



The good and bad of receiving help: The effects of receiving dependent and autonomous help on subsequent creativity

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ARTICLE INFO

Keywords:

Creativity

Dependent help

Autonomous help

Intrinsic motivation

ABSTRACT

Much research has examined the role of help in creativity, highlighting the benefits of receiving help, often under the assumption that helping behavior is intended to benefit recipients. We apply the autonomous–dependent distinction, which describes how help is delivered—either autonomously or in a controlling manner—and examine their differing effects on recipients' creativity in subsequent tasks through intrinsic motivation. Across two field studies and one experiment, we consistently find that receiving dependent help from coworkers hinders creativity in subsequent tasks, whereas receiving autonomous help enhances it. These effects are mediated by recipients' intrinsic motivation. Our findings reveal a detrimental consequence of receiving dependent help: it can impose motivational costs that ultimately stifle creativity in subsequent tasks in the same domain. We conclude that the manner in which help is delivered is crucial, extending beyond its contents, sources, and technical adequacy.

1. Introduction

The role of receiving help in creativity has received much attention (Amabile et al., 2014; Fisher et al., 2018; Grodal et al., 2015; Harrison et al., 2022). Research has focused primarily on its positive effect on creativity (Amabile et al., 1996; Hargadon and Bechky, 2006; Li and Liu, 2019; Madjar et al., 2002; Zhou and George, 2001), driven by the “fundamental assumption” (Lee et al., 2023) that helping is intended to benefit others (Grant and Patil, 2012; Mossholder et al., 2011; Organ, 1988). For instance, research reveals that helping benefits recipient creativity because it fosters learning (Han et al., 2022) or a positive mood (Madjar et al., 2002). However, a few studies point to the potential downside or limitation of help for creativity. For example, Mueller and Kamdar (2011) identified the relational cost of help seeking (i.e., it engenders the obligation to reciprocate, which in turn harms creativity because it takes time away from creative tasks). Fisher et al.'s qualitative research (2018) noted the limitations of receiving one-time help in completing creative projects and proposed that receiving deep help might also be counterproductive in some circumstances, pointing to the potential downsides of receiving help.

Despite these valuable insights, our understanding of the types of help that may have less beneficial or even harmful consequences remains limited. Indeed, Fisher et al. (2025) noted that the phenomenon of “unhelpful help” has received scant attention, even though their qualitative findings reveal its prevalence in organizations. The current state is problematic because related theory and research on help in creativity (e.g., Hargadon and Bechky, 2006; Madjar et al., 2002; Zhou and George, 2001) would be inaccurate and even misleading if receiving a certain type of help could indeed adversely influence creativity in a subsequent task. Without this insight, organizations may inadvertently encourage forms of help that are instrumentally useful in some respects but undermine later creativity. Against this backdrop, we investigate how receiving certain types of help may undermine subsequent creativity and why.

Receiving help involves tension between meeting recipients' instrumental needs and preserving their independence (Nadler, 1997; 2015). Receiving help can provide resources (e.g., solutions) that address instrumental needs for problem solving in current tasks. However, it may also jeopardize independence (Jones et al., 2020), encroaching on self-determination (Deelstra et al., 2003) and fostering

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dependency on others in future problem solving (Nadler, 2015). This tension is relevant to creativity, as feelings of competence and autonomy—and, consequently, active engagement—are essential (Gong et al., 2009; Tierney and Farmer, 2002; Zhang and Bartol, 2010). When receiving help fosters dependency, it dampens recipients' motivation to take initiative, explore novel ideas, and persist in creative endeavors. Therefore, the nature of the received help—namely, whether it nurtures autonomy or cultivates dependency—is pivotal. Previous studies, such as Madjar et al. (2002), which distinguished between work and nonwork sources of help, and Madjar (2008), which differentiated between emotional and informational help, touched on the enabling aspects of help (e.g., offering information and encouragement to recipients). However, the types of help that threaten one's sense of independence and competence and their negative impact on creativity have rarely been considered (Fisher et al., 2025).

To address this omission, we apply Nadler's (1997, 1998) help typology to the creativity literature. This typology distinguishes between dependent help, in which recipients receive ready-made solutions (i.e., the helper resolves the problem directly), and autonomous help, in which recipients receive tools and hints to solve the problem independently. This typology captures how help is delivered, thus differing from prior lenses such as sources (e.g., work vs. nonwork in Madjar et al., 2002) or contents (informational vs. emotional support in Madjar, 2008). While both dependent and autonomous help have instrumental value for the immediate task, receiving dependent help can be harmful because of its potential psychological costs. Receiving dependent help can erode recipients' confidence in their own capabilities (Nadler, 2015; van Leeuwen and Täuber, 2010) and diminish their perceived agency (Hammond and Overall, 2015; Zhu et al., 2021), fostering reliance on external input and ultimately inhibiting recipients' deep engagement and exploration of novel ideas in subsequent tasks. Receiving autonomous help, on the other hand, can increase recipients' confidence (Lee et al., 2023), foster continuous learning (Geller and Bamberger, 2012), and encourage their engagement and exploration in later tasks.

Furthermore, we propose intrinsic motivation, which refers to engaging in task activities out of interest in and enjoyment of the task itself (Amabile, 1997; Shin and Zhou, 2003), as a mechanism linking receiving dependent help and recipients' subsequent creativity. Autonomous help and dependent help differ fundamentally in terms of the needs they fulfill and hence their motivational consequences. Receiving dependent help provides immediate relief but fosters recipients' sense of dependency on helpers or others for problem solving (Chernyak-Hai et al., 2024). Receiving autonomous help, in contrast, requires recipients' deeper involvement and greater effort and fosters a sense of autonomy and competency (Nadler, 2015, 2020). According to self-determination theory (Deci and Ryan, 1985, 2000), receiving help, by shaping recipients' perception of basic psychological needs (i.e., autonomy and competence), will impact their intrinsic motivation. This impact, in turn, will lead to enhanced creativity in subsequent tasks in the same domain. Specifically, receiving higher levels of dependent help decreases recipients' creativity in subsequent tasks because it reduces intrinsic motivation by fostering feelings of incompetence (Nadler, 2015) and constraining feelings of autonomy. Receiving higher levels of autonomous help leads to higher creativity in recipients' subsequent tasks because it increases intrinsic motivation by fostering a sense of competence and autonomy.

