

14th ISCA 2024

Conscientiousness as a Moderator: Examining the Effects of Challenge Stressors on Decision-Making Styles

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ABSTRACT

This study investigates the relationship between challenge stressors and decision-making styles, with conscientiousness acting as a moderating variable. It aims to elucidate how individuals in cooperative organizations can leverage their personality traits to enhance their decision-making processes under stress. A hierarchical multiple regression analysis was conducted using data collected from 110 respondents across various cooperatives in Wonosobo, employing a snowball sampling technique. The results indicated that both challenge stressors and conscientiousness significantly influence decision-making styles. Specifically, an increase in challenge stressors positively impacted decision-making styles, leading to more strategic and focused approaches. Furthermore, conscientiousness moderated this relationship, suggesting that individuals with higher levels of conscientiousness are better equipped to manage challenge stressors effectively, thereby improving their decision-making outcomes.

Keywords: Challenge Stressors; Decision-Making Styles; Conscientiousness

1. Introduction

In an increasingly dynamic and competitive work environment, individuals face various challenge stressors—pressures that are often viewed as productive challenges driving performance improvement. Challenge stressors, such as tight deadlines, high job demands, and the expectation to achieve optimal outcomes, can motivate individuals to work harder and more efficiently. However, the literature indicates that challenge stressors can have a dual effect. On the one hand, these pressures often contribute positively to productivity and motivation. On the other hand, without effective stress management, they can impair cognitive functioning. This may lead to poor decision-making in high-pressure situations (Lepine et al., 2004).

Furthermore, the conscientiousness dimension of individual personality plays a key role in determining how one responds to such pressures. People with high conscientiousness tend to be more organized, responsible, and meticulous in their tasks. They often demonstrate greater capacity to handle challenge stressors and employ a more rational and strategic

approach under stress. These individuals are also more likely to manage stress proactively, which helps them make logical and structured decisions, even in stressful environments. Thus, conscientiousness can act as a moderator, either amplifying or reducing the effects of stressors on decision-making (M. Barrick et al., 2001).

In this context, individuals with high conscientiousness are more resilient in the face of stressors, leading to better decision-making under pressure. Conversely, individuals with lower conscientiousness may be more prone to impulsive or poor decision-making when confronted with stress. While much research has explored the relationship between stressors and performance, studies examining the moderating role of conscientiousness on decision-making are scarce. Many studies have focused primarily on the direct effects of challenge stressors on job performance or other work behaviors (Podsakoff et al., 2007). These studies often overlook the interactive role of personality factors like conscientiousness.

Furthermore, studies on how personality influences decision-making typically fail to consider how stressors interact with these traits (Dane & Pratt, 2007). Judge et al. (2014) point out that the current literature on how personality and stressors interact in decision-making contexts remains limited. This reveals a significant research gap. There is still much to explore about how conscientiousness may moderate the effects of stressors on decision-making. Given the increasing complexity and demands of modern jobs, further research on the interaction between these three variables is essential.

2. Literature Review

2.1 Challenge Stressors and outcomes

Challenge Stressors are a type of stressor viewed as opportunities for growth rather than threats. These stressors include increased responsibilities, tight deadlines, and complex tasks. Although they require significant effort, challenge stressors can lead to positive outcomes when managed well. Individuals' perceptions of stressors as opportunities to develop skills or achieve higher performance tend to motivate them to engage more in their work, enhancing productivity and involvement (Cavanaugh et al., 2000; Lepine et al., 2005). These challenges also provide opportunities to expand individuals' capacities to handle complex tasks and contribute to personal growth and resilience.

Individuals' responses to challenge stressors are heavily influenced by personal characteristics, such as motivation, resilience, and past experiences. Those who view stressors as opportunities typically respond with a problem-solving mindset, leading to better task performance and a sense of achievement (Podsakoff et al., 2007). Conversely, if individuals perceive challenge stressors as an overwhelming burden, they may experience cognitive overload that disrupts focus and decision-making (Webster et al., 2010). Thus, how one interprets a stressor—as an opportunity or an obstacle—affects their stress levels and decision-making ability.

Decision-Making Styles (DMS) play a crucial role in facing challenge stressors. Individuals usually have a dominant style, such as rational, intuitive, dependent, avoidant, or spontaneous (Scott & Bruce, 1995). Rational decision-makers tend to rely on thorough analysis and logical reasoning, which helps them better cope with complex pressures (Lepine et al., 2005). In contrast, intuitive decision-makers rely more on their instincts, which may work well in fast-paced situations but not in contexts requiring in-depth analysis (Brousseau et al., 2006). Dependent decision-makers seek guidance from others, while avoidant individuals may tend to postpone decision-making. Spontaneous decision-makers, although quick to react, risk overlooking important details due to impulsive decisions. Under challenge stressors,

methodical decision-making styles, such as the rational style, are more likely to succeed, while less structured styles may lead to fatigue or disengagement (Scott & Bruce, 1995).

