNWC explained the relation between job characteristics – i.e., job demands, supervisor support and job control –, workload and time pressure – and burnout and engagement in call center employees (Chambell et al., 2017).

Examining this mechanism is key in high job demand professions such as nursing. This is a predominantly female sector with high potential stressors, including high work overload, irregular working hours, and shift work (Palenzuela et al., 2019, Yildirim & Aycan, 2008). These factors make nurses particularly prone to suffer the consequences of work-related stress in their personal life. Therefore, we aim to analyze how WNWC experiences also explain the relationship between specific job demands and work engagement in a demanding sector such as nursing.

This study makes theoretical and practical contributions, by expanding the JD-R theory (Bakker & Demerouti, 2007, 2014) in several ways. First, we integrate theoretical insights from social comparison literature and the work-nonwork interface into JD-R theory (Bakker & Demerouti, 2007, 2014). On this basis, our most important finding shows the ways in which a specific personal resource – SCO – reduces the entire health impairment process. We confirm that social comparison is of relevance in work environments with high levels of distress and uncertainty, such as nursing. We also provide empirical evidence for two new assumptions proposed by Schaufeli and Taris (2014) to expand the JD-R theory (Bakker & Demerouti, 2007, 2014). The first one is related to the outcome of the health impairment process. The positive side in the JD-R theory (Bakker & Demerouti, 2007, 2014) has received little attention, and we contend that well-being of employees cannot only be defined by the absence of negative well-being (Nelson & Simmons, 2003).

Based on this idea we analyze the impact of job demands on work engagement. Second, we show that there are other explanatory mechanisms beyond burnout that relate job demands to employees' well-being. Specifically, we demonstrate that in a demanding sector job demands have an impact on work engagement through WNWC experiences. For practice, personal resources building interventions have demonstrated to improve work engagement (Knight et al., 2017). In these interventions, SCO proves to be a personal resource able to reduce the health impairment process that negatively impacts on work engagement.

The Mediating Effect of WNWC between Job Demands and Work Engagement

Work engagement is a motivational construct defined as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli et al., 2002, p. 74). It is an important predictor of employees' effectiveness over other job attitudes – e.g., job satisfaction, job involvement and organizational commitment (Mackay et al., 2017). Understanding employees' engagement involves pondering the factors that may directly thwart that engagement – such as job demands –, as well as the mechanisms that explain those effects – such as WNWC.

Grounded in the JD-R theory (Bakker & Demerouti, 2007, 2014), and following Schaufeli and Taris’ (2014) suggestions, we analyze how job demands reduce employees' engagement. As job demands deplete the resources needed to cope with non-work demands, they promote WNWC experiences. According to the “matching-hypothesis,” through an attribution process, the main consequence of WNWC would remain in the domain where the conflict starts (Amstad et al., 2011). For instance, WNWC is strongly connected with work-related results, including burnout, low levels of job satisfaction, low organizational commitment, absenteeism, and turnover (Amstad et al., 2011). Babic et al. (2017) offer three reasons for this. First, when workers experience WNWC they react by protecting personal resources. Second, they attribute the resource depletion to the work domain, thereby eliciting a feeling of dissatisfaction with it. Third, individuals could reduce their work engagement as a strategy to deal with their dissatisfaction at work. Chamberl et al. (2017), grounded in the job-demands and job control resources model, have demonstrated that 1) job demands – e.g., workload and time pressure – have a negative impact on employees' well-being, and 2) that work-life conflict partially explains this relationship among Portuguese call-center employees (Carvalho & Chamberl, 2018) and Portuguese Marine Corps (Chambell et al., 2017).

Based and building on this background, we propose the following hypothesis:

**Hypothesis 1**: WNWC mediates the negative effect of job demands on work engagement.

The Buffering Effect of SCO

In their daily relations, individuals face many chances to learn about others' opinions, skills, and lives (Vogel et al., 2015). According to Gibbons and Buunk (1999), individuals high in SCO seek information about the self for self-evaluation and self-improvement by comparing one's accomplishments, one's situation, and one's experiences with those of others – and this regardless of the direction of comparison that is sought (i.e., upward or downward) (Buunk et al., 2007). Contrary to individuals with low SCO, high SCO individuals compare themselves in their attitudes and opinions not only with similar but also with dissimilar individuals (Michinov & Michinov, 2001). This attitude offers the possibility to learn from a wider range of colleagues thereby increasing personal resources.

