

Does job boredom benefit creativity? A cross-domain process through leisure crafting

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Abstract

Purpose – The job design literature recommends various ways to enrich jobs. However, some jobs cannot be redesigned, and employees inevitably experience job boredom. Drawing on a cross-domain perspective based on self-determination theory of motivation and conservation of resource theory, we propose a theoretical model that specifies how and when job boredom can benefit employees by promoting their innovativeness.

Design/methodology/approach – We test our theoretical propositions by analyzing multi-wave data collected from 389 employees in Taiwan.

Findings – Results show that despite its direct negative effect on creativity, job boredom is positively related to leisure crafting in the personal life domain, which is a positive predictor of employee creativity. The positive indirect effect of job boredom on creativity through leisure crafting is strengthened by job routinization, which conserves employee resources during work hours.

Originality/value – In this study, we specify when job boredom benefits and hinders creativity, hence expanding the existing knowledge regarding the role of job boredom in the workplace. Our analysis offers new theoretical insights by theorizing and demonstrating the cross-domain flow of resources from the work domain to the non-work leisure domain and then back to the work behaviours of employees in promoting workplace innovativeness.

Keywords Job boredom, Leisure crafting, Job routinization, Creativity, Conservation of resources, Workplace innovation

Paper type Research paper

Introduction

Organizational researchers have highlighted the benefits of challenging and enjoyable, thus intrinsically motivating, jobs toward creativity and innovation (Park *et al.*, 2021; Wang *et al.*, 2021). The job design literature underscores that enriched jobs, both in terms of tasks and relational aspects, can enhance work meaningfulness and employee engagement, ultimately driving proactive exploration of new opportunities and innovative solutions (Hackman and Oldham, 1980; Ji *et al.*, 2021; Lunenburg, 2011). Despite the prevailing recommendations to design jobs to make them interesting, challenging, and meaningful (Ji *et al.*, 2021; Lunenburg, 2011), the reality of boredom at work remains inevitable in certain roles and among some employees. Boredom has become a prevalent concern across various occupational sectors, as an increasing number of individuals perceive their job roles as lacking meaningful contributions, resulting in feelings of alienation and a diminished sense of purpose (Toscanelli *et al.*, 2022).

The global pandemic exacerbated work-related boredom through the rise of hybrid and remote work arrangements, which often led to increased social isolation (Eddy *et al.*, 2022; Vaziri *et al.*, 2022). Moreover, contrary to expectations, automation and the integration of AI have contributed to the prevalence of monotonous and dull tasks that lack social stimulation and autonomy (Toscanelli *et al.*, 2022). The growing use of task monitoring technologies and algorithmic controls has further diminished the meaningfulness of knowledge-intensive work. As Schott and Fischer (2023) observe, “experiences of boredom in the workplace are



unavoidable and may even increase also among white collar and professional employees” (p. 2). Recent studies highlight “boreout,” a phenomenon stemming from job boredom, as a critical risk to individual performance, comparable to the well-documented issue of workplace burnout (Abubakar *et al.*, 2022). Despite this growing concern, there has been limited focus on understanding how to transform such negative work experiences among white-collar workers into opportunities for both employees and organizations, particularly in the context of innovation management.

Complementing the prevalent focus on enriched and challenging jobs as drivers of creativity (e.g. Park *et al.*, 2021; Wang *et al.*, 2021), we explore the positive potential of job boredom in fostering employee creativity, extending the literature that has predominantly emphasized its downsides (Eid, 2020; Van Hooff and Van Hooff, 2014). Recognizing that job enrichment is not always feasible in certain roles or environments, it is essential to examine both the detrimental effects of job boredom and its potential benefits, including its capacity to stimulate creative thinking under specific circumstances. Schott and Fischer (2023) recently highlighted that, contrary to the prevailing negative framing of job boredom in management literature, boredom can serve as a functional emotion that often leads to positive outcomes, such as generating creative ideas. Their systematic review revealed that individuals can cope constructively with boring tasks, enhancing their creativity, innovation, and prosocial behaviors (Mann and Cadman, 2014). This productive coping is more likely when individuals are supported with favorable resources that create “the ‘right’ conditions facilitating the bright sides of boredom” (Schott and Fischer, 2023, p. 10). Such situational and job-related boundary conditions enable employees to harness boredom as a catalyst for innovativeness.

In the present study, we move beyond the consideration of boundary conditions to explore an alternative possibility that job boredom contributes to employee creativity through its resource-related implications across different life domains. The cross-domain perspective emphasizes the fluid transfer of motivation, energy, and resources between various life areas, such as work and leisure (Chen and Fellenz, 2020). From this viewpoint, job boredom might inspire individuals to engage in enriching non-work activities that ultimately enhance their work performance. Self-Determination Theory (SDT) postulates that individuals are inherently motivated to fulfill their needs and desires across domains; thus, when these needs are unmet in one domain, individuals may seek to fulfill them in another (Deci and Ryan, 2000; Ryan and Deci, 2017). For instance, an employee experiencing boredom at work might engage in leisure activities such as goal setting, social interactions, or learning new skills, which can replenish energy and stimulate creative thinking (Lim *et al.*, 2021). These non-work activities are conceptualized as *leisure crafting*, defined as the proactive pursuit of leisure activities aimed at goal achievement, human connection, and personal growth (Petrou and Bakker, 2016).

We further propose that leisure crafting can channel the motivation derived from job boredom into meaningful activities that enhance their capacity for creativity in the workplace (Petrou *et al.*, 2017). According to Conservation of Resources (COR) theory, individuals pursuing leisure crafting acquire and restore resources that can later be used to complete their tasks (Hobfoll, 1989; Hobfoll and Wells, 1998). Leisure crafting enables individuals to gain emotional, cognitive, or social resources, which enhance their ability to solve problems creatively when they return to work. Recent studies underscore the importance of non-work activities as essential recovery tools that improve productivity and creativity (Eddy *et al.*, 2022; Sonnentag, 2018). These activities help employees replenish their resources and foster innovation in their professional roles. By integrating the cross-domain perspective implied in SDT and COR theory, we propose that job boredom may encourage leisure crafting in the non-work domain, which in turn supplies essential resources needed for creative performance in the work domain (Chae and Choi, 2019).

Finally, we identify *job routinization* as a boundary condition that amplifies the effect of job boredom on leisure crafting and, subsequently, creativity. Previous studies indicate that job routinization enables individuals to complete their tasks using consistent procedures (Bargh

and Barndollar, 1996). This efficiency allows employees to conserve additional cognitive and physical resources, which they can allocate to other activities (Chae and Choi, 2019; Wickens and Hollands, 2000). Consequently, employees experiencing boredom in highly routinized jobs may have more surplus resources at their disposal, making them more likely to engage in leisure crafting compared to those in less routinized roles. In essence, job routinization provides a favorable condition for bored employees to redirect their unused resources into enriching non-work activities, which in turn foster their creativity.