H1. Challenge stressors have a significant impact on decision-making styles.

2.2 *Conscientiousness Sebagai Moderasi*

Conscientiousness, characterized by diligence and a strong sense of responsibility, plays a pivotal role in how individuals manage challenge stressors. Individuals exhibiting high levels of conscientiousness tend to demonstrate greater organizational skills and persistence, enabling them to navigate the complexities inherent in challenge stressors more effectively (M. R. ; Barrick & Mount, 1991). Their structured approach and long-term focus facilitate sustained productivity without succumbing to burnout (Demerouti et al., 2001). This resourceful disposition aligns with the Conservation of Resources (COR) Theory, which underscores the importance of maintaining, acquiring, and protecting resources to cope with stress effectively (Hobfoll, 1989). Individuals possessing high conscientiousness are adept at building reserves of cognitive, emotional, and psychological resources, which they utilize to confront challenges without compromising their motivation (Halbesleben et al., 2014).

Moreover, conscientious individuals are more inclined to engage in behaviors that mitigate resource depletion, such as proactive planning and establishing a stable work rhythm (Tugade & Fredrickson, 2004). They approach decision-making with a measured and careful mindset when faced with challenge stressors, contrasting with those who exhibit lower levels of conscientiousness. The latter group may feel overwhelmed by stressors, often resulting in impulsive decision-making (Judge & Ilies, 2002; McCrae & Costa, 1997). This ability to conserve resources while maintaining focus ensures that conscientious individuals can make effective decisions even under pressure.

As the intensity of challenges escalates, the role of conscientiousness subtly influences decision-making processes. Individuals characterized by diligence and organizational skills are better equipped to confront pressure with a thoughtful approach, thereby leading to more judicious and directed decision-making (Bakker et al., 2005). Conversely, those who lack these traits may often experience feelings of overwhelm, making them more susceptible to hasty decisions. Indirectly, conscientiousness contributes to an individual's capacity to remain calm and think clearly in the face of complex work-related stress (Halbesleben et al., 2014).

H2. Conscientiousness significantly moderates the relationship between challenge stressors and decision-making styles.

3. **Research Methodology**

Data for this study were collected from various cooperatives located in the Wonosobo region. To ensure a comprehensive and representative sample of respondents, we employed a snowball sampling technique. This approach was selected due to the challenges associated with directly identifying all relevant stakeholders within the cooperative sector. Through snowball sampling, researchers can initiate contact with initial respondents who subsequently recommend additional relevant individuals, thereby facilitating access to cooperative members who may be dispersed or less structured in their organization. This method is particularly beneficial for reaching individuals who may infrequently participate in formal cooperative activities or who, while not occupying managerial roles, play significant operational roles within the cooperatives.

The participants in this study included cooperative management personnel such as chairpersons, secretaries, treasurers, and managers, as well as regular cooperative members and

administrative and operational staff. Additionally, several volunteers engaged in cooperative programs also contributed to this research. In total, 110 respondents were successfully recruited for this study.

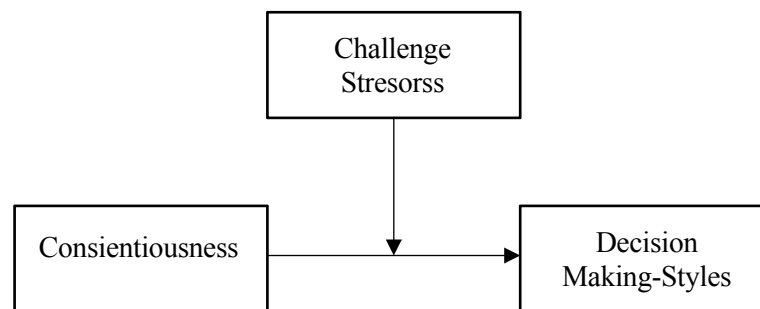


Figure 1. Research Model

Measurement

This study employed the following measures, drawn from existing literature. All scale items were assessed using a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). Challenge stressors were evaluated using the six-item scale developed by (Cavanaugh et al., 2000). Employees rated the extent to which specific statements induced stress in their work environment, employing a scale from 1 (no stress) to 5 (a great deal of stress). Examples of the statements include, "The time pressure I face" and "The number of projects or assignments I handle."