We advance research on the role of help in creativity in two significant ways. First, by exploring various typologies of help, such as sources or contents (Madjar et al., 2002; Madjar, 2008), the extant research has demonstrated helpful types of help. Applying the autonomous–dependent help typology, we move away from the assumption that help is beneficial for creativity and reveal that receiving certain forms of help (i.e., dependent help) can dampen recipients' subsequent creativity. This insight underscores that the way help is delivered (i.e., in an autonomous or controlling way) plays a crucial role beyond the content (e.g., informational vs. emotional), source (e.g., work vs.

nonwork), and technical adequacy (i.e., quality) that have been highlighted in prior research. Second, we offer a motivational explanation of the harmful effects of dependent help, which goes beyond the mood, learning, and interpersonal reciprocity mechanisms identified in existing research on the role of help in creativity. Our work highlights the importance of motivational quality by demonstrating that receiving dependent help can diminish intrinsic motivation, thereby hindering creativity in subsequent tasks.

2. Theory and hypotheses

2.1. Theoretical background: dependent and autonomous help

While receiving help can alleviate difficulties, it may also threaten an individual's need for independence (Nadler, 2015), making it a “mixed blessing” for the recipient (Nadler, 2020). Nadler (1997, 1998) distinguished between dependent help and autonomous help, offering a promising typology for understanding how different types of help can address recipients' instrumental needs while shaping their subsequent sense of independence. Receiving dependent help involves getting direct solutions to a problem, like being told what to do or having someone else resolve it on one's behalf (Koopmann, 2016; Nadler, 1997, 1998). For instance, an employee responsible for developing a tagline may receive a ready-made slogan from a colleague—a form of dependent help that resolves the immediate task with minimal effort. However, this type of help fosters reliance on the helper's expertise, positioning the recipient in a dependent role (van Leeuwen and Täuber, 2010) and potentially undermining their capabilities to tackle the challenge independently.

Receiving autonomous help involves obtaining the skills or tools needed to solve a problem independently (Nadler, 2020). In the same tagline example, the employee receives guidance on the general principles of effective slogan writing, such as how to create emotional resonance. This form of help typically involves the recipient being provided with underlying logic and knowledge, fresh viewpoints, or relevant personal experiences (Koopmann, 2016; Lee et al., 2024). By receiving autonomous help, recipients achieve independence by building knowledge, practicing skills, and overcoming challenges by themselves (Lee et al., 2023; Nadler, 1998). Thus, while both types of help address instrumental needs, autonomous help cultivates a foundation for independence, whereas dependent help fosters reliance on external assistance.

2.2. Effects of receiving dependent and autonomous help on creativity

Previous research has considered the empowering features of help, emphasizing its role in providing knowledge, perspectives, and encouragement to recipients engaging in creative work. For example, Madjar et al. (2002) discovered that support from both work and nonwork sources facilitates creativity. Their measure of support includes items reflecting both informational elements (e.g., useful feedback) and emotional support (e.g., readiness to listen). Expanding on this work, Madjar (2008) delved into informational and emotional support from various sources (i.e., primary work unit, other work-related individuals, and nonwork-related individuals) and reported that these different types of support have varying positive effects. However, types of help that could jeopardize recipients' independence have been largely overlooked.

According to Fisher et al. (2018), help that involves intense intervention or fosters dependency can disrupt recipients' creative process. This insight is critical because creativity arises not only from instrumental assistance but also from recipients' active engagement (Zhang and Bartol, 2010) and sustained creative effort (Lucas and Nordgren, 2015). As such, it is possible that receiving a certain type of help may hinder recipients' engagement in subsequent challenges in the same domain. By introducing the autonomous–dependent distinction, we directly examine the beneficial and harmful consequences of receiving

coworker help on subsequent creativity, with a focus on which type of help may have adverse effects and why.

Receiving dependent help from coworkers resolves immediate difficulties, but it undermines creativity beyond the focal episode by fostering a passive and dependent behavioral tendency. Receiving such help typically involves the provision of ready-made, actionable solutions, which simplifies the problem-solving process and relieves recipients of the need for persistent and effortful engagement—an essential component of creativity (Amabile, 1983; Nijstad et al., 2010). Since cognitive effort comes at an internal cost (Marois and Ivanoff, 2005), individuals often conserve their cognitive resources (Kool et al., 2010). As a result, receiving dependent help promotes reliance on external input rather than actively tackling subsequent challenges, leading to decreased creativity in subsequent tasks. Creative solutions often emerge from active and persistent engagement with challenges (Binnewies et al., 2007; Lucas and Nordgren, 2015), and receiving dependent help shifts recipients' role in the creative process to that of a passive executor of externally defined solutions (Nadler, 2015, 2020). This shift not only reduces autonomous idea generation but also bypasses the crucial acquisition of knowledge and problem-solving skills. Consequently, recipients miss out on developing the competencies and self-directed mental representations necessary for generating novel ideas. When faced with future challenges in the same domain, they may therefore struggle to initiate novel ideas. Thus, we hypothesize:

Hypothesis 1. Receiving dependent help from coworkers harms recipients' subsequent creativity.

When receiving autonomous help from coworkers, recipients gain transferable knowledge, fundamental principles, and problem-solving tools instead of merely task-specific solutions (Chernyak-Hai et al., 2024; Lee et al., 2024). These resources support active engagement in subsequent creative tasks, such as searching for and integrating multiple sources of information, developing various alternatives, and iteratively evaluating and refining ideas. Because autonomous help provides necessary resources without taking over the problem (Nadler and Chernyak-Hai, 2014), recipients retain the "action choice" over how to apply the input and which paths to pursue. As a result, they actively engage with the problem, integrating the guidance they receive rather than passively accepting it (Alvarez et al., 2018). By taking the lead in early helping experiences, recipients develop transferable problem-solving knowledge and skills, thereby enhancing their sense of agency when facing subsequent challenges. This empowerment enables them to approach problems with initiative and a willingness to explore. Such active involvement fosters a deeper understanding of the challenges and increases the likelihood of arriving at solutions that are both novel and useful (Carmeli and Schaubroeck, 2007). Thus, we hypothesize:

Hypothesis 2. Receiving autonomous help from coworkers enhances recipients' subsequent creativity.