The prototypical image of a high comparer [...] is of an individual who is interpersonally- more than introspectively oriented, being
sensitive to the behavior of others, and who has a degree of uncertainty about the self, along with an interest in reducing this self-uncertainty (Gibbons & Buunk, 1999, p. 138).

While this description highlights both weaknesses and strengths, based on recent research on SCO by Yang and Robinson (2018) we will focus on its strengths. As Gibbons and Buunk (1999) highlight, high SCO individuals, albeit uncertain about their ‘self,’ are not passive and have an interest in reducing that uncertainty. More explicitly, in a later work, Buunk and Gibbons (2006) demonstrated that high SCO individuals are conscientious – i.e., self-disciplined, deliberative, achievement seeking, and motivated by their sense of responsibility – in some degree. This strength could help employees deal with job demands.

As mentioned earlier, high SCO individuals compare with others in opinions and abilities (Buunk et al., 2001). Regarding skills, an essential question is whether individuals are doing well by comparing with others facing high job demands. When job demands are high, individuals need to know if they are using the appropriate strategies to cope with these demands. If their strategies are not appropriate, high SCO individuals may obtain more information to change their strategies, and therefore may be more able to cope with high job demands, ultimately reducing WNWC experiences.

With regard to opinions, high SCO individuals tend to wonder how they should feel or think by comparing with others facing high job demands. If they assess that job demands constitute a threat, high SCO individuals may cognitively distance themselves from such others in order to avoid assessing themselves unfavourably (Buunk & Gibbons, 2006). Conversely, if job demands are seen as a challenge, individuals with high SCO might improve and learn from others to cope with high job demands, thereby reducing WNWC experiences. For this reason, SCO might become a key personal resource that buffers the negative impact of job demands on WNWC.

This study proposes a moderated mediation model (see Figure 1), which includes how and under which circumstances a given effect is produced. According to the rationale mentioned above – namely, the creation of resources to actively reduce uncertainty about the self – employees whose SCO level is high are less likely to suffer from the negative effect of job demands on WNWC and on work engagement. Specifically, high SCO employees will make use of more social comparison tools to cope with high job demands. Based on this, we propose the following hypothesis:

**Hypothesis 2**: The indirect effect of job demands on work engagement through WNWC is stronger when SCO is low while this effect is weaker when SCO is high.

![Diagram](image_url)

**Figure 1.** Proposed conceptual model of the study.

**Method**

**Participants**

A total of 510 employees participated in this study (82 men and 414 women). The mean age of the respondents was 47.33 years (SD = 9.38). We focus our research on the analysis of one profession in the health sector: nursing. Nurses have to face feelings and emotional demands (Martinez et al., 2020). Several studies with nurses showed that high job demands experienced by these professionals are positively associated with negative outcomes, including job dissatisfaction, intent to leave, turnover, and burnout (e.g., Hayes et al., 2012; Lu et al., 2012; Palenzuela et al., 2019).

About two thirds of respondent nurses (76.6%) were married or living with a partner, 8.7% were divorced, 2% were widowed, and 12% were single. In terms of family burden, 23% of respondents had children between the ages of 4 and 12, and 49% had children older than 13. More than half of the nurses had obtained post-secondary degrees (71.2%), 24.6% had completed secondary school, and 3.7% had completed elementary school. In terms of working status, most participants had a tenured job (71.7%), 17.8% had short contracts as substitutes for permanent staff nurses, and 10.5% had temporary jobs. Nurses had 9.26 years (SD = 9.83) of work experience on average.

**Procedures**

The measure instrument has two parts. First, we collected information about participants’ demographic variables – age, gender, education level, job tenure, marital status, and number of children. Second, we measured job demands, WNWC, SCO, and work engagement.

