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ABSTRACT. This paper briefly summarizes the challenge-hindrance model of stress (CHM), its basis in the transactional theory of stress, and its integration with modern stress theories found in social psychology and management literature. In doing so, it provides a content map/process model to guide future research that can contribute to creating a more effective measure of the secondary appraisals of stressors. Although psychometric and related statistical concerns regarding extant measures have been noted and discussed in the literature, the proposed model may aid in the conceptualization of the nomological network of the stress process. This paper also expands upon and explicitly outlines the relationship between the Hobfoll (1989) Conservation of Resources Theory (CORT) and the CHM model, an understanding that may further aid in developing a more effective measure of secondary appraisals of stress. Further, it proposes an individual difference to be tested in future research, which incorporates threat stressors and their appraisal—an unstudied link in the CHM research suggested by Horan (2020). We also incorporate experiential avoidance into the proposed theoretical process model, a previously undiscussed moderator in organizational literature despite heavy empirical evidence in clinical psychological research as this individual difference. These propositions are then used to suggest avenues for future research.

Introduction

According to the Cavanaugh et al. (1998) stress model, there exists two types of stressors: "challenge stressors," which may result in strain but will also provide opportunities for feelings of accomplishment, growth, and development, and hindrance stressors, which are stressors that produce strain and may result in interference of goals. Because these definitions focus on predicted work outcomes, however, issues with individual differences during the appraisal process arise. That is, because the form the stressor takes is predicated on its influence (e.g., it is a challenge if it results in positive outcomes), the appraisal process is diminished in comparison to the form of stress. Currently, substantive research centers around studying individual differences like conscientiousness, neuroticism, goal orientation, and self-efficacy in appraisals. Still, little research exists in secondary appraisals, and any existing research in this area relies upon weak measures which label stressors as challenge or hindrance *a priori*, meaning prior to observation of participants. This paper aggregates several moderating variables involved in this process and proposes the inclusion of other variables, like experiential avoidance, that are conceptually related but not yet empirically tested. It also emphasizes the need for a more structured measure of the secondary appraisals as well as an incorporation of conservation of resources theory (CORT) into this measurement.

Theoretical Basis for CHM

One of the leading theories in stress research is the transactional theory of stress (Lazarus & Folkman, 1984), which is based upon the idea that there exist two appraisal processes: primary and secondary appraisals. Primary appraisals refer to an individual's judgments of the potential stressor's goal relevance as irrelevant, positive, or stressful, while secondary appraisals refer to that individual's judgement of their coping abilities of this stressor, like their existing constraints and resources (Lazarus & Folkman, 1984). For example, a primary appraisal of a project deadline would involve the individual determining whether this assignment is goal-relevant. If this primary appraisal leads to an appraisal of stress, a secondary appraisal will involve the individual determining whether they are capable of dealing with this stressor. Individual differences, like conscientiousness and goal-orientation, would then predispose this individual to appraise the stressor as either challenging or hindering. Unlike the "Vitamin Model" (Warr, 1987), which proposes a model of diminishing returns for the effects of positive stressors, and the conservation of resources theory (Hobfoll, 1989), which posits that individuals are motivated to conserve existing resources and acquire new ones, this theory most fundamentally deals with the secondary appraisal process. Therefore, this secondary appraisal is critical to the challenge-hindrance model of stress (CHM) when the stressor is appraised as challenging or hindering.

Although the CHM is based heavily upon the transactional theory of stress, many current measures of this theory fail to account for the differences in appraisals. Studies test the model by pre-determining stressors as challenge (e.g., tight deadlines or difficult work) or hindrance (e.g., favoritism or role ambiguity) without accounting for extenuating factors, like individual differences, or even the fact that some stressors may be classified as both challenging and hindering. Several studies have called for addressing this issue, but improvements are still lacking.