2.3. The mediating role of intrinsic motivation

We propose that the divergent effects of receiving dependent and autonomous help from coworkers on subsequent creativity are fundamentally rooted in the motivational quality of receiving help, particularly intrinsic motivation. Meta-analytic evidence has revealed that intrinsic motivation serves as a key precursor to creativity (Liu et al., 2016). Intrinsically motivated individuals are more inclined to explore a wide variety of information, consider diverse solutions, take risks, and engage persistently in the creative process (Gong et al., 2017; Shalley et al., 2004). While previous research has focused on the cognitive, affective, and social mechanisms related to the role of help in creativity (Han et al., 2022; Madjar et al., 2002; Mueller and Kamdar, 2011), we argue that intrinsic motivation is crucial for understanding the motivational costs associated with receiving dependent help. Receiving such help can undermine an individual's core needs for autonomy and competence and, hence, intrinsic motivation (Ryan and Deci, 2017).

Receiving high levels of dependent help can undermine recipients'

sense of competence through ready-made solutions with minimal explanation or guidance (Asser, 1978; Geller and Bamberger, 2012). The direct provision of solutions implicitly conveys a message of inadequacy, highlighting a competence gap between the helper and the recipient. It suggests that the recipient is incapable of resolving the problem independently (Nadler, 2015; van Leeuwen and Täuber, 2010), which can weaken their belief in their own capabilities. Moreover, the absence of guidance limits opportunities for learning and skill development, which are essential for fostering a sense of competence (Nadler, 2020). Additionally, receiving high levels of dependent help can erode recipients' sense of autonomy by encroaching on their personal input (Nadler, 1998). When helpers take control of the situation (Fisher et al., 2018), recipients feel the imposition of helpers' ideas on them (Nadler, 1997). This relegation to a passive role can lead recipients to internalize a diminished sense of agency, thus fostering reliance on external solutions (Nadler et al., 2003; Nadler, 2015). Together, the devaluation of competence and the restriction of autonomy create significant motivational costs, depleting the intrinsic drive to initiate and persist in creative exploration in subsequent tasks.

When receiving high levels of autonomous help, recipients are supported in ways that foster both competence and autonomy. Autonomous help typically includes knowledge components, such as tools and basic principles for analyzing problems (Bamberger, 2009; Nadler, 1997). Instead of supplying a readymade solution, this support encourages recipients to apply the guidance themselves. This process allows them to learn through trial and error, leading to successful problem-solving that stems from their own efforts. Such experiences bolster their sense of competence in tackling similar challenges in the future. Moreover, receiving autonomous help allows recipients to decide how and when to utilize support (Alvarez et al., 2018). This autonomy preserves their volitional engagement (Hammond and Overall, 2015) and reinforces their sense of self-determination. As a result, recipients are more inclined to take initiative and remain self-directed in facing subsequent challenges. Thus, while receiving dependent help may undermine recipients' intrinsic motivation, receiving autonomous help can reinforce it beyond the initial helping episode. Thus, we hypothesize²:

Hypothesis 3. Receiving dependent help from coworkers harms recipients' subsequent creativity through intrinsic motivation.

Hypothesis 4. Receiving autonomous help from coworkers enhances recipients' subsequent creativity through intrinsic motivation.

3. Overview of studies

We conducted three studies. In Study 1, we tested our hypotheses using a multiwave, multisource field study. Study 2 replicated Study 1 with another multiwave, multisource field study while controlling for alternative mediators to better establish the distinct mediating role of intrinsic motivation. In Study 3, we manipulated the type of help received to test our hypotheses and ensure internal validity.

3.1. Research transparency statement

Studies 1 and 2 were not preregistered. Study 3 was preregistered at AsPredicted (<https://aspredicted.org/6xp5qp.pdf>) prior to data collection. The preregistration included formal hypotheses, manipulations of the independent variables, measures for the dependent variables, desired sample size, exclusion criteria, and a detailed plan for how the data would be analyzed.

All the study materials, including measures, anonymized data, and analysis codes/syntax for all the studies can be accessed at our OSF

² We originally included learning and performance-prove goal orientations as moderators. To maintain focus on the core theoretical contribution, we moved the development of the moderation hypotheses and the corresponding empirical results to online Supplemental Material A.

repository (https://osf.io/dms4u/?view_only=e31e8e4792ff4ffba484048f70e34344). We adhered to the APA Style Journal Article Reporting Standards for quantitative studies (<https://apastyle.apa.org/jars>). To analyze the data in Study 1, we used Mplus 7.4 for the path analysis and performed Monte Carlo simulations in R (Selig and Preacher, 2008) to calculate the mediation effects. To analyze the data in Study 2, we used Mplus 7.4 for the path analysis and the bias-corrected bootstrap to calculate the mediation effects. We used SPSS 24 and Mplus 7.4 to analyze the data for Study 3.

4. Study 1: methods

4.1. Sample and procedures

We conducted a two-wave, multisource survey. The participants were from 67 units in 15 companies in China. The companies operated in different industries (e.g., information technology, energy, manufacturing, chemical, construction, and banking). We invited all employees from 67 units to participate ($N = 371$) and distributed the surveys onsite or online to accommodate their preferences and convenience. In the first survey (Time 1), the participants responded to questions about receiving autonomous help and dependent help from coworkers, perceived creativity expectations, job complexity, and demographics. We obtained usable responses from 341 employees. One month later (Time 2), the same 341 employees who completed the first survey and their direct supervisors responded to the second survey. Specifically, the employees rated their intrinsic motivation, and their direct supervisors rated their creativity. We obtained valid responses from 293 employees and 62 supervisors.³ After matching employees with direct supervisors, we obtained a final valid sample of 237 employees from 62 units, yielding a response rate of 63.88% at the individual employee level and 92.54% at the supervisor (unit) level. Each supervisor rated an average of 3.82 employees (range: 1 to 9).