**Job demands.** We used the Nursing Stress Scale (NSS) developed by Gray-Toft and Anderson (1981) and adapted to Spanish by Escribà et al. (1999) to measure job demands. The scale consisted of 34 items grouped into nine factors in which different situations that are usually stressful for nursing workers are described. We conducted interviews with several nurses to identify the most salient demands. Based on prior studies (Fillion et al., 2007) we selected the most suitable items, which amounted to 9. Subsequently, we removed two items because they had both the lowest homogeneity indices and the lowest squared multiple correlation coefficients in comparison with the rest of the items (R² = .05, .07). The scale finally consisted of 7 items. The items show a moderate correlation with the entire scale (r = .39, .45, .48, .41, .40, .39, .29), because the r effect is about .30 (Cohen, 1988). A sample item was “Not to have enough time to emotionally support family.” We used a 4-point scale for responses ranging from 0 = never to 3 = often. The internal consistency of the scale for the present study was α = .62. A low alpha may be due to the number of items, the number of answer alternatives, or the proportion of the variance of the test (Dominguez-Lara & Merino-Soto, 2015). We conducted a confirmatory factor analysis (CFA) of this scale using Mplus 6.12 statistical software (Muthén & Muthén, 2010) to overcome these limitations. Results of CFA show that factor loadings of seven items (λ = .38, .34, .37, .62, .49, .49, .37) are above recommended (Brown, 2006) (λ > .30). We also calculated coefficient, because it does not depend on the number of items, and it is calculated on the basis of estimated factor loadings of each item, which allows for more stable estimates (Timmerman, 2005). Results show an α = .63 (omega coefficient) which, according to the .60 threshold established by Fornell and Larcker (1981), support the reliability of the scale.

**Work-nonwork conflict** was measured by using the Spanish adapted version of the 6-item scale developed by Carlson et al. (2000). Items assessed the extent to which certain aspects of the job may interfere with private life. A sample item was “Due to all the pressures at work I have come home too stressed to do the things I enjoy.” A 5-point Likert scale was used to tabulate responses (from 1 = strongly agree to 5 = strongly agree). The internal consistency of the scale was α = .87.

**Social comparison orientation** was measured by using the 11-item Iowa Netherlands Scale for Comparison Orientation (INCOM) developed by Gibbons and Buunk (1999) and adapted to Spanish by Buunk et al. (2005). A sample item was “I always pay a lot of attention to how I do things compared with how others do things.” A 7-point Likert scale was used to tabulate responses (from 1 = strongly
Work engagement was measured by using the Spanish adapted version of the 9-item Utrecht Work Engagement Scale-9 (UWES-9) developed by Schaufeli et al. (2006). A sample item was ‘At my work, I feel bursting with energy.’ A 7-point scale was used to tabulate responses (from 1 = never to 7 = everyday). The internal consistency of the scale was $\alpha = .79$.

Out of 900 questionnaires distributed throughout health centers in the south of Spain, 510 were returned, yielding a response rate of 56.7%. In order to gather data of the nursing staff, a member of the research team visited each health center, convened staff in a room and conveyed detailed instructions to complete the questionnaire. To ensure the anonymity and confidentiality of respondents, completed surveys were placed in a sealable envelope, and handed over to the researcher.

Results

Preliminary Analyses

We conducted a CFA using LISREL 8.7 to examine whether the suggested 4-factor solution (including job demands, WNWC, SCO, and work engagement) fits data better than three alternative factor structures: a 3-factor structure where job demands and WNWC are loaded on two factors, and SCO and work engagement are collapsed into one factor, a 2-factor structure where job demands is loaded on one factor, and WNWC, SCO and work engagement are collapsed into one factor, and a 1-factor model where job demands, WNWC, SCO and work engagement are collapsed into one factor. In doing so, we examined chi-square and RMSEA values. Results showed that the suggested 4-factor solution was significantly better than the 3-factor solution, $\Delta \chi^2(92) = 2949.23$, $p < .01$; the 2-factor solution, $\Delta \chi^2(494) = 4144.76$, $p < .01$; and the 1-factor solution, $\Delta \chi^2(495) = 4403.34$, $p < .01$. Additionally, as RMSEA values ranged from .12 to .08, our 4-factor model resulted in an acceptable fit, because it was below recommended ($< .10$) (Byrne, 2010). These results imply that the four constructs, job demands, WNWC, SCO, and work engagement are statistically different.

In order to further explore the hypothesized mediated and moderated mediation model, we used a conditional process modeling via PROCESS, a macro for SPSS developed by Hayes (2013). This statistical procedure allows using 1,000 bootstrap estimates for the construction of 95% bias-corrected confidence interval for the indirect effect in simple mediation and conditional indirect effect in moderated mediation. This macro function also runs a test of the equality of the conditional indirect effect at different levels of the moderator variable.