Current State of CHM Literature

The majority of extant CHM stress literature relies on *a priori* classification, which involves characterizing stressors as either challenging or hindering beforehand (as opposed to the participant directly appraising the stressor as a challenge or hindrance), like the 11-item Cavanaugh et. al (2000) measure of challenge/hindrance stressors. For example, items like heavy workloads and due dates are automatically classified as challenging. However, this method of classification fails to account for variability in types of stressors. Notably, one stressor may be perceived as both a challenge and hindrance stressor by an individual, and most importantly, the variability in secondary appraisals of these stressors. For example, individuals may differ in their secondary appraisals of having to complete the same project by a certain deadline based upon number of resources, personality, and other individual differences. However, *a priori* classification of this example may immediately characterize it as a challenge stressor, in which it is assumed that the individual feels that this project will eventually result in personal growth, even though a differing secondary appraisal may involve feeling overwhelmed by the same project.

Even studies which attempted to account for this discrepancy, like Webster et. al (2011), compensate for this gap with less than adequate methods. Specifically, these methods fail to measure the appraisal, and instead allow the participant to almost replicate the appraisal process during the rating by initially defining challenge vs. hindrance stressors and allowing participants to classify from there. Recently, more studies (e.g., Lin et. al, 2015, Ma et al., 2015, & Zheng et al., 2020) have linked these appraisals to differences like conscientiousness and goal-orientation.

Individual Differences

Despite these measurement shortcomings in CHM research, several strides have been determined individual differences that moderate the appraisal process.

Conscientiousness

Research has found that conscientiousness has a moderating effect on the relationships between challenge/hindrance stressors and challenge/hindrance appraisals, with higher levels of this trait being linked to more frequent challenge appraisals (Lin, 2015). One of the main findings of this paper is that in terms of predicting stressor-strain relationships, conscientiousness is a double-edged sword because those higher in conscientiousness are more likely to experience more severe strain in response to increases in both challenge and hindrance stressors (Lin, 2015). Further, highly conscientious individuals were more likely to channel their personal resources towards maintaining their performance standards, leading to insufficient resources (Lin, 2015). This double-edged effect can be attributed to individuals experiencing increased strain because they are more willing to give up resources to combat these stressors.

Self-Efficacy

Self-efficacy as defined by Bandura (1977), describes an individual's evaluation of their ability to achieve academic success, where an individual who is confident in their abilities to complete an assignment would have greater levels of self-efficacy than an individual who appraised their abilities as inadequate for the same assignment. This moderating variable clearly fits into the challenge-hindrance appraisal process, as appraisals of these stressors are directly tied to an individual's appraisal of whether the stressor is goal relevant and manageable. Therefore, as Horan (2020) posits, coping self-efficacy, which refers to an individual's belief about their ability to cope with stress (Chesney et al., 2006) can potentially predict the results of the appraisal process with individuals high in self-efficacy having more predisposition to appraise a stressor as challenging, compared to their lower self-efficacy level counterparts.

Goal Orientation

Goal orientation has been identified as a moderator of the secondary appraisal process. Learning goal orientation is the tendency for an individual to desire to improve competence and master a situation; performance-prove goal orientation reflects a desire to demonstrate one's competence; performance-avoid goal orientation describes an individual's desire to hide incompetency (Vandewalle and Cummings, 1997). Ma (2019) found that individuals high in learning and performance-prove goal orientation were more likely to appraise challenge stressors as challenging, and individuals high in performance-avoid and performance-prove goal orientation were more likely to appraise hindrance stressors as hindering. This moderating effect of goal orientation on the appraisal process can be explained by the fact that those high in performance-prove and performance-avoidance goal orientation are more likely to strive to avoid performance failures, and those high in learning and performance-prove goal orientation attach greater importance to work performance and achievement (Ma, 2019). Because LGO-high individuals aim to acquire and develop competencies, this facet of goal orientation can be reasonably

incorporated into a processing model that these individuals will be more likely to appraise stressors as opportunities to gain these competencies. Likewise, performance-avoid goal orientation is incorporated into this model, as those individuals who are more likely to avoid stressors as a whole due to their aversion to experiencing personal failures.

These moderating variables, which were chosen because of their fundamental relevance in predisposing individuals' reactions to stimuli and subsequent actions have been aggregated in Figure 1.