This study makes several important contributions to the literature on job design and innovation management. First, we complement existing single-domain studies, which predominantly emphasize the detrimental effects of job boredom on work attitudes and performance, effectively neglecting its potential benefits. By adopting a cross-domain perspective grounded in SDT (Deci and Ryan, 2000), we theorize how individuals may respond to job boredom by engaging in non-work behavior (i.e. leisure crafting) that subsequently enhances their work performance (i.e. increased creativity). Given the growing risk of reduced autonomy and meaning among white-collar and professional workers (Toscanelli *et al.*, 2022), this study addresses recent calls to understand and support these workers in constructively managing boredom (Abubakar *et al.*, 2022; Schott and Fischer, 2023).

Second, we expand the understanding of leisure crafting by examining its impact on work-related performance. Previous research has largely focused on leisure crafting's contributions within the non-work domain (Lim *et al.*, 2021; Petrou and Bakker, 2016; Tsaour *et al.*, 2021; Xue *et al.*, 2022). We extend this perspective by highlighting its role as a cross-domain mechanism that translates the effects of job boredom into creative contributions at work.

Third, we elaborate on the potentially beneficial cross-domain effects of job boredom by identifying job routinization as a boundary condition based on COR theory. Specifically, we propose that job routinization provides additional resources for employees experiencing boredom, promoting their engagement in proactive non-work behaviors like leisure crafting. This integration of SDT and COR perspectives offers a novel theoretical framework, demonstrating how different job conditions—such as boredom and routinization—interact to influence non-work activities and subsequently circle back to enhance work performance. The proposed research framework is summarized in Figure 1. We empirically validate this framework using a sample of white-collar and professional service workers from diverse industries.

Literature review and hypotheses

In the current study, we integrate SDT and COR theory for our theory development. SDT is one of the dominant frameworks used to understand individuals' motivation and predict their behavior (Ryan and Deci, 2017). A fundamental premise of SDT is the significance of intrinsic motivation as the central motivational factor based on individuals' inherent desire to fulfill their innate psychological needs (i.e. autonomy, competence, and relatedness; Deci and Ryan,

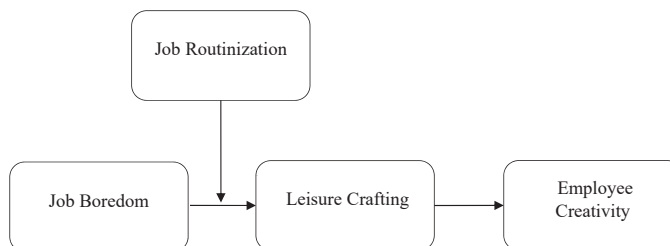


Figure 1. Conceptual framework. Source: Authors' own work

2000). Whether (or not) these needs can be fulfilled mainly relies on the degree to which a person's situated environment supports or thwarts them (Ryan and Deci, 2017). SDT also proposes that instead of being passively impacted by their situated environment, individuals *proactively* fulfill their needs in a cross-domain manner (Ryan and Deci, 2000). In other words, when they cannot fulfill their innate desires in a specific domain (e.g. professional life or workplace), they may strive to do so in another domain (e.g. leisure life or home) (Petrou *et al.*, 2017; Vallerand, 2000).

Although SDT allows us to explain why individuals' intrinsic motivation operates in a cross-domain manner to fulfill their innate desires, it may not clarify why individuals' behavior in one domain fuels their behavior in another domain and when such cross-domain processes can be facilitated. This flow of energy and behavioral transition across different life domains necessitates an additional theoretical perspective. To resolve this conceptual challenge, we draw on COR theory because individuals' mental state and behavior are affected by the resources available to them both within a domain and across domains. At the core of COR theory (Hobfoll, 1989), individuals have a natural tendency to maintain and protect available resources (i.e. resource conservation) and further acquire resources (i.e. resource acquisition). The theory specifies that individuals need to invest resources to protect themselves or recover from resource loss. Those with more resources tend to invest available resources for future resource gain and acquisition of new resources (Hobfoll, 1989).

In light of the above discussion, considering both SDT and COR theory offers a plausible explanation of the cross-domain effect of job boredom. Specifically, this integrative approach accounts for why bored employees may be intrinsically motivated to perform leisure crafting (i.e. SDT), particularly under the condition of job routinization, which enables them to save resources from work (i.e. COR theory). The cross-domain view from SDT and COR theory further explains why the resources acquired through the crafted leisure activities eventually contribute to employee creativity at work that requires considerable resources (Chae and Choi, 2019). Therefore, the current theoretical developments necessitate and also benefit from the use of SDT and COR theory as articulated below.

Advantages and disadvantages of job boredom

The management literature has traditionally regarded job boredom as a detrimental job experience associated with negative employee outcomes, including stress symptoms, absenteeism, turnover intention, counterproductive work behavior, and diminished organizational citizenship behavior (Abubakar *et al.*, 2022; Kim *et al.*, 2021). Unlike this predominantly negative framing of job boredom in the management field (Eid, 2020; Van Hooft and Van Hooft, 2014), psychological studies have highlighted its potential constructive implications, particularly for creativity (Schott and Fischer, 2023). Recent findings indicate that, especially in post-pandemic remote and hybrid work environments, boredom can act as a stimulus for creativity by providing unstructured time for reflection and mental rest (Eddy *et al.*, 2022). This dual perspective underscores the need to explore boredom not merely as a liability but also as a potential resource for fostering creativity and innovation in the workplace.

Although boredom is often perceived as unpleasant and demotivating, it can also serve as a catalyst for creative incubation—a process where individuals unconsciously generate ideas while mentally detached from focused work (Eastwood *et al.*, 2012). Job boredom can facilitate creativity by fostering cognitive states characterized by an unintentional, uncontrolled, and unconstrained flow of information and thoughts (Fischer and Schott, 2021; Mann and Cadman, 2014). This perspective suggests that boredom has the potential to stimulate creative thinking even in routine roles by prompting employees to devise new ways of re-engaging with their tasks. For instance, bored employees may explore alternative approaches or propose process improvements as a means of coping with or escaping boredom. Such actions can inadvertently foster innovation within the organization.

Therefore, job boredom does not necessarily impede performance; rather, it can create conditions conducive to creativity. In a recent review, [Schott and Fischer \(2023\)](#) proposed that the performance implications of job boredom depend on how individuals cope with it, rather than on the mere presence of boredom itself. They argued that constructive coping with boredom is more likely when employees are supported with appropriate resources, such as job-related resources (e.g. feedback, skill discretion, empowerment) and contextual resources (e.g. organizational slack, adhocracy culture). This perspective suggests that managers play a critical role in leveraging job boredom by investing in and providing resources that employees can use to cope constructively and generate novel ideas. Complementing this contingency model that emphasizes the boundary conditions enabling job boredom to have positive outcomes, we aim to advance this research stream by identifying specific intervening mechanisms that explain the connection between job boredom and creativity.

Job boredom and creativity

Employee creativity is a critical performance domain and a vital element of work that enables contemporary organizations to achieve and sustain competitive advantages ([Bruno and Canina, 2022](#); [Lee et al., 2019](#)). Whether job boredom can positively influence creativity remains unclear, as its effects often depend on how individuals respond to the experience of boredom ([Westgate, 2020](#)). Traditionally viewed as a negative workplace experience associated with disengagement and reduced motivation, recent research has started to highlight the potential of boredom to act as a stimulus for creative thinking ([Schubert et al., 2023](#)). For instance, employees engaged in passive and repetitive tasks may allow their minds to wander, engaging in creative daydreaming that subsequently helps them devise innovative solutions ([Baird et al., 2012](#); [Mann and Cadman, 2014](#)). These findings suggest that job boredom has the potential to contribute to workplace creativity, provided certain conditions—such as supervisory support, opportunities for cognitive reflection, or resources to act on creative ideas—are in place to enable employees to channel their boredom productively ([Chae and Choi, 2019](#)).