Figure 2. Interactive Effects of the Interaction NJD and SCO on WNWC Experiences.

Bootstrap analysis showed that job demands had a negative indirect effect on work engagement through WNWC with a low level of SCO (see Figure 2). The product term was $-.09$ (boot $SE = .04$, 95% CI $[-.17, -.02]$) at low levels of SCO, which is significantly different from zero, and it was not significantly different from zero at high levels of SCO. Moreover, the index of moderated mediation was $.04$ (boot $SE = .02$, 95% CI $[.01, .09]$), which is also significantly different from zero. Thus, there was an important difference between the two conditional indirect effects at high and low SCO levels. These results support Hypothesis 2. Falling SCO increased the negative indirect effect of job demands on work engagement through WNWC, as it was indicated by the positive value of the moderated mediation index.

Finally, we controlled for the effects of the demographic variables: age ($\beta = -.01$, $p > .05$), gender ($\beta = .01$, $p > .05$), marital status ($\beta = -.01$, $p > .05$), number of children 0-3 years ($\beta = .08$, $p > .05$), number of children 4-12 years ($\beta = .11$, $p > .05$) and number of children more than 13 years ($\beta = -.06$, $p > .05$) in the moderated mediation analysis, but their effects were not significant.

Discussion

This study demonstrates that employees with a high SCO level are protected from the negative effect of job demands on WNWC and work engagement. Succinctly put, SCO mitigates the positive effect of job demands over WNWC and the negative effect over work engagement. Such a finding expands the JD-R theory (Bakker & Demerouti, 2007, 2014), demonstrating that SCO is a personal resource. This is in consonance with former research on social learning theory, in which observing others who are doing well can be inspirational while observing others who are doing worse can be effective in alleviating short-term negative mood (Gibbons & Gerrard, 1991). To provide an example, while high SCO individuals compare with others both upward and downward, as Buunk et al. (2007) demonstrated, only high SCO individuals who compared with others with a poorer social life deemed their own social life as satisfactory. They were among the first studies to provide evidence of the moderator effect of social comparison on job satisfaction. Thus, SCO can accomplish an adaptive function by reducing ambiguity and making adjustment to threats.
under stressful situations easier (Buunk & Gibbons, 2006). In fact, as Festinger (1954) proposed in his social comparison theory, the drive for social comparison has a survival value because if an individual does not appraise his or her own abilities and opinions their survival is jeopardized. This evidence suggests that SCO may compensate for the scarcity of other personal resources. If this is true, comparing with others would lead individuals to enhance their self-esteem by learning abilities from others, or by appraising their own abilities to confirm they are able to deal with work demands.

Previous studies, using JD-R theory (Bakker & Demerouti, 2007, 2014), have demonstrated the relevance of analyzing personal resources (e.g., Fodor et al., 2020; Martín-Hernández et al., 2020), highlighting the potential of these resources to reduce the negative effect of highly demanding jobs on employees’ well-being and performance. For example, Fodor et al. (2020) demonstrated how personal resources, such as physical activity, are of relevance when job resources failed at buffering job demands effect on burnout. Moreover, Martín-Hernández et al. (2020) showed how the effect of a personal resource – like mindfulness – was longer in time than a job resource – autonomy. They found that a personal, more than a job-related resource, had a lagged moderating effect on job outcomes. The main explaining mechanism is that personal resources, like mindfulness and SCO, could enhance behavioral self-regulation processes, which imply a benign cognitive appraisal of demands as challenges rather than hindrance and an actively coping with them. Previous research has demonstrated a positive effect of emotional demands on wellbeing when they are appraised as challenging and motivating demands (e.g., Bakker et al., 2007; Xanthopoulou et al., 2013). Therefore, it is reasonable to think that SCO effect would also remain in time. Moreover, as it is a trait personal resource, it will be always available beyond job resources. In future studies, this effect could be analyzed.