Among the 237 employees, 33.33% were female, and 72.15% had a bachelor's degree or higher. Their average age was 29.79 years (range: 21 to 50 years), and their average organizational tenure was 3.59 years (range: 1 month to 20.50 years). Among the 62 supervisors, 20.97% were female, 82.26% had a college degree or higher, the average age was 34.16 years (range: 26 to 58 years), and the average organizational tenure was 6.82 years (range: 3 months to 18.33 years). There were no differences between participants who dropped out after T1 ($N = 48$) and those who participated at both times ($N = 293$) in terms of sex ($\chi^2 = 0.84$, $p = 0.36$), educational level ($\chi^2 = 3.37$, $p = 0.50$), age ($t = 0.03$, $p = 0.97$), or organizational tenure ($t = 0.87$, $p = 0.39$).

4.2. Measures

Unless stated otherwise, all the measures were rated on a 6-point Likert scale (1 = "strongly disagree" to 6 = "strongly agree"). All the measures were originally developed in English and translated into Chinese following Brislin's (1986) back-translation procedure.

Receiving autonomous help and dependent help from coworkers (Time 1). We adapted Koopmann's (2016) ten-item scale of leader autonomous and dependent help to measure receiving autonomous and dependent help from coworkers. We modified the original items by changing "team members" and "our supervisor" to "I" and "my coworkers", respectively. The scale includes two five-item subscales. A sample item for receiving autonomous help is "When I encounter work task-related difficulties, my coworkers help explain the substance of the

issue so that I can solve the problem on my own in the future" (Cronbach's $\alpha = 0.93$). A sample item for receiving dependent help is "When I encounter work task-related difficulties, my coworkers help me by handing me the solution" (Cronbach's $\alpha = 0.72$).⁴

Intrinsic motivation (Time 2). We used Shin and Zhou's (2003) 5-item intrinsic motivation scale. The employees rated the extent to which they agreed that the items currently described them. A sample item is "I am currently engaged in my task because I enjoy finding solutions to complex problems" (Cronbach's $\alpha = 0.93$).

Recipient creativity (Time 2). We measured recipient creativity using Zhou and George's (2001) 13-item scale. The direct supervisors rated the items for "X" (a focal employee's name was provided). A sample item is "Suggests new ways to achieve goals or objectives" (Cronbach's $\alpha = 0.95$).

Control variables. We controlled for variables that may influence creativity. We controlled for employee age, education level (1 = "below high school, 2 = "high school"; 3 = "college"; 4 = "university"; 5 = "postgraduate"), and organizational tenure (years) because these factors may affect knowledge, skills, and experience, which are crucial to creativity (Gong et al., 2009, 2013; Hirst et al., 2009; Madjar et al., 2002; Tierney and Farmer, 2002). We also controlled for employee sex (0 = "female", 1 = "male"), which has been shown to potentially bias others' ratings of employee creativity (Proudfoot et al., 2015). Furthermore, research suggests that perceived creativity expectations, a motivational predictor, may influence employee creativity (Farmer et al., 2003; Tierney and Farmer, 2004). We controlled for perceived creativity expectations using Farmer et al.'s (2003) six-item scale. A sample item is "Many other unit employees expect me to be creative" (Cronbach's $\alpha = 0.78$). Finally, job complexity may influence an individual's need for different types of help (Liu et al., 2022), hence affecting the effectiveness of receiving help. It also increases intrinsic motivation and, hence, creativity according to the job characteristics model (Oldham and Cummings, 1996). We therefore controlled for job complexity⁵ using Shaw and Gupta's (2004) 3-item job complexity scale. A sample item is "My job requires a lot of skills" (Cronbach's $\alpha = 0.76$).

4.3. Analytical strategy

We used Mplus 7.4 to test our hypotheses. As the employees were nested within their direct supervisors (units), which in turn were nested within companies, we first calculated the intraclass correlation coefficients (ICC1) for recipient intrinsic motivation and creativity with a three-level null model. The results revealed no significant between-company variance in recipient intrinsic motivation ($\sigma^2 = 0.04$, $p = 0.31$, ICC1 = 0.06) or creativity ($\sigma^2 = 0.01$, $p = 0.26$, ICC1 = 0.03). We then constructed a two-level null model. The results revealed significant between-unit variance in recipient intrinsic motivation ($\sigma^2 = 0.12$, $p = 0.01$, ICC1 = 0.19) and creativity ($\sigma^2 = 0.19$, $p = 0.001$, ICC1 = 0.37). Thus, we used a sandwich estimator (TYPE = COMPLEX, ESTIMATOR = MLR in Mplus) to address the nonindependence of the data associated with multiple cluster sampling and to correct for potential estimation bias. This approach is commonly used to analyze single-level models (i.e., the employee level in this study) with nonindependent data structures (Wu et al., 2016). We conducted a series of path analyses at the

³ Following the guidelines from Meade and Craig (2012), we excluded participants who responded in a monotonous pattern, such as "3, 3, 3...", or a repeating pattern, such as "1, 2, 3, 1, 2, 3...". For data collected online, we followed the guidelines from Aguinis et al. (2021) and excluded participants who finished the survey in less than two seconds per item.

⁴ We validated the adapted scales through three samples: sample 1 for exploratory factor analysis (EFA), sample 2 for confirmatory factor analysis (CFA), and sample 3 for checking convergent and discriminant validity with other constructs (i.e., coworker support, coworker developmental feedback, and team autonomy support) from the creativity literature. Details are available from online Supplemental Material B.

⁵ We also tested the moderating role of job complexity. The results showed that job complexity did not significantly moderate the relationship between receiving help and intrinsic motivation. Details are available in online Supplemental Material C.

individual level. We group-mean-centered all predictors to partial out potential confounding effects of between-unit variance and minimize potential multicollinearity problems. To test the indirect effects hypotheses, we followed [Selig and Preacher's \(2008\)](#) procedure to calculate the confidence intervals (CIs) for the indirect effects using a Monte Carlo simulation with 10,000 replications.