The measurement of conscientiousness in this research utilized the short version of the Big Five Inventory–2 (BFI-2-S), developed by (Soto & John, 2017). The BFI-2-S consists of 30 items that assess five primary personality domains, including conscientiousness, which encompasses three specific facets: organization, productivity, and responsibility. This measurement has been widely utilized in psychological research and has demonstrated adequate reliability and validity for assessing conscientiousness across various population samples.

The Scott and Bruce General Decision-Making Style Inventory, developed in 1995 and widely utilized internationally, assesses decision-making styles through a set of 25 questions. Respondents answer on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This inventory evaluates five key decision-making styles: dependent, avoidant, spontaneous, rational, and intuitive.

4. Results

4.1 Hypotheses Testing

The Kolmogorov-Smirnov test was conducted to ensure that the data did not exhibit statistical issues and conformed to a normal distribution. Additionally, it is crucial to confirm that the independent variables are free from multicollinearity, a condition characterized by high correlations among independent variables, before performing multiple regression analysis. The presence of multicollinearity can compromise the accuracy of regression analysis results (Sugiyono, 2017). To assess multicollinearity, the Variance Inflation Factor (VIF) and tolerance tests were employed. (Sugiyono, 2017) suggests that the general thresholds for multicollinearity are a minimum tolerance value of 0.10 and a maximum VIF value of 10. According to the test results, the VIF for challenge stressors is 2.371 and for conscientiousness is 1.059, while the corresponding tolerance values are 0.422 and 0.944. These values indicate that there are no multicollinearity issues among the independent variables, as all VIF values are below 10 and all tolerance values are above 0.10.

Table 1. Multicollinearity test for independent variable dimensions

Independent Variabel	VIF	Tolerance
Challenge Stressors	2.371	0.422
Consientiousness	1.059	0.944

Based on the results of the hypothesis testing presented in Table 2, it was found that both hypotheses—namely challenge stressor (CS) and conscientiousness (CO)—have a significant positive effect on decision-making style. For the first hypothesis (H1), the coefficient β of 0.938 indicates that an increase in challenge stressor will enhance decision-making style. The t-value of 4.035, with a significance level of 0.000, demonstrates that this effect is statistically significant at the 0.05 level, thereby confirming the acceptance of this hypothesis.

Furthermore, for the second hypothesis (H2), conscientiousness also significantly influences decision-making style, with a coefficient β of 1.613. The t-value of 7.856, accompanied by a significance level of 0.000, reinforces this finding and indicates a stronger effect compared to challenge stressor. Therefore, the second hypothesis is also accepted. Overall, both independent variables—challenge stressor and conscientiousness—significantly impact decision-making style, with conscientiousness exhibiting a more pronounced influence.

Table 2. Result of hypothesis testing

Hypotheses	β	t	Sig.	Results
CS (H1)	0.938	4.035	0.000	Accepted
CO (H2)	1.613	7.856	0.000	Accepted

Note: Dependent variable: decision making-style. CS: challange stressor; CO: consientiousness

4.2 Moderating Variable

This study employed hierarchical multiple regression to analyze the moderating role of conscientiousness in the relationship between challenge stressor and decision-making style across several cooperatives in Wonosobo. Based on Table 3, the first model developed examines the effect of challenge stressor on decision-making style. The analysis results indicate that this model is significant, with an F-value of 1010.002 and a p-value of less than 0.000. This signifies that challenge stressor has a substantial effect on decision-making style, implying that higher levels of challenges faced result in a greater impact on how individuals make decisions.

In the next step, the second model was expanded to include conscientiousness as a moderating variable alongside challenge stressor. The analysis results for the second model also indicate significance, with an F-value of 704.169 and a p-value of less than 0.000. These findings demonstrate that conscientiousness not only functions as an additional variable but also interacts with challenge stressor. This suggests that an individual's level of conscientiousness can enhance or moderate the impact of challenge stressor on decision-making style. For instance, individuals with high conscientiousness may be better equipped to manage the challenges they encounter, positively influencing their decision-making processes.

In the overall model analysis, the first step reveals an R^2 value of 0.942, indicating that 94.2% of the variation in decision-making style can be explained by challenge stressor.

However, in the second step, when incorporating conscientiousness, the R^2 value slightly increases to 0.945. Although the increase is not substantial, this change still reflects a significant difference between the two models and indicates that conscientiousness has a noteworthy impact on the relationship between challenge stressor and decision-making style.