Conservation of Resources Theory

One factor that might influence secondary appraisals is the lack of resources, a concept detailed in the Conservation of Resources Theory (CORT). One theory that somewhat addresses this point is the Job-Demands Resources Framework (JD-R), which explains that stress occurs when demands are high, and resources are low (Bakker and Demerouti, 2005). However, this framework does not inherently consider the role of appraisals in this process, and currently no research exists which examines how individual differences interact with the resources available to individuals, which is where CORT is relevant. CORT approaches stress with the perspective that people are motivated to conserve their resources and work to acquire more. In the workplace, these resources include time and energy. According to Horan (2020), CORT is linked to the challenge-hindrance model (CHM) because hindrance stressors can be viewed as circumstances in which resources are threatened to be lost, and challenge stressors can be viewed as circumstances in which resources are open to gain. However, the theory proposed in our paper expands upon past references to CORT in CHM and considers that CORT is the link between the CHM and these individual differences, as CHM is fundamentally reliant upon these secondary appraisals. When an individual is undergoing the stress process, they will appraise the stressor based upon their desire to prevent the loss of and/or gain of resources.

When considering these outlined variables, two individual differences, conscientiousness and self-efficacy, can be viewed as resources. According to Bartley and Roesch (2011), conscientiousness is a valuable resource because it predisposes individuals high in this trait to better allocate their resources and cope with stressors. Further, according to Halbesleben et al. (2009), individuals high in conscientiousness will more actively use a "surplus" of resources to optimize for desired outcomes, thereby indicating that those high in the resource of conscientiousness during the secondary appraisal will, according to CORT, be more likely to appraise the stressor as challenging.

As Horan (2020) described, the individual will view this stressor as an opportunity to gain more resources. Similarly, self-efficacy can be viewed as a resource; according to Benight (2008), when self-efficacy is high, individuals will direct their energies toward correcting the causes of the stressor, while those with low self-efficacy will spend energy to cope with the emotional distress. As these examples show, the incorporation of CORT into the CHM framework fills in the gaps left unexplained by faulty measurements.

Conclusions and Recommendations for Future Research

Experiential Avoidance (EA)

One relatively unstudied potential individual difference/moderating variable is experiential avoidance, which describes the predisposition and tendency of an individual to avoid and suppress negative emotions and situations which may prompt uncomfortable feelings (Aktar et al., 2017). According to Buhr and Dugas et. al (2012), the existence of high levels of experiential avoidance (EA) can exacerbate the inability to deal with uncertainty in everyday life. For example, ambiguity in role descriptions and assignments are commonly appraised as hindrance stressors, but experiential avoidance can potentially incline an individual to not only appraise this stressor as hindering, but also engage in avoidance tactics, such as procrastination. Indeed, it could be the case that any small or trivial amount of ambiguity could result in strong negative reactions by someone high in EA. An individual who is more likely to avoid situations presenting the possibility of feeling negative emotions, who will thereby be further immobilized to deal with the stressor, may also have an altered perception of their ability to cope with their stressors. This tendency can then more directly lead to increased likelihood of a hindrance appraisal. Further, higher levels of neuroticism are positively associated with experiential avoidance. Future research can further investigate these relationships and test the inclusion of experiential avoidance in this model of the challenge-hindrance appraisal process.

Experiential avoidance could also explain why some stressors can be classified as both challenging and hindering. Although they are perceived to be goal advantageous, challenge stressors still cause strain, so individuals high in EA may be more likely to avoid challenge stressors, despite realizing its value in their goal achievement, and will consequently and simultaneously view it with dread, which can promote hindrance appraisals. Notably, EA also further bolsters the conceptual relationship between CORT and CHM. For some of these individuals, there is no way to adapt to stressor, and all stressors portend a loss in resources, so the only logical response would be to completely avoid the situation altogether. Even if the stressor has no legitimate ability to harm the individual appraising the stress, those high in EA will view it with dread and appraise it as hindering, which further underscores the issue of *a priori* classifications.

Given these predictions about the role of EA in the appraisal process, its existence may even render evaluations of goal orientation obsolete, as it generally and fundamentally addresses the affinity of an individual to achieving goals. In fact, the varying forms of goal orientation all seem to indicate differing underlying levels of EA. Those high in learning goal orientation have lower levels of EA, and those high in performance-avoid goal orientation having higher levels of EA. This difference has been accounted for in our theoretical model.