5. Study 1: results

[Table 1](#) reports the descriptive statistics. To check the distinctiveness of our focal variables (i.e., receiving autonomous help, receiving dependent help, intrinsic motivation, and recipient creativity), we performed a series of confirmatory factor analyses (CFAs). The hypothesized four-factor model fit the data well: $\chi^2_{(344)} = 679.93$, $p < 0.001$, CFI = 0.93, TLI = 0.92, RMSEA = 0.06, SRMR = 0.05. All the items loaded significantly on their corresponding factors. This model also fit the data better than all the alternative models, including models combining two help types, combining intrinsic motivation with either help type or with creativity, combining employee-rated variables (i.e., two help types and intrinsic motivation), and a single-factor model. The full results of these model comparisons are available in online Supplemental Material D. These results support the discriminant validity of our key variables.

5.1. Tests of main and mediation effects

As shown in the total effect model ([Table 2](#)), receiving autonomous help from coworkers was positively related to recipient creativity ($B = 0.10$, $SE = 0.04$, $p = 0.02$), and receiving dependent help from coworkers was negatively related to recipient creativity ($B = -0.14$, $SE = 0.06$, $p = 0.02$). Thus, Hypotheses 1 and 2 were supported.

As shown in the mediation effect model ([Table 2](#)), receiving autonomous help from coworkers was positively related to intrinsic motivation ($B = 0.18$, $SE = 0.04$, $p < 0.001$), and receiving dependent help from coworkers was negatively related to intrinsic motivation ($B = -0.17$, $SE = 0.08$, $p = 0.03$). When intrinsic motivation was included, receiving autonomous help and dependent help was no longer significant for recipient creativity, whereas intrinsic motivation was significant ($B = 0.17$, $SE = 0.06$, $p = 0.007$), thus supporting the mediating role of intrinsic motivation. Notably, adding intrinsic motivation to the model increased the explained variance in creativity from $R^2 = 0.06$ to $R^2 = 0.09$ ($\Delta R^2 = 0.03$), yielding a Cohen's f^2 of 0.03, which represents a relatively small effect size ([Cohen, 1988](#)). We further conducted a Monte Carlo simulation with 10,000 replications to test the indirect effects directly. The indirect relationship between receiving autonomous help and creativity via intrinsic motivation was 0.03 (95% CI = [0.007, 0.059]), and the indirect relationship between receiving dependent help and creativity via intrinsic motivation was -0.028 (95% CI = [-0.062 , -0.002]). Taken together, these results support Hypotheses 3 and 4.

Table 1
Means, Standard Deviations, and Correlations among Variables—Study 1.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Age	29.79	6.10	—									
2 Sex	0.67	0.47	−0.06	—								
3 Educational level	3.77	0.73	−0.23**	0.03	—							
4 Organizational tenure	3.59	3.18	0.63**	−0.10	−0.29**	—						
5 PCE	3.79	0.63	0.01	0.13*	0.07	−0.01	(0.78)					
6 Job complexity	4.13	0.87	0.07	0.13	0.07	0.11	0.18**	(0.76)				
7 Receiving AH	3.39	1.03	−0.14*	0.00	−0.03	−0.10	0.14*	0.13*	(0.93)			
8 Receiving DH	2.42	0.61	−0.05	0.09	0.08	−0.03	−0.16*	−0.13*	−0.02	(0.72)		
9 Intrinsic motivation	4.13	0.81	0.06	0.17*	−0.07	−0.02	0.47**	0.18*	0.25**	−0.23**	(0.93)	
10 Recipient creativity	4.18	0.71	0.00	0.12	0.12	0.04	0.20**	0.22**	0.13*	−0.16*	0.24**	(0.95)

Notes. $N = 237$. Abbreviations: PCE = perceived creativity expectations; Receiving AH = receiving autonomous help from coworkers; Receiving DH = receiving dependent help from coworkers. Reliabilities are along the diagonal in parentheses.

* $p < 0.05$.

** $p < 0.01$ (two-tailed).

Table 2
Hypothesis Testing Results—Study 1.

Variable	Total effect Recipient creativity	Mediation effect Intrinsic motivation	Recipient creativity
Age	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Sex	0.07 (0.14)	0.20 (0.14)	0.04 (0.14)
Educational level	0.19* (0.08)	−0.09 (0.08)	0.20* (0.08)
Organizational tenure	0.02 (0.02)	−0.01 (0.02)	0.02 (0.02)
Perceived creativity expectations	0.18* (0.09)	0.50** (0.12)	0.10 (0.08)
Job complexity	0.03 (0.05)	0.03 (0.07)	0.03 (0.06)
Receiving AH	0.10* (0.04)	0.18** (0.04)	0.07 (0.04)
Receiving DH	−0.14* (0.06)	−0.17* (0.08)	−0.11 (0.06)
Intrinsic motivation			0.17** (0.06)
R^2	0.06	0.18	0.09
ΔR^2			0.03

Notes. $N = 237$. Unstandardized coefficients are presented. Standard errors are shown in parentheses. Abbreviations: Receiving AH = receiving autonomous help from coworkers; Receiving DH = receiving dependent help from coworkers.

* $p < 0.05$.

** $p < 0.01$ (two-tailed).

Our hypotheses remain supported without control variables. We report the results without control variables in online Supplemental Material D.

5.2. Discussion

Study 1 revealed that receiving dependent help from coworkers was negatively related to recipient creativity, whereas receiving autonomous help from coworkers was positively related to recipient creativity. Furthermore, intrinsic motivation mediated these relationships. However, we did not rule out alternative mechanisms in Study 1, and both intrinsic motivation and recipient creativity were measured at Time 2. In Study 2, we replicated Study 1's findings by controlling for alternative mechanisms and using a three-wave time-lagged design.

6. Study 2: methods

6.1. Sample and procedures

We surveyed employees and their direct supervisors at a branch of a technology company in southwestern China. All the participants held positions in research and development. To encourage participation, we offered 50 yuan (approximately 7 USD) for the completion of each wave of the survey. At Time 1, we invited 251 employees to report on receiving autonomous help and dependent help from coworkers, perceived creativity expectations, competence needs, autonomy needs, and demographics, and obtained usable responses from 246 employees.