Table 3. Multiple hierarchical regression analysis

Model	R2	F	Sig
1	0.942	1010.002	0.000
2	0.945	704.169	0.000

Note: a. Predictor: (constant), challenge stressor, conscientiousness, decision making-style; b. Predictor: (constant), challenge stressor, conscientiousness, interaction of challenge stressor x conscientiousness, decision making-style.

The results of the moderation regression analysis presented in Table 4 indicate that the first hypothesis (H1), which examines the effect of challenge stressor (CS) on decision-making style (DMS), has a beta coefficient (β) of 0.516. With a t-value of 4.226 and a significance value (Sig.) of 0.000, these results demonstrate that the effect of CS on DMS is statistically significant at the 1% significance level. Therefore, hypothesis H1 is accepted, indicating that higher levels of challenge stressors correlate with a greater impact on individuals' decision-making styles.

Meanwhile, the second hypothesis (H2), which investigates the moderating role of conscientiousness (CO) in the relationship between CS and DMS, shows a beta coefficient (β) of 0.026. With a t-value of 7.068 and a significance value also at 0.000, hypothesis H2 is likewise accepted. This signifies that conscientiousness strengthens or moderates the relationship between challenge stressor and decision-making style. In other words, individuals with a high level of conscientiousness tend to be more capable of managing challenge stressors, which, in turn, positively influences their decision-making styles.

Table 2. Result of Moderated Regression Analysis

Hypotheses	β	t	Sig.	Results
CS \rightarrow DMS (H1)	0.516	4.226	0.000	Accepted
CS \rightarrow CO \rightarrow DMS (H2)	0.026	7.068	0.000	Accepted

Note: Dependent variable: DMS: decision making-style. CS: challenge stressor; CO: conscientiousness

5. Discussion

The results of the moderation regression analysis presented in the table indicate that challenge stressors (CS) significantly influence decision-making style (DMS), while conscientiousness (CO) serves to enhance this relationship. This analysis contributes to the existing body of literature by elucidating how these variables interact in a workplace context. The findings align with previous studies, thereby reinforcing the theoretical framework that supports the notion that challenge stressors can foster adaptive decision-making behaviors.

In exploring the first hypothesis (H1), which investigates the effect of challenge stressors on decision-making style, the results reveal a statistically significant relationship, prompting the acceptance of this hypothesis. Specifically, when individuals encounter challenge stressors—defined as work-related challenges perceived as opportunities for growth—their decision-making style tends to become more directed and strategic. This finding resonates with the research conducted by Espedido & Searle (2021), which highlights that challenge stressors enhance individuals' problem-solving abilities, leading to a more positive impact on their decision-making processes.

The second hypothesis (H2) delves into the role of conscientiousness as a moderator

between challenge stressors and decision-making style. The findings suggest that conscientiousness has a significant moderating effect, illustrating that individuals with high levels of conscientiousness—characterized by attributes such as diligence, meticulousness, and a strong sense of responsibility—are better positioned to leverage workplace challenges to enhance their decision-making capabilities. This perspective underscores the importance of personality traits in shaping how individuals respond to stressors in their professional environments.

Furthermore, this study illuminates the nuanced interplay between personality and stressors, positing that conscientiousness not only influences how individuals cope with challenges but also how effectively they can navigate complex decision-making scenarios. The correlation between conscientiousness and cognitive processing in decision-making is particularly pronounced in high-pressure situations, as indicated by the research of Crivelli et al. (2024). This highlights the critical role that personality traits play in determining the quality of decisions made under stress.

6. Conclusions

This study investigated the relationships between challenge stressors, conscientiousness, and decision-making styles among cooperative members in Wonosobo. The findings reveal that challenge stressors significantly impact decision-making styles, indicating that individuals perceive these stressors as opportunities for growth and improvement. As individuals encounter higher levels of challenge stressors, their decision-making becomes more strategic and directed, enhancing overall performance.

Moreover, the research highlights the moderating role of conscientiousness. Individuals with high levels of conscientiousness—characterized by diligence, responsibility, and organization—are better equipped to manage challenge stressors effectively. This ability allows them to leverage challenges to enhance their decision-making styles.

The implications of this study are significant for organizations aiming to improve decision-making processes under challenging conditions. By fostering a workplace culture that encourages resilience and conscientiousness, organizations can enhance their employees' ability to thrive in stressful environments. Future research should further explore the nuanced interactions between personality traits and stressors to develop comprehensive strategies for optimizing decision-making in various organizational contexts.

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