Nevertheless, given that job boredom is generally a negative work experience, it is not expected to directly enhance employee creativity. Instead, it may hinder creativity unless specific internal mechanisms or facilitative boundary conditions are in place to buffer its negative effects or channel it in a positive direction ([Chae and Choi, 2019](#); [Schott and Fischer \(2023\)](#)). Bored employees often disengage from their tasks due to dissatisfaction with their work ([Eastwood et al., 2012](#); [Kahn, 1990](#)), making them less likely to exert additional voluntary effort to generate novel solutions. Creativity typically emerges when individuals are deeply engaged and motivated to develop novel and useful ideas ([Hackman and Oldham, 1980](#); [Holm-Hadulla and Wendt, 2020](#); [Paulus and Kenworthy, 2021](#)). However, boredom leads employees to perceive their tasks as unchallenging and uninteresting, which can diminish their motivation and result in disengagement ([Reijseger et al., 2013a, b](#)). Furthermore, creativity is often associated with positive emotional states ([Conner and Silvia, 2015](#)), whereas boredom is typically accompanied by unpleasant moods ([Game, 2007](#)). Based on these considerations, we propose the following direct effect hypothesis:

H1. Job boredom is negatively related to creativity.

Positive indirect effect of job boredom on creativity through leisure crafting

Although we expect job boredom to be a negative predictor of creativity in the workplace, we also propose that job boredom may improve employee creativity indirectly through leisure crafting. Despite studies showing negative outcomes of job boredom, such as job dissatisfaction and counterproductive work behaviors ([Eid, 2020](#); [Van Hooff and Van Hooff, 2014](#)), some scholars claimed potential creative benefits of job boredom ([Schott and Fischer, 2023](#)). For example, bored employees may shift their attention from their work to their

inner thoughts (i.e. daydreaming), which is a part of dynamic memory that promotes one's ability to reevaluate extant information (Mann and Cadman, 2014). Similarly, Belton and Priyadharshini (2007) argued that boredom may lead to creativity because of its unfocused, unintentional, and unconscious scanning of the task environment. These theoretical speculations suggest that job boredom can promote creativity by distancing employees from their daily work activities and possibly initiating transitions to other domains of life. To explore these theoretical possibilities, we investigate how bored employees may take advantage of their life outside the work domain to improve their creativity in the workplace.

Bored employees perceive their tasks to be not challenging, stimulating, and entertaining (Csikszentmihalyi, 1975; Van Tilburg and Igou, 2012), so they tend to disengage from their work role (Eastwood *et al.*, 2012; Kahn, 1990). According to SDT, bored employees are prone to move from the work domain to a non-work domain to satisfy their unfulfilled desires or change the situation to a more interesting activity (Azizi *et al.*, 2010). Boredom may originate from a form of variety-seeking drive that motivates individuals to seek challenges or stimulation elsewhere and pursue creative alternatives to counteract boredom (Mikkelsen, 2022). Bored employees may spend their free time or off-work hours on leisure crafting to compensate for their unsatisfied needs at work (Berg *et al.*, 2010).

Empirical studies reveal that bored employees tend to proactively engage in non-work activities and attempt to achieve their personal goals through leisure crafting (Petrou and Bakker, 2016). Specifically, they may connect with friends, attend social events, pursue their personal interests and hobbies, experience new activities, and learn new things (Elpidorou, 2018; Gasper and Middlewood, 2014). Through leisure crafting, individuals shape non-work leisure activities into opportunities where they can develop themselves and fulfill their personal desires (Snir and Harpaz, 2002; Sonnentag and Fritz, 2007). In view of SDT, leisure crafting may offer an alternative venue for need satisfaction for employees who feel bored from their work. We therefore advance the following hypothesis:

H2. Job boredom is positively related to leisure crafting.

We further draw on COR theory and advance that leisure crafting supplies additional resources that can be returned to the work domain. Chen (2020) showed that leisure crafting helps individuals acquire personal resources, such as personal resources (through goal setting), relational resources (through human connections), and intellectual resources (through learning and development). Leisure crafting allows individuals to learn new knowledge and skills (Sonnentag and Fritz, 2007), thereby enabling them to reframe their work tasks and problems using different perspectives (Sorohan, 1993). A fresh perspective gained from leisure activities may contribute to their creativity at work. Leisure crafting also helps individuals improve their interpersonal relationships and broaden their social networks, thus facilitating their acquisition of different points of view they can apply at work to enhance creativity (Perry-Smith and Mannucci, 2017). Goal setting, which is another element of leisure crafting involving the sense of mastery and self-efficacy (Tsaor *et al.*, 2023), may motivate individuals to take challenges at work and stimulate them to think creatively to resolve those challenges (Seelig, 2012). From the cross-domain perspective based on COR theory, extra resources gained from leisure crafting can be used to manage task challenges and engage in creative problem solving, which requires considerable resources (Chae and Choi, 2019).

The literature provides empirical evidence that workplace creativity can be enhanced by non-work-related factors (e.g. Amabile *et al.*, 1996; Madjar *et al.*, 2002). For instance, emotional support or encouragement from significant others in one's private life predicts creativity at work (Madjar, 2008; Madjar *et al.*, 2002). Similarly, non-work-related internet use, such as engaging in social networking services, has been found to foster creativity by providing exposure to diverse viewpoints (Gunawardena, 2015; Hojjati, 2016). These findings highlight that workplace creativity is not solely driven by work-specific factors but can also be influenced by resources and experiences gained outside the work domain.

Accordingly, by encouraging leisure crafting, organizations can leverage employees' personal development outside of work to drive innovative solutions (Spreitzer *et al.*, 2012; Perry-Smith and Mannucci, 2017). When employees engage in non-work activities that support cognitive recovery and learning during their off-hours, they can acquire and replenish emotional, cognitive, and social resources that later enhance their ability to solve problems creatively at work (Zacher *et al.*, 2014). This process is particularly valuable in contexts where job boredom results in cognitive underutilization, as leisure crafting allows employees to redirect their unspent mental energy into innovative thinking when they return to work (Hunter and Csikszentmihalyi, 2003). In summary, when combined with the previously hypothesized relationship between job boredom and leisure crafting, job boredom can indirectly enhance employee creativity by encouraging proactive leisure crafting that facilitates resource acquisition and personal growth.

H3. Job boredom has a positive indirect relationship with creativity through leisure crafting.