At Time 2, one month after Time 1, we invited these 246 employees to report on intrinsic motivation, creative self-efficacy, help-giving, individual learning, and positive and negative affect. We obtained usable responses from 245 employees because one employee was transferred to a branch in a different city. At Time 3, one month after the Time 2 survey, we invited 28 direct supervisors of these 245 employees to rate each subordinate's creativity. We obtained matched responses from 244 employees and 28 direct supervisors because one employee had resigned from the company. This resulted in a final response rate of 97.21% for employees and 100% for supervisors. Among the 244 employees, 25.00% were female, 52.05% had a bachelor's degree or higher, the average age was 28.62 years (range: 22 to 52 years), and the mean organizational tenure was 4.18 years (range: 6 months to 13 years). Among the 28 supervisors, 25.00% were female, all had a bachelor's degree or higher, the average age was 40.18 years (range: 33 to 56 years), and the average organizational tenure was 12.29 years (range: 5 to 19 years).

6.2. Measures

All the measures were originally developed in English and translated into Chinese following Brislin's (1986) back-translation procedure. All the items were rated on a 5-point Likert scale (1 = "strongly disagree" to 5 = "strongly agree").

Receiving autonomous and dependent help from coworkers (Time 1). We used the same measures from Study 1. The Cronbach's α values for receiving autonomous and dependent help from coworkers were 0.89 and 0.82, respectively.

Intrinsic motivation (Time 2). We used the Study 1 measure (Cronbach's $\alpha = 0.78$).

Recipient creativity (Time 3). We used the Study 1 measure (Cronbach's $\alpha = 0.94$).

Control variables. As in Study 1, we controlled for employee age, sex (0 = "female", 1 = "male"), education level (1 = "below high school", 2 = "high school"; 3 = "college"; 4 = "university"; 5 = "postgraduate"), organizational tenure (in years), and perceived creativity expectations. The Cronbach's α for perceived creativity expectations was 0.85. We also controlled for competence and autonomy needs because employees with such needs may seek out experiences and tasks that satisfy these needs and therefore experience greater intrinsic motivation (Sheldon and Gunz, 2009). We measured competence needs using 6 items adapted from Hackman and Oldham's (1975) Growth Need Strength scale. A sample item is "I would like to have opportunities for personal growth and development" (Cronbach's $\alpha = 0.87$). We measured autonomy needs using Steers and Braunstein's (1976) 5-item scale. A sample item is "In my work assignments, I try to be my own boss" (Cronbach's $\alpha = 0.84$).

To demonstrate the distinct explanatory power of intrinsic motivation and rule out alternative explanations that might account for the relationship between receiving help and creativity, we controlled for four mechanisms that have been examined in prior research on help and creativity: help-giving (Mueller and Kamdar, 2011), individual learning (Han et al., 2022), and positive and negative affect (Madjar et al., 2002). We measured employee help-giving using Settoon and Mossholder's (2002) 8-item scale. A sample item is "Goes out of the way to help coworkers with work-related problems" (Cronbach's $\alpha = 0.91$). We measured individual learning using 6 items adapted from Lankau and Scandura's (2002) scale. A sample item is "I have gained new skills in the workplace" (Cronbach's $\alpha = 0.91$). We used Mackinnon et al.'s (1999) 10-item scale to measure positive and negative affect, with five items for each (1 = "not at all" to 5 = "extremely"). The positive affect items include "enthusiastic," "determined," "excited," "inspired," and "alert" (Cronbach's $\alpha = 0.91$), whereas the negative affect items include "scared," "afraid," "upset," "distressed," and "nervous" (Cronbach's $\alpha = 0.76$). We also controlled for creative self-efficacy, a major predictor of creativity (Zhou et al., 2022), to rule out the possibility that our

observed effects on creativity are explained by a recipient's creative confidence. We measured creative self-efficacy using Tierney and Farmer's (2002) 3-item scale. A sample item is "I have confidence in my ability to solve problems creatively" (Cronbach's $\alpha = 0.89$).

6.3. Analytical strategy

We first examined whether there were supervisor-level nesting effects of our mediator and dependent variable. We calculated the ICC1 for recipient intrinsic motivation and creativity with a two-level null model. The results revealed no significant supervisor-level variance in recipient intrinsic motivation ($\sigma^2 = 0.002$, $p = 0.87$, ICC1 = 0.01) or in creativity ($\sigma^2 = 0.01$, $p = 0.34$, ICC1 = 0.04). Consistent with prior research (de Vries et al., 2014), we tested the hypotheses at the individual level. As in Study 1, we estimated a series of path models using Mplus 7.4 to test our hypotheses. We followed Edwards and Lambert's (2007) recommendations to conduct bootstrapping procedures with 10,000 replications to test the mediating effects.

7. Study 2: results

Table 3 shows the descriptive statistics. To check the distinctiveness of our focal variables, we tested the hypothesized four-factor model (i.e., receiving autonomous help, receiving dependent help, intrinsic motivation, and recipient creativity) and compared it against alternative models. The CFA results indicated that the four-factor model fit the data well: $\chi^2_{(344)} = 573.09$, $p < 0.001$, CFI = 0.93, TLI = 0.93, RMSEA = 0.05, SRMR = 0.05. All the items loaded significantly on their corresponding factors. This model also fit better than all the alternative models, including models combining two types of help, combining intrinsic motivation with either type of help or with creativity, combining employee-rated variables (i.e., two help types and intrinsic motivation), and a single-factor model. Full model-comparison results are available in online Supplemental Material E. Overall, these results support the discriminant validity of our key variables.

We also conducted separate CFAs to check whether intrinsic motivation was distinct from the controls. The results showed that the six-factor model (i.e., intrinsic motivation, creative self-efficacy, individual learning, positive affect, negative affect, and help-giving) demonstrated a better fit with the data ($\chi^2_{(449)} = 788.11$, $p < 0.001$, CFI = 0.92, TLI = 0.91, RMSEA = 0.06, SRMR = 0.05) than any alternative model where intrinsic motivation was separately combined with each of the other variables, thereby supporting the discriminant validity of these variables. The full results of these model comparisons are available in online Supplemental Material E.