Variability of Hindrance Stressors

Few studies have been drawn from the CHM to examine the variability of hindrance stressors. For example, threat appraisals occur in situations that may result in personal harm or loss (Horan, 2020). Considering the relationship between CHM and CORT, CORT allows for the distinction between these two negatively valenced appraisals (hindrance and threat) by describing hindrance appraisals as ones where resources are perceived to be threatened versus in threat appraisals, where resources are perceived to have been actively taken away, leading to personal harm.

Future research can further investigate this distinction, then, using measurements drawn from CORT.

Promising research exists in the relationship between threat appraisal and experiential avoidance, as individuals high in experiential avoidance may be more inclined to use defensive silence through experiential avoidance in response to lost resources by keeping knowledge private (Khalid et al. 2020). This tendency directly lends itself to CORT theory, with individuals higher in experiential avoidance being more likely to perform a threat appraisal because they are more likely to react strongly in response to a loss of resources. Therefore, it follows that experiential avoidance could potentially be incorporated into a nomological model of this stress appraisal process that includes threat appraisals, which can be expanded upon in future research.

Ultimately, it is imperative that future research in the challenge-hindrance model of stress works towards the development of a more accurate measure of the secondary appraisal process. By explicitly integrating theoretically related but disparate streams of research in this paper contributes to both scholarly and management applications. For example, the proposed model provides a testable theory that incorporates all extant literature to elucidate the secondary stress appraisal process. Moreover, HR professionals and applied psychologists can improve employee satisfaction and productivity by potentially understanding "how' and "why" individuals view certain job demands as *too* demanding or how to motivate them. This paper calls for action by proposing COR as not only a theoretical basis for CHM, which several studies have already discussed, but as a potential method of solving this issue of measurement.

References

Aktar, E., Nikolić, M., & Bögels, S. M. (2017). Environmental transmission of generalized anxiety disorder from parents to children: Worries, experiential avoidance, and intolerance of uncertainty. *Dialogues in Clinical Neuroscience*, 19(2), 137–147. https://doi.org/10.31887/dcns.2017.19.2/eaktar

Bakker A.B., Demerouti E., Euwema M.C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology.* 10:170–80

Bartley C.E., Roesch S.C. (2011). Coping with Daily Stress: The Role of Conscientiousness. *Personality and Individual Differences,* 50(1), 79-83. doi: 10.1016/j.paid.2010.08.027.

Benight, C. C., Cieslak, R., Molton, I. R., & Johnson, L. E. (2008). Self-evaluative appraisals of coping capability and posttraumatic distress following motor vehicle accidents. *Journal of Consulting and Clinical Psychology,* 76(4), 677–685. https://doi.org/10.1037/0022-006X.76.4.677

Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., and Boudreau, J. W. (1998). "Challenge" and "hindrance" Related Stress Among U.S. Managers *(CAHRS Working Paper #98-13).* Ithaca, NY: Cornell University.

Chesney, M. A., Neilands, T. B., Chambers, D. B., Taylor, J. M., and Folkman, S. (2006). A validity and reliability study of the coping self-efficacy scale. *British Journal of Healthy Psychology.* 11, 421–437. doi: 10.1348/135910705X53155

Dugas, M. J., Schwartz, A., & Francis, K. (2004). Brief report: Intolerance of uncertainty, worry, and Depression. *Cognitive Therapy and Research*, 28(6), 835–842. https://doi.org/10.1007/s10608-004-0669-0

Halbesleben J. R. B., Harvey J., Bolino M. C. 2009. Too engaged? A conservation of resources view of the relationship between work engagement and work interference with family. *Journal of Applied Psychology,* 94: 1452-1465.

Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. *American Psychology*. 44, 513–524. doi: 10.1037/0003-066X.44.3.513

Horan, K. A., Nakahara, W. H., DiStaso, M. J., & Jex, S. M. (2020). A review of the Challenge-Hindrance Stress Model: Recent Advances, expanded paradigms, and recommendations for Future Research. *Frontiers in Psychology,* 11. https://doi.org/10.3389/fpsyg.2020.560346

Khalid, B., Iqbal, R. & Hashmi, S.D. Impact of workplace ostracism on knowledge hoarding: mediating role of defensive silence and moderating role of experiential avoidance. *Future Business Journal,* 6, 39 (2020). https://doi.org/10.1186/s43093-020-00045-6

Lazarus, R. S., and Folkman, S. (1984). Stress, Appraisal, and Coping. New York, NY: Springer Publishing Company, 150–153.