Moderating effect of job routinization

We further elaborate on the cross-domain effect of job boredom by focusing on the resource availability from one's job as a potential boundary condition for such processes. To this end, we isolate job routinization as a positive contingency. Job routinization accounts for repetition at work and the resulting automaticity, which is characterized by unintentionality, uncontrollability, lack of awareness, and efficiency (Ohly *et al.*, 2006). This feature requires individuals to follow the same procedure based on well-learned routines from previous experiences to accomplish the task (Bargh and Barndollar, 1996). Moreover, when the behavior to perform a given task is automatically triggered by the task cues, individuals do not need to make decisions concerning what to do, thereby saving their time and cognitive resources (Ohly *et al.*, 2006). Therefore, job routinization may help individuals prevent possible resource loss and even gain additional resources at work by reducing the need to make task-related decisions (Verplanken and Orbell, 2003) and enabling a quick task completion (Wickens and Hollands, 2000). In sum, job routinization diminishes cognitive demands and frees up personal resources of employees (Harju and Hakanen, 2016).

Drawing on COR theory (Hobfoll, 1989), we expect that the positive effect of job boredom on leisure crafting may be strengthened when job routinization is high. Specifically, the standardized, predictable work processes resulting in the automaticity of task behaviors may not only conserve the resources of employees but also help them gain additional resources that have not been used during work (Chae and Choi, 2019). Consistent with this expectation, Ohly *et al.* (2017) revealed that routinized work behaviors actually increase employees' energy level. Likewise, Loukidou *et al.* (2009) claimed that job routinization lets employees avail additional resources to carry out other non-work activities because it allows them to complete their tasks faster with little efforts.

Building on previous findings, we argue that extra or unused resources at work can be deployed in a cross-domain manner to personal domains because individuals tend to mobilize their available resources across their living domains (Clark, 2000). Individuals are strategic in how they use their available resources (Halbesleben *et al.*, 2014). When they have extra resources, they are in a better position to invest these in future resource gain and become motivated to do so through performing leisure crafting (Halbesleben and Wheeler, 2015). As resource allocation theory suggests (Kanfer and Ackerman, 1989), when individuals carry out a task frequently, a substantial amount of their time will be saved, and the extra resources spared will be sufficient to be used for performing other activities (Ohly *et al.*, 2006).

Even for those employees who are bored with their jobs, if they cannot develop automaticity in performing their jobs, then they may be unable to conserve and expand their available resources. In this case, they may just choose to take a rest or sleep after work instead of proactively engaging in leisure crafting, which requires a substantial resource investment. Therefore, we posit that job routinization amplifies the positive effect of job boredom on

leisure crafting because under high (vs. low) job routinization, bored employees may have more resources available at their disposal that they can use in a cross-domain manner.

H4. Job routinization positively moderates the relationship between job boredom and leisure crafting.

We propose a moderated mediation effect by combining the above moderation hypothesis with the hypothesized indirect effect of job boredom on creativity through leisure crafting. Specifically, when individuals perform highly routine tasks and gain additional resources during work, they are more likely to craft their leisure activities after work and thus exhibit creativity when they get back to work. Accordingly, we advance the following first-stage moderated mediation hypothesis:

H5. Job routinization positively moderates the indirect relationship between job boredom and creativity mediated by leisure crafting.

Method

Participants and procedure

To test our hypotheses, we conducted a two-wave survey study using a sample of Taiwanese employees from diverse industries. While the study focused on Taiwanese employees, the inclusion of participants from a wide range of industries and job roles enhances the generalizability of the findings, offering insights that may be applicable to broader populations. Data collection was facilitated in collaboration with a reputable survey company based in Taiwan, which assisted in recruiting participants while ensuring anonymity and confidentiality, in full compliance with legal and ethical guidelines. Employee participation was entirely voluntary, and participants were rewarded with online gift certificates for their time and input.

We collected field data over two time periods, separated by a two-week interval. At Time 1, participants provided information about their job boredom, routinization, and leisure crafting, along with demographic details. At Time 2, participants reported on their creative performance at work. This time-lagged approach helps mitigate concerns about common method bias and enhances the temporal validity of the results (Podsakoff *et al.*, 2003). It also aligns with our research objectives by allowing us to examine how job boredom may influence creative performance over time (Dormann and Griffin, 2015). We adhered to recommendations from existing studies suggesting that short time lags are suitable for investigating the effects of individual attitudes and perceptions on subsequent behaviors (Beck and Shen, 2019; Schulte-Braucks *et al.*, 2019). The two-week gap between surveys was chosen to minimize potential confounding factors that might arise with longer intervals (Berking *et al.*, 2008), ensuring a focused examination of the hypothesized relationships.

The online questionnaire at Time 1 was distributed to an initial sample of 582 employees through the system of the survey company. A total of 497 usable questionnaires were returned, yielding a response rate of 85%. Two weeks after Time 1, we distributed the Time 2 questionnaire to the 497 participants who completed Time 1 questionnaire. A total of 389 usable questionnaires were returned, yielding a response rate of 78%. Females accounted for 51.7% of this final analysis sample, and 37.5%, 39.1%, and 21.3% of them were aged 19–30, 31–40, and 41–50 years, respectively. These employees had tenures of 6 months to 1 year (26.7%), 1–2 years (27%), 2–5 years (27.8%), and more than 5 years (18.5%). Most of them worked in business/service (39.8%), manufacturing/operations (25.4%), engineering/technology (16.2%), or public service/education (11.3%). Detailed information about the participants' demographics is provided in Table 1.

Measures

All survey items were subjected to a rigorous translation and back-translation process from English to Chinese by a professional translation company to ensure their original meanings

Table 1. Respondents' demographic characteristics and frequencies

Category	Items	Frequency	Category	Items	Frequency
Age	18 years old or under	6	Tenure	6 months or less	49
	19–30 years old	146		6 months–1 year	104
	31–40 years old	152		1–2 years	105
	41–50 years old	83		2–5 years	108
	51 years old or above	2		5 years or more	23
Occupation	Agriculture, forestry/Fishing	11	Gender	Male	188
	Manufacturing/Operation	99		Female	201
	Engineering/Technology	63			
	Business/Service	155			
	Medical/Law	11			
	Military/Education	44			
	Others	6			

Note(s): $N = 389$ participants

Source(s): Authors' own work

were preserved (Brislin, 1980). Researchers have raised concerns regarding changes in response formats, such as the number of scale points, which could significantly alter response patterns (Johns, 2005). Consequently, any adjustments to the response format require a compelling methodological justification (Guy and Norvell, 1977). Given that there are no methodological grounds necessitating changes to the response formats of the focal measures, we adhered to the original scales, using either five- or six-point Likert-type formats. This approach maintains consistency with the validated measures and ensures the reliability of the data collected. The full set of measurement items used for each scale is presented in the Appendix for reference.

Job boredom. We measured job boredom by using a 6-item scale ($\alpha = 0.82$) developed by Reijseger et al. (2013a, b). All items were rated based on a 7-point Likert scale (1 = *Never*, 7 = *Very often*). This scale was chosen for its demonstrated validity and reliability in measuring the subjective experience of job boredom, making it well-suited to align with the objectives of the current research.

Leisure crafting. Leisure crafting was assessed using a 9-item scale ($\alpha = 0.94$) developed by Petrou and Bakker (2016). The items were rated on a 5-point Likert scale (1 = *Not at all*, 5 = *Very much*). This scale is particularly relevant to the current focus on cross-domain behavior, as it effectively captures how individuals proactively shape their leisure time to fulfill personal goals. This aligns with our theoretical framework, grounded in SDT and COR theory, by linking leisure crafting to resource acquisition that supports creativity.