7.1. Tests of main and mediation effects

As shown in the total effect model (Table 4), receiving autonomous help from coworkers was positively related to recipient creativity ($B = 0.12$, $SE = 0.04$, $p = 0.009$), and receiving dependent help from coworkers was negatively related to recipient creativity ($B = -0.12$, $SE = 0.05$, $p = 0.01$), supporting Hypotheses 1 and 2.

As shown in the mediation effect model (Table 4), receiving autonomous help from coworkers was positively related to intrinsic motivation ($B = 0.18$, $SE = 0.06$, $p = 0.003$), and receiving dependent help from coworkers was negatively related to intrinsic motivation ($B = -0.11$, $SE = 0.05$, $p = 0.048$). When intrinsic motivation was included in the equation, receiving autonomous help from coworkers was no longer significant for creativity, and the effect of receiving dependent help from coworkers was reduced. Moreover, intrinsic motivation was significant for recipient creativity ($B = 0.17$, $SE = 0.07$, $p = 0.01$), thus supporting the mediating role of intrinsic motivation. Notably, adding intrinsic motivation to the model increased the explained variance in creativity from $R^2 = 0.08$ to $R^2 = 0.17$ ($\Delta R^2 = 0.09$), yielding a Cohen's f^2 of 0.11, which represents a small-to-medium effect size (Cohen, 1988). The

Table 3
Means, Standard Deviations, and Correlations among the Variables—Study 2.

Variable	Mean	SD	1	2	3	4	5	6	7	8
1 Age	28.62	4.26	—							
2 Sex	0.75	0.43	−0.14*	—						
3 Educational level	2.53	0.52	0.28**	0.01	—					
4 Organizational tenure	4.18	3.19	0.78**	−0.19**	0.03	—				
5 PCE	2.96	0.85	−0.01	−0.01	−0.13*	0.08	(0.85)	—		
6 Competence needs	3.72	0.63	0.09	−0.01	0.06	0.05	0.05	(0.87)	—	
7 Autonomy needs	3.48	0.89	−0.04	−0.02	0.11	−0.04	0.02	0.00	(0.84)	—
8 Receiving AH	3.45	0.85	0.16*	−0.02	0.01	0.14*	0.12	0.21**	0.03	(0.89)
9 Receiving DH	2.08	0.77	0.01	0.11	−0.12	0.06	0.05	−0.20**	−0.08	−0.12
10 Intrinsic motivation	3.40	0.67	0.06	0.13*	0.02	−0.01	−0.06	0.13*	0.01	0.25**
11 Creative self-efficacy	3.29	0.72	−0.00	0.06	0.07	−0.09	0.05	0.14*	0.07	0.22**
12 Help-giving	3.55	0.62	0.04	0.01	0.00	−0.01	−0.02	0.31**	0.11	0.13*
13 Individual learning	3.23	0.77	0.01	0.01	0.10	0.00	0.03	−0.01	0.09	0.22**
14 Positive affect	3.35	0.96	0.01	−0.02	0.08	−0.04	−0.03	0.01	0.06	0.07
15 Negative affect	2.74	0.82	0.01	−0.11	0.08	0.02	0.07	0.05	0.00	−0.08
16 Recipient creativity	3.33	0.61	0.06	0.05	0.08	0.04	0.09	0.10	0.10	0.20**
Variable	Mean	SD	9	10	11	12	13	14	15	16
9 Receiving DH	2.08	0.77	(0.82)							
10 Intrinsic motivation	3.40	0.67	−0.15*	(0.78)						
11 Creative self-efficacy	3.29	0.72	−0.13*	0.24**	(0.89)					
12 Help-giving	3.55	0.62	−0.07	0.10	0.28**	(0.91)				
13 Individual learning	3.23	0.77	0.09	0.07	0.20**	0.10	(0.91)			
14 Positive affect	3.35	0.96	−0.09	0.08	0.11	−0.01	−0.03	(0.91)		
15 Negative affect	2.74	0.82	0.00	−0.11	0.01	0.04	0.02	−0.16*	(0.76)	
16 Recipient creativity	3.33	0.61	−0.17**	0.27**	0.23**	0.15*	0.17**	0.13*	−0.07	(0.94)

Notes. $N = 244$. Abbreviations: PCE = perceived creativity expectations; Receiving AH = receiving autonomous help from coworkers; Receiving DH = receiving dependent help from coworkers. Reliabilities are along the diagonal in parentheses.

* $p < 0.05$.
** $p < 0.01$ (two-tailed).

Table 4
Hypothesis Testing Results—Study 2.

Variable	Total effect Recipient creativity	Mediation effect Intrinsic motivation	Recipient creativity
Age	−0.00 (0.02)	0.02 (0.02)	−0.01 (0.02)
Sex	0.11 (0.09)	0.21* (0.10)	0.06 (0.08)
Educational level	0.09 (0.08)	−0.06 (0.09)	0.07 (0.08)
Organizational tenure	0.01 (0.02)	−0.02 (0.02)	0.02 (0.02)
Perceived creativity expectations	0.06 (0.05)	−0.06 (0.05)	0.07 (0.05)
Competence needs		0.05 (0.08)	
Autonomy needs		−0.00 (0.04)	
Receiving AH	0.12** (0.05)	0.18** (0.06)	0.04 (0.05)
Receiving DH	−0.12* (0.05)	−0.11* (0.05)	−0.10* (0.05)
Help-giving			0.08 (0.07)
Individual learning			0.10 (0.06)
Positive affect			0.05 (0.04)
Negative affect			−0.03 (0.05)
Creative self-efficacy			0.08 (0.06)
Intrinsic motivation			0.17* (0.07)
R^2	0.08	0.11	0.17
ΔR^2			0.09

Notes. $N = 244$. Unstandardized coefficients are presented. Standard errors are shown in parentheses. Abbreviations: Receiving AH = receiving autonomous help from coworkers; Receiving DH = receiving dependent help from coworkers.