Although there is a wide empirical evidence of the negative effect of job demands on work engagement, some research have demonstrated that this effect relates to how challenging are appraised (e.g., Bakker et al., 2007; Xanthopoulou et al., 2013) these demands and the level of the demands (e.g., Martínez et al., 2020). According to Martínez et al. (2020), employees’ work engagement decrease when employees perceive high job demands. However when job demands are low, this relationship turns into positive. It is important to highlight that these studies refer to emotional job demands. In our study, we measured both emotional and job demands. That could explain why, despite the low levels of job demands, we found a significant and positive relationship with work engagement.

It is well-known that work engagement is an outcome of both personal and environmental factors (Tziner et al., 2019). This paper shed light on how these personal and environmental factors are combined to enhance work engagement. Moreover, we explain how work-environmental factors spillover into nonwork domain to finally impact on work engagement. To provide one example, findings indicate a negative indirect effect of job demands on work engagement via WNWC. This is in consonance with prior research showing that emotional charge and work overload are the most common demands experienced by nurses (e.g., Colombo et al., 2013). This finding suggests that work-nonwork interaction is the mechanism that explains the negative consequences of job demands on work engagement, as opposed to previous explanations in terms of overload or complexity of demands (e.g., Martínez et al., 2020). Job demands reduce workers’ opportunities to disconnect from work and/or enjoy non-work activities. As time goes by, resources are depleted, so health problems such as high levels of strain and exhaustion increase (Babic et al., 2017) while performance decreases (Gilboa et al., 2008; Palenzuela et al., 2019).

Objections can be raised about the limitations of this research because of the use of self-report measures to test hypotheses, with the argument that they may be affected by the common method variance. To address this alleged limitation, it is important to point out that this study deals with a personality variable, and almost 100% of the studies assessing personality traits use self-report measures (Vazire, 2006). Second, as we can see in Table 1, the correlations between the main variables of this study are low, which suggests a low common method variance. Third, results from the factorial analysis show that measures are independent. Future studies should test this design using a longitudinal study. A further positive point of our study lies in the fact that we have gathered data from a large number of nurses. This makes data generalizable for this job as a whole, given the characteristic high percentage of women in this professional sector (Yıldırım & Aycan, 2008).

As recommended by Buunk et al. (2005), this study analyzed SCO as a one-factor construct. However, a recent study by Yang and Robinson (2018) shows that both dimensions –i.e., ability and opinion – are independent when it comes to account for certain results. For example, when people compare abilities they have in mind achievements and performance. However, when comparing opinions, people try to identify similarities or differences in thoughts, attitudes, values, and beliefs (Festinger, 1954). More specifically, in a study about social network and social integration, Yang and Robinson (2018) showed that while both dimensions have a positive effect on social adjustment, students with high SCO of opinion had better college social adjustment than those students just comparing abilities. However, unlike the study by Yang and Robinson (2018), in a work environment it is important to compare both opinions and abilities, the former in view of a better social adjustment, and the latter in view of a better performance. For this reason, this study has considered both types of comparison as a single dimension. Yang and Robinson’s (2018) study supports our results, since they highlight that SCO is not necessarily detrimental to well-being. Considering that the wide empirical evidence shows the dark side of SCO, more studies need to be done to differentiate the effects of ability and opinion based on SCO.

Although SCO is considered a personality trait, the desire for social comparison may be influenced by situational factors such as uncertainty and stress in competitive teamwork (Buunk et al., 2005). All these factors are also relevant in the nursing environment. An important take-away of this study is that organizations should be aware that there is a positive side to having high SCO nurses in this work environment, and should learn how to operationalize this for the benefit of individuals and the organization. For instance, SCO as a personal resource could be introduced in the design of coaching programs or team-building processes, and this might provide nurses with efficient tools to improve their adjustment to work environment. For example, human resources managers could enhance team reflexivity in order to identify best practices that allow nurses to stimulate social comparison processes. Using coaching programs, human resources managers could make employees aware of their own weakness and strength comparing with others. Training programs could teach employees how looking at others may enhance behavioral self-regulation processes that can help them appraise demands as a challenge rather than hindrance. Managers could also introduce the analysis of personality variables, like SCO, in their personnel selection process, with a view to decreasing potential WNWC and increasing work engagement.

From a theoretical point of view, our findings support the argument for including the SCO as a personal resource in the stress models. Future studies should expand the analysis of the influence of SCO to other variables, like work-home enrichment, to further confirm the importance of this resource in the positive organizational psychology field.

**Conflict of Interest**

The authors of this article declare no conflict of interest.