Job routinization. We evaluated job routinization using a 12-item scale ($\alpha = 0.85$) developed by Verplanken and Orbell (2003) that is widely used in previous studies (Chae and Choi, 2019; Ohly et al., 2006). The participants rated the items on a 7-point Likert scale (1 = *Not at all*, 7 = *Extremely*). This scale was chosen because it effectively captures the automaticity and habitual nature of task performance, which is crucial for understanding how routine work can free up cognitive resources that facilitate leisure crafting and, subsequently, foster creativity.

Creativity. We measured creativity using an 8-item scale ($\alpha = 0.94$) adapted from George and Zhou (2001). The original scale has 13 items, which are condensed to 8 items in prior studies (Chughtai, 2016; Zampetakis, 2008). The participants reported their own creativity on a 5-point Likert scale (1 = *Strongly disagree*, 5 = *Strongly agree*). We selected this scale for its alignment with the study's focus on creativity as a work-related individual outcome. As one of the most frequently used measures of individual creativity, this scale is particularly suitable for assessing creative behaviors across diverse organizational settings, ensuring relevance and reliability in our research context.

Control variables

Several demographic variables were measured, including age, gender, tenure, and education. [Bernerth and Aguinis \(2016\)](#) recommended that the selection of control variables should be supported by adequate theoretical justifications. Previous studies underpinned by human capital theory and job embeddedness theory claim that the basic employee bio characteristics, such as age, gender, and tenure, can be related to creativity ([Liu et al., 2016](#)). Moreover, by proposing a developmental theory of creativity, [Renzulli \(1992\)](#) claimed the impact of education on creativity. To address these theoretical possibilities and the potential confounding in our analysis, we controlled for these variables in our hypothesis testing. Moreover, following the recommendations of [Bernerth and Aguinis \(2016\)](#), we conducted the same analysis with and without control variables and obtained the results with the same significance patterns.

Results

Measurement model and common method bias

Given that all our measures were self-reported, we conducted a confirmatory factor analysis to validate the current measurement model and found that our hypothesized four-factor model exhibited acceptable fit to the observed data ($\chi^2(df = 248) = 663.29$, $\chi^2/df = 2.68$; CFI = 0.92; NFI = 0.90; SRMR = 0.05). We also tested alternative measurement models, including a three-factor model by collapsing boredom and routinization as a single factor ($\chi^2(df = 250) = 1100.05$, $\chi^2/df = 4.40$; CFI = 0.84; NFI = 0.81; SRMR = 0.09); a two-factor model by collapsing boredom, routinization, and leisure crafting as a single factor ($\chi^2(df = 251) = 1757.33$, $\chi^2/df = 7.00$; CFI = 0.72; NFI = 0.69; SRMR = 0.12); and a single-factor model ($\chi^2(df = 252) = 2076.23$, $\chi^2/df = 8.24$; CFI = 0.66; NFI = 0.63; SRMR = 0.13). All these alternative measurement models produced a worse fit than the hypothesized four-factor structure (all χ^2 difference tests, $p < 0.001$), thus highlighting the empirical distinctiveness of the study variables.

In addition, we applied Harman's single-factor test, following the suggestion of [Podsakoff et al. \(2003\)](#) to check the magnitude of the common method variance underlying the current study variables. The results revealed that the variance among focal variables explained by a single, main factor was only modest (37.36%) being much smaller than the cutoff point of 50%. We also checked the VIF of all predictor variables. The VIF values were all less than 1.2, which is much smaller than the typical cutoff point of 5. These patterns indicated that the threat of a common method variance was not serious in the current data. The means, standard deviations, and correlations between study variables are presented in [Table 2](#).

Testing the main and indirect effects

To test the proposed hypotheses, we used SPSS Process Macro (Model 7) that allowed us to evaluate the significance of the main, moderating, indirect, and conditional indirect effects among variables. [Table 3](#) summarizes the results for the main and moderating effects estimated using 5,000 bootstrapped samples.

In [Hypothesis 1](#), we proposed that job boredom is a direct, negative predictor of creativity. In line with this expectation, job boredom showed a negative main effect on employee creativity ($b = -0.04$, $p < 0.05$), thereby confirming [Hypothesis 1](#). Job boredom serves as a significant negative predictor of creativity, although its effect size is relatively small. While boredom can diminish motivation and engagement at work, it does not strongly suppress employees' creative potential, as demonstrated in the findings outlined below.

In [Hypotheses 2 and 3](#), we posited that job boredom may have a positive indirect effect on creativity owing to its positive relationship with leisure crafting. Our analysis confirmed that job boredom was positively related to leisure crafting ($b = 0.36$, $p < 0.001$), hence supporting [Hypothesis 2](#) (see [Table 3](#)). In addition, the indirect relationship between job boredom and

Table 2. Descriptive statistics and correlations among study variables

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Age	2.82	0.80	–												
2. Gender	1.48	0.50	0.05	–											
3. Tenure	3.88	1.13	0.00	0.09	–										
4. Education	4.00	0.89	0.07	–0.06	–0.08	–									
5. Occupation 1	0.03	0.17	–0.06	–0.07	0.02	0.00	–								
6. Occupation 2	0.25	0.44	–0.01	0.04	0.08	–0.06	–0.10*	–							
7. Occupation 3	0.16	0.37	–0.01	0.01	–0.04	0.03	–0.08	–0.26***	–						
8. Occupation 4	0.40	0.49	0.01	0.01	–0.02	0.05	–0.14**	–0.48***	–0.36***	–					
9. Occupation 5	0.03	0.17	–0.02	–0.07	–0.04	0.00	–0.03	–0.10*	–0.08	–0.14**	–				
10 Occupation 6	0.11	0.32	0.04	–0.01	0.02	–0.01	–0.06	–0.21	–0.16**	–0.29***	–0.06	–			
11. Job boredom	3.33	0.93	–0.14**	–0.05	7.01	–0.03	0.01	0.01	–0.06	0.04	–0.06	0.02	–		
12. Job routinization	5.11	1.31	0.04	–0.08	0.04	–0.05	0.03	0.08	–0.06	–0.01	–0.03	0.02	–0.20***	–	
13. Leisure crafting	3.58	1.00	–0.05	–0.03	–0.04	0.04	0.02	0.03	–0.05	–0.01	–0.02	0.03	0.29***	0.11*	–
14. Creativity	3.83	0.64	0.02	0.01	–0.03	–0.02	0.01	–0.05	–0.01	0.02	–0.07	0.07	–0.05*	0.20***	0.28***

Note(s): * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ ($N = 389$ participants)

Gender: 1 = Male, 2 = Female; Age: 1 = 18 years old or under, 2 = 19–30 years old, 3 = 31–40 years old, 4 = 41–50 years old, 5 = 51 years old or older; Tenure: 1 = Less than 1 month, 2 = 1–6 months, 3 = 6 months–1 year, 4 = 1–2 years, 5 = 2–5 years, 6 = More than 5 years; Education: 1 = Elementary/Primary school or under, 2 = Junior high school, 3 = Senior high/vocational school, 4 = Bachelor's degree, 5 = Master's degree, 6 = Doctoral degree; Occupation: 1 = Agriculture, forestry/fishing, 2 = Manufacturing/operation, 3 = Engineering/technology, 4 = Business/service, 5 = Medical/Law, 6 = Military/Education, 7 = Others