Lin, W., Ma, J., Wang, L., & Wang, M. (2015). A double-edged sword: The moderating role of conscientiousness in the relationships between work stressors, psychological strain, and job performance. *Journal of Organizational Behavior*, 36(1), 94-111.

Ma, J., Peng, Y., & Wu, B. (2021). Challenging or hindering? the roles of goal orientation and cognitive appraisal in stressor-performance relationships. *Journal of Organizational Behavior,* 42(3), 388–406. https://doi.org/10.1002/job.2503

Warr, P. B. (1987). Work, Unemployment, and Mental Health. Oxford: Oxford University Press.

Webster, J. R., Beehr, T. A., and Love, K. (2011). Extending the challenge-hindrance model of occupational stress: the role of appraisal. *Journal of Vocational Behavior*, 79, 505–516. doi: 10.1016/j.jvb.2011.02.001

Zheng, J., Gou, X., Li, H., Xue, H., & Xie, H. (2020). Linking Challenge–Hindrance Stressors to Safety Outcomes and Performance: A Dual Mediation Model for Construction Workers. *International Journal of Environmental Research and Public Health,* 17(21), 7867.

Figure 1

Nomological network of expected interacting variables on secondary appraisal process

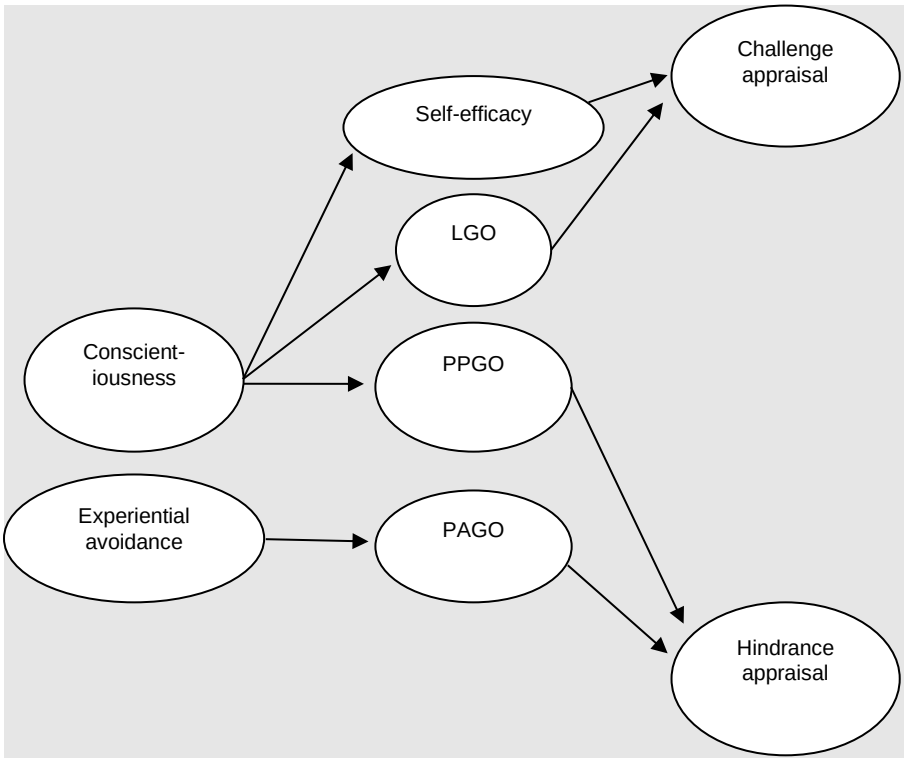

Figure 1. Nomological network of expected relationships between empirically supported individual differences and stressor appraisals, and the proposed relationship between experiential avoidance and hindrance appraisals. Arrows denote positive relationships.

LGO = learning goal orientation; PPGO = performance-prove goal orientation, PAGO = performance-avoid goal orientation