Source(s): Authors' own work

Table 3. Results for the moderated mediation model: main and moderating effects

Predictors	Outcome: creativity at work	Outcome: leisure crafting	Outcome: creativity at work
Constant	4.09 (0.37)***	3.44 (0.51)***	3.26 (0.35)***
Age	0.01 (0.04)	−0.01 (0.06)	0.01 (0.04)
Gender	0.01 (0.07)	0.03 (0.10)	0.01 (0.06)
Tenure	−0.02 (0.03)	−0.04 (0.04)	−0.01 (0.03)
Education	−0.02 (0.04)	0.06 (0.05)	−0.03 (0.04)
Occupation 1	0.04 (0.33)	0.10 (0.49)	−0.02 (0.31)
Occupation 2	−0.05 (0.27)	0.08 (0.40)	−0.10 (0.26)
Occupation 3	−0.02 (0.28)	0.02 (0.41)	−0.04 (0.26)
Occupation 4	0.02 (0.27)	0.04 (0.40)	−0.01 (0.26)
Occupation 5	−0.26 (0.33)	0.07 (0.48)	−0.29 (0.31)
Occupation 6	0.13 (0.28)	0.11 (0.42)	0.08 (0.27)
Job boredom	−0.04 (0.04)	0.36 (0.05)***	−0.10 (0.04)***
Job routinization		0.14 (0.04)***	
Leisure crafting			0.21 (0.03)***
Job boredom*Job routinization		0.10 (0.04)**	
R ²	0.07	0.14	0.11

Note(s): $N = 389$ participants. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Occupations: 1 = Agriculture and Forestry/fishery and animal husbandry, 2 = Manufacturing/operation, 3 = Engineering/technology, 4 = Business/service, 5 = Medical law/Professional, 6 = Military/Education, 7 = Others

Values in parentheses are standard errors

Source(s): Authors' own work

creativity mediated by leisure crafting was positive and significant (indirect effect = 0.07, 95% confidence interval (CI) = [0.04, 0.12], see Table 4), hence supporting Hypothesis 3. The indirect effect reveals that job boredom can positively predict creativity through leisure crafting. When employees experience boredom, they often seek stimulating activities outside of work, allowing them to restore cognitive resources and enhance creative performance upon returning to their tasks. This finding demonstrates the dual nature of boredom: although it may reduce workplace motivation, it can also foster creativity by promoting constructive non-work-related activities.

Testing moderation and moderated mediation

In Hypotheses 4 and 5, we claimed that job routinization positively moderates the relationship between job boredom and leisure crafting and the indirect effect of job boredom on creativity. We tested these moderation and moderated mediation hypotheses. As reported in Table 3, the

Table 4. Analysis results of indirect and conditional indirect effects

Indirect effect	Effect	Boot SE	Boot LLCI	Boot ULCI
−1 SD	0.05	0.02	0.01	0.10
<i>M</i>	0.07	0.02	0.04	0.12
+1 SD	0.10	0.03	0.06	0.16
Index of moderated mediation	0.02	0.01	0.003	0.05

Note(s): Bootstrap sample size = 5,000. LL: lower limit; UL: upper limit; CI: confidence interval

Source(s): Authors' own work

interaction between job boredom and job routinization was a significant predictor of leisure crafting ($b = 0.10, p < 0.01$). We also performed a simple slope analysis to probe the form of this significant interaction. Specifically, we estimated the slope between job boredom and leisure crafting at high (1 SD above the mean) and low (1 SD below the mean) levels of job routinization. [Figure 2](#) presents the simple slopes. The results showed that the relationship between job boredom and leisure crafting was stronger among participants with high job routinization ($b = 0.46, p < 0.001$) than among those with low job routinization ($b = 0.36, p < 0.001$), thereby supporting [Hypothesis 4](#).

We then tested job routinization as a first-stage moderator of the indirect effect of job boredom on creativity via leisure crafting. The results of the bootstrapping analysis confirmed the moderated mediation hypothesis, which posits that the indirect effects of job boredom on creativity through leisure crafting significantly varied across different levels of job routinization. The test of the conditional indirect effects is reported in [Table 4](#). Specifically, job boredom exerted a greater indirect effect when job routinization was high or 1 SD above the mean (indirect effect = 0.10, 95% CI = [0.06, 0.16]) than when job routinization was low or 1 SD below the mean (indirect effect = 0.05, 95% CI = [0.01, 0.10]). The difference was statistically significant (index of moderated mediation = 0.02, CI = [0.003, 0.05]), hence empirically supporting [Hypothesis 5](#).

The results of the moderating effects of job routinization indicate that the relationship between job boredom and leisure crafting is stronger for employees in highly routinized roles. Such jobs allow employees to conserve cognitive resources, enabling them to enrich leisure activities that enhance creativity at work. This finding suggests that, while routine jobs may appear restrictive, they can drive employees to seek fulfillment of their personal needs through non-work activities, ultimately leading to improved creative output in the workplace.

Discussion

This study delves into the potentially ambivalent implications of job boredom in the workplace. Our conceptual and empirical analyses confirm the negative direct effect of job boredom on employee creativity, consistent with existing literature highlighting boredom's detrimental impact on engagement and innovative thinking ([Eastwood et al., 2012](#)). However, to provide a more nuanced understanding, we adopt the cross-domain perspective of human motivation from SDT and COR theory. Through this lens, we demonstrate that job boredom

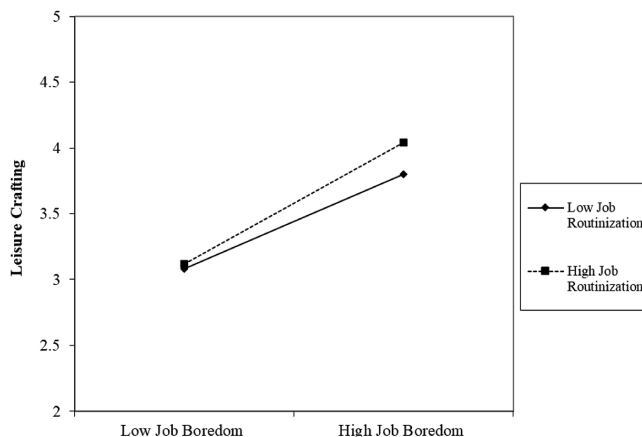


Figure 2. Moderating effect of job routinization on the relationship between job boredom and leisure crafting. Source: Authors' own work

can indirectly enhance employee creativity by motivating individuals to engage in leisure crafting. Our findings consolidate existing knowledge regarding the immediate negative effects of job boredom while also revealing its potential to contribute positively to organizational outcomes through non-work activities. We also find that for those facing high job routinization, job boredom has a highly positive effect on their leisure crafting and creativity, hence highlighting the cross-domain transfer of personal resources as suggested by COR theory. In the sections below, we outline the implications and contributions of this study, discuss its limitations, and propose directions for future research.

Theoretical implications

This study offers several theoretical contributions. First, it advances the literature on job design and creativity by empirically demonstrating the dual effects of job boredom on employee creativity. While job boredom directly hinders creativity by reducing motivation and engagement, it can simultaneously enhance creativity indirectly by motivating employees to craft their leisure activities. Previous studies have suggested that job boredom may contribute to creativity through uncontrolled cognitive processes such as mind wandering and daydreaming that occur when individuals are bored (Eastwood *et al.*, 2012; Gasper and Middlewood, 2014; Van Tilburg and Igou, 2012). However, our findings reveal an alternative mechanism. Instead of being uncontrolled or purposeless during work, bored employees may channel their energy into the non-work domain, engaging in proactive and meaningful behaviors through leisure crafting. These purposeful activities allow individuals to acquire and replenish resources, which they later use to enhance their creative performance at work. By uncovering this alternative route, our analysis expands the understanding of how job boredom can benefit creativity.

Second, our findings offer novel insights into the job design literature. Contemporary studies on job design emphasize the importance of enriching work conditions to enhance employee motivation and performance (e.g. Yoo *et al.*, 2019). However, implementing job enrichment strategies may not always be feasible for certain roles or work environments. Drawing inspiration from the cross-domain perspectives of SDT and COR theory, we take a step further by highlighting the importance of encouraging employees' proactive behaviors during their leisure time as a complementary approach to coping with unfavorable job properties. This perspective broadens both the theoretical and practical scope of job design. Instead of focusing exclusively on modifying job characteristics, organizations can adopt a more holistic approach that recognizes the interplay between work and non-work domains. Supporting employees in actively initiating meaningful leisure activities after work provides an additional pathway for enhancing well-being and creativity, even in contexts where traditional job enrichment is not viable. This approach not only redefines how organizations view job design but also introduces new approaches to addressing the challenges posed by monotonous or unengaging work environments.

Third, guided by SDT (Ryan and Deci, 2017), we identify leisure crafting as a mediator in the relationship between job boredom and creativity. This cross-domain perspective extends previous research on job boredom, which predominantly adopts a within-domain approach (Fischer and Schott, 2021; Park *et al.*, 2019). Specifically, we argue that individuals experiencing boredom at work may shift their focus from work to another domain, such as personal leisure, where they engage in activities that help them acquire additional emotional, cognitive, and social resources. These resources can subsequently enable them to be more creative when they return to their work tasks. This cross-domain perspective provides novel insights into how individuals navigate and span multiple life domains to transform job boredom into constructive work behaviors (Epetimehin, 2011). This approach enriches the understanding of how work and non-work domains interact to shape employee innovativeness.

Fourth, this study extends the emerging literature on leisure crafting by illustrating how it can be shaped by negative work experiences and, in turn, predict work outcomes. Drawing on

SDT (Ryan and Deci, 2000), we demonstrate that negative work experiences, such as job boredom, can drive individuals to shift their focus from the work domain to the non-work domain to fulfill unmet needs. Our findings further contribute to the leisure crafting literature by revealing its constructive impact on work outcomes. While much of the existing evidence highlights the benefits of leisure crafting for enhancing personal well-being in the non-work domain (Lim *et al.*, 2021; Tsaur *et al.*, 2021; Xue *et al.*, 2022), our study establishes its connection to workplace creativity. This relationship supports the idea of cross-domain resource transfer, providing novel insights into how employees can leverage resources acquired through leisure crafting to enhance their creativity at work.

Fifth, drawing on COR theory, we demonstrate that job routinization can enable individuals to conserve unused resources from work, which can then be invested in after-work activities in a cross-domain manner. Job routinization generates a resource surplus by reducing the cognitive and physical demands from work, thereby amplifying the positive effect of job boredom on leisure crafting. Our findings confirm the cross-domain applicability of COR theory by illustrating the flow of resources from the work domain (job boredom and routinization) to the personal domain (leisure crafting) and then back to the work domain (employee creativity). Furthermore, by incorporating job routinization into our framework, we also contribute to the development of SDT, which has often overlooked the role of external work conditions (Oudeyer and Kaplan, 2008). By integrating insights from SDT and COR theory, we highlight how employees span multiple living domains—such as work, family, school, and personal or community activities—to optimize their resource use and overall effectiveness.

Practical implications

The current findings have significant implications for innovation management, illustrating how organizations can leverage the cognitive-resource implications of boredom to stimulate employee innovativeness. By recognizing the cognitive slack associated with job boredom, and encouraging leisure crafting, organizations can provide employees with the mental resources necessary for creative thinking—a core element of innovation. By proactively managing boredom and creating opportunities for employees to channel their resources into productive activities, managers can cultivate a more innovative and dynamic workforce. Several practical implications from the current analysis can be considered.

First, given that job boredom directly hinders creativity, managers should actively address the levels of job boredom experienced by employees. As widely recommended in the job design literature (Hackman and Oldham, 1980; Ji *et al.*, 2021), organizations can redesign boring jobs to make them more challenging and meaningful, thereby fulfilling employees' basic psychological needs. However, existing job design studies have largely concentrated on structural job enrichment strategies, such as task variety, autonomy, and skill utilization (Oldham and Hackman, 2010). Our findings extend this research by highlighting that employees can mitigate boredom not only through job design but also by proactively engaging in activities beyond their formal work responsibilities. Specifically, we show that employees can incorporate playfulness into their work through leisure crafting, a mechanism that has been largely overlooked in conventional job enrichment literature (Petrou and Bakker, 2016).

For example, introducing gamification or playful work design can transform dull tasks into engaging activities that stimulate motivation and creativity (Bakker *et al.*, 2020; Kalinauskas, 2014). Playful work design refers to employees' proactive efforts to incorporate play into their work activities to enhance intrinsic motivation and engagement (Bakker *et al.*, 2020). It consists of two key dimensions: designing fun, where employees introduce playful elements such as humor to make tasks more enjoyable, and designing competition, where individuals create self-imposed performance challenges or set personal goals (Bakker *et al.*, 2020). By doing so, playful work design helps reduce boredom, increase resilience in repetitive jobs, and promote cognitive flexibility. By promoting sustained engagement, this approach allows

employees to remain motivated and innovative even in routine or monotonous work environments (Scharp *et al.*, 2022).

Second, when a particular job cannot be redesigned to avoid boredom, or when certain employees are predisposed to experience boredom even in enriched roles, managers can encourage employees to proactively craft their leisure activities outside of work. Rather than directly intervening in employees' personal or social lives, organizations can introduce structured initiatives that facilitate leisure crafting. Research suggests that company-sponsored well-being programs, gym memberships, and various workshops enhance employees' psychological resources, ultimately benefiting their performance at work (Spreitzer *et al.*, 2012; Sonnentag and Fritz, 2015). For instance, organizations can collaborate with fitness centers or creative learning platforms to offer employees discounted access to recreational activities such as yoga, painting, or music lessons. In addition, corporate-sponsored networking events or team-building retreats that incorporate leisure activities can encourage employees to expand their social connections and engage in personally meaningful pursuits. By implementing these structured yet flexible initiatives, organizations can offer employees opportunities to engage in leisure crafting, allowing them to return to work with replenished cognitive and emotional resources that enhance innovation and creativity (Hunter and Csikszentmihalyi, 2003; Perry-Smith and Mannucci, 2017).

Third, while job routinization can amplify the positive effects of job boredom on leisure crafting and creativity, the goal is not to encourage managers to deliberately promote job routinization or job boredom. Instead, organizations that inevitably deal with bored employees working under the condition of high automation, routinization, and/or the application of AI-based algorithmic controls can proactively create opportunities for employees to engage in leisure crafting. For example, programs like community engagement projects, creative workshops, or informal networking events can further enable employees to acquire new resources that enhance their ability to innovate. By investing in such proactive strategies, organizations can transform the constraints of highly routinized roles into opportunities for fostering personal growth and innovation.

Fourth, while high levels of creativity may not typically be expected in operational and administrative roles, encouraging employee engagement through initiatives like leisure crafting can provide substantial long-term benefits, such as increased job satisfaction and morale and reduced turnover. When employees feel supported in managing boredom, they are more likely to return to work with renewed cognitive resources, leading to improved efficiency and a greater potential for innovation. By fostering engagement and motivation even in routine tasks, organizations can create a workplace culture that supports continuous improvement and innovation across all levels.

Finally, our research demonstrates that while job boredom directly hinders creativity, it can also indirectly enhance it through leisure crafting, particularly in highly routine roles. Unlike previous studies that suggest boredom fosters creativity through spontaneous cognitive processes such as daydreaming (Baird *et al.*, 2012; Mann and Cadman, 2014), our findings highlight a proactive behavioral response following boredom. Specifically, employees redirect their available cognitive resources into structured leisure activities, which in turn contribute to workplace creativity. Importantly, we identified job routinization as a key boundary condition that strengthens this effect. Employees in highly routine roles tend to have more cognitive resources available to invest in creative leisure activities, making them more likely to benefit from this process. Rather than simply alleviating boredom, organizations can strategically manage it by providing access to structured non-work activities such as professional development programs, creative workshops, or flexible work arrangements that allow employees to develop new skills. By bolstering this proactive response to boredom, organizations can cultivate a more innovative workforce, even in roles traditionally viewed as monotonous or constrained by standard operating procedures.

Study limitations

Several limitations of this study should be noted. First, the two-wave data separated by two weeks can be a shortcoming that prevents strong conclusions from the current analysis. The ideal research design for testing the current conceptual model involves three-wave data that separates independent, mediating, and dependent variables in the model to clarify the causal directions among them. Given these design considerations, the current theoretical propositions can be further replicated and expanded with empirical efforts with studies adopting alternative design features, such as various, perhaps longer, time lags, three-wave data, and/or day-level data using experience sampling method.

Second, common method bias can be a concern in this study (Podsakoff *et al.*, 2003). This methodological concern can be attenuated through our use of a multi-wave design and the superior model fit of our hypothesized measurement model over alternative models. Furthermore, our results related to the interaction effect may not be particularly affected by common method bias because correlated errors cannot produce a spurious interaction but only reduce true interactions (Du *et al.*, 2018; Schmitt, 1994). Although manager-rated creativity has been recommended (George and Zhou, 2001), researchers have also supported the use of self-reported creativity measures in that creativity is an internal process and thereby should be evaluated by the respondents themselves (Shalley *et al.*, 2009; Zhang and Bartol, 2010). Considering the pros and cons associated with self-versus other-rated creativity, future research should validate the current model using manager-rated creativity or other objective measures.

Third, one of the main limitations of this study lies in the composition of the sample, with over 60% of participants working in business/service or manufacturing/operations roles. While the current analysis provides valuable insights, the findings may not be fully generalizable to the broader workforce. The experience of job boredom and its relationship with creativity may differ for knowledge workers engaged in creative tasks, such as those in design or software development (Davenport, 2005). Employee tenure may also influence how job boredom and engagement manifest. While this study did not find a significant relationship between tenure and job boredom, the limited range of tenure within the sample may have attenuated its potential effect. To gain a more comprehensive understanding of how job boredom, leisure crafting, and creativity interact across a range of occupations and experience levels, future research should aim to include a more diverse sample that captures various job roles and tenure levels.

Fourth, the cultural and economic context of Taiwan may limit the generalizability of the current findings to other regions or countries. Taiwan's economy, characterized by its high level of industrialization driven by manufacturing and technology sectors, could influence how job boredom is experienced and addressed within Taiwanese organizations compared to those in other economic contexts. In addition, Taiwan's emphasis on cultural values such as harmony, collectivism, and hierarchical work structures may shape how employees approach leisure crafting and perceive creativity in the workplace (Hofstede, 1980; Farh *et al.*, 2007). Expanding the sample to include industries and regions with different cultural norms and economic structures will provide a more comprehensive understanding of the broader applicability of the current results.

Conclusions

On the basis of cross-domain perspective inspired by SDT and COR theory, we reveal that job boredom contributes to the creativity of employees by motivating them to craft leisure activities. We also show that job routinization serves as a facilitating boundary condition in the relationship between job boredom and leisure crafting. Future research may refer to and extend our research framework to advance a nuanced understanding of the role of job boredom by exploring its effects on non-work leisure activities and the cross-domain flow of resources to ultimately benefit employee performance such as creative idea generation. Organizations and

practicing managers may develop alternative managerial interventions for employees with negative work experiences for whom job redesign and enrichment cannot be implemented. Further research efforts may extend our theoretical application of SDT and COR theory to specify the cross-domain processes for transforming employees' job boredom into desirable job resources through crafting in the non-work domain, ultimately enhancing employee creative performance and organizational innovation.

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Job boredom scale

- (1) I feel bored at my job.
- (2) During work time I daydream.
- (3) I tend to do other things during my work.
- (4) It seems as if my working day never ends.
- (5) I spend my time on tasks that do not hold my interest.
- (6) At work, I feel time goes by very slowly.

Leisure crafting scale

- (1) I try to build relationships through leisure activities.
- (2) Through my leisure activities, I try to obtain novel experiences.
- (3) I organize my leisure time in such a way that it gives me new experiences.
- (4) I try to learn new things during my leisure time.
- (5) I try to develop new interests during my leisure time.
- (6) I seek challenges during my leisure activities.
- (7) I actively look for personal growth through leisure activities.
- (8) I try to meet new people during my leisure activities.
- (9) I try to connect with others during my leisure time.

Job routinization scale

- (1) I do my main tasks without consciously remembering the method.
- (2) I do my main tasks without thinking.
- (3) I carry out my tasks automatically.
- (4) I perform my main tasks without thinking about it.
- (5) I do my main tasks as a matter of routine.
- (6) I complete my main tasks in a habitual manner.
- (7) I do my main tasks automatically, without having to think about them.
- (8) I perform my main tasks as a matter of habit.
- (9) When I work, my actions come naturally without me having to think.
- (10) I do my main tasks without paying attention to the specific steps.
- (11) I complete my main tasks in the same manner every time.
- (12) I carry out my tasks with little conscious thought.

Creativity scale

- (1) I suggest new ways of performing work tasks.
- (2) I come up with creative solutions to problems.
- (3) I often have new and innovative ideas.

- (4) I come up with new ways to improve the quality of my work.
- (5) I suggest ideas for new projects or improvements.
- (6) I experiment with new ways of doing things at work.
- (7) I find new uses for existing methods or materials.
- (8) I come up with original solutions to work-related problems.

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