* $p < 0.05$.
** $p < 0.01$ (two-tailed).

bootstrapping results revealed that the indirect relationship between receiving autonomous help from coworkers and recipient creativity via intrinsic motivation was 0.03 (95% CI = [0.006, 0.075]), and the indirect relationship between receiving dependent help from coworkers and recipient creativity via intrinsic motivation was −0.02 (95% CI = [−0.059, −0.001]). Taken together, these results support Hypotheses 3 and 4.

We obtained the same pattern of results without the control variables. Details of these additional analyses and results are available in

online Supplemental Material E.

7.2. Discussion

Study 2 replicated Study 1's results, thereby supporting the robustness of our findings. Receiving autonomous help from coworkers was positively related to recipients' creativity, whereas receiving dependent help from coworkers was negatively related to it. Intrinsic motivation mediated these relationships, and it remained a significant mediator when help-giving, individual learning, creative self-efficacy, positive affect, and negative affect were controlled. We then conducted Study 3, a preregistered experiment, to enhance the internal validity of our findings.

8. Study 3: methods

8.1. Participants

We recruited Chinese working adults with advertising design experience through Credamo (<https://www.credamo.com>) and compensated them with 20 CNY (2.83 USD) for their participation. A priori analysis using G* Power version 3.1.9.7 indicated that we needed at least 528 (176 per condition) participants to detect a small-to-medium effect size (Cohen's $d = 0.30$) with $\alpha = 0.05$ and power = 0.80. To ensure sufficient valid responses, we oversampled to 600 participants. Before analysis, we excluded 32 participants who either failed the attention check ($N = 7$) or recalled events unrelated to our manipulations ($N = 25$) (Chernyak-Hai et al., 2024; Lee et al., 2019). For example, a response such as "Addressing a problem in engineering mechanics" was irrelevant to the question "Please reflect on your own past advertising design work... What specific problems did you encounter in comparable scenarios?" In the final sample of 568 participants, 53.70% were female, 89.61% had a bachelor's degree or higher, the average age was 30.68 years (range: 18 to 60 years), and the average advertising design experience was 3.91 years (range: 0.20 to 29 years). Sensitivity power analysis confirmed

that our final sample size was adequate to detect a minimum effect size of Cohen’s $d = 0.29$ in the planned pairwise comparisons, with $\alpha = 0.05$ and power = 0.80.

8.2. Design and procedure

We utilized a between-subjects design with three conditions: receiving autonomous help, receiving dependent help, and receiving no help (see online Supplemental Material F for the manipulation materials). Participants were randomly assigned to one of the three conditions and read a scenario in which an employee named “L” faced a challenging advertisement design problem and received autonomous, dependent, or no help from a coworker. The participants were then asked to recall a comparable experience in which they had received similar help from a coworker. Previous studies have successfully used this recall method (Harari et al., 2022; Lee et al., 2019). We asked the participants to elaborate on their experience by answering questions such as “What is your coworker’s name or nickname?”, “What specific problem did you encounter in a comparable scenario?”, and “How did your coworker address it?” Focusing on specific details aids recall (Robinson and Clore, 2001). Participants then completed assessments of received help as part of the manipulation check.

Next, the participants engaged in a creativity task to design advertisement slogans for sports sunglasses. After reading the task instructions and before writing down their designs, the participants completed a measure of intrinsic motivation. Our procedure was informed by van Dijke et al. (2019), who examined the impact of nostalgia on intrinsic motivation. In their study, nostalgia was induced through an event reflection task, followed by the assessment of intrinsic motivation during an anagram task. Similarly, we measured intrinsic motivation for the creativity task to test whether our manipulation of the type of help received influenced participants’ subsequent creativity in designing advertisement slogans via intrinsic motivation.⁶ Afterward, participants brainstormed and listed their ideas before selecting one for their final slogan design.

8.3. Measures

Manipulation checks. We measured receiving autonomous help and dependent help using two items for each type, adapted from Chernyak-Hai et al. (2024), with specific reference to “my coworker”. The participants indicated their level of agreement with the items (1 = “strongly disagree” to 7 = “strongly agree”). A sample item for receiving autonomous help is “My coworker provided tools for dealing with the problem myself” (Spearman-Brown = 0.74). A sample item for receiving dependent help is “My coworker provided an immediate solution to my problem” (Spearman-Brown = 0.81).

Intrinsic motivation. We selected and adapted three relevant items from Shin and Zhou’s (2003) scale⁷ for the advertisement slogan design task. The participants indicated their level of agreement with the items reflecting why they enjoyed the task (1 = “strongly disagree” to 7 = “strongly agree”). A sample item is “Because I enjoy coming up with new ideas for the task” (Cronbach’s $\alpha = 0.71$).

⁶ To check the robustness of our findings, we measured autonomy needs (Cronbach’s $\alpha = 0.72$) and competence needs (Cronbach’s $\alpha = 0.75$) before the experiment started to control for their potential influence on intrinsic motivation. We also measured creative self-efficacy (Cronbach’s $\alpha = 0.70$), positive affect (Cronbach’s $\alpha = 0.83$), and negative affect (Cronbach’s $\alpha = 0.74$) at the same time as intrinsic motivation. We present detailed information for these measures and supplementary analyses including these control variables in online Supplemental Material G.

⁷ We removed two items that were not applicable to the current advertisement design task, i.e., “because I enjoy creating new procedures for work tasks” and “because I enjoy improving existing processes or products”.

Creativity. Two independent raters—trained PhD students from a business school who were blind to the hypotheses—assessed the creativity of participants’ final slogan designs. We compiled the rating task instructions and the designs into an Excel file without disclosing the experiment’s purpose, hypotheses, or conditions. The raters evaluated the creativity of each participant’s final slogan design. Following Shin and Grant (2021), we provided the raters with the definition of creativity (i.e., the production of novel and useful ideas; Amabile, 1983) and instructed them to answer the following question: “How creative do you think the participant’s design is?” The scale ranged from 1 (“not creative at all”) to 7 (“very creative”). An example of an uncreative idea is “Stable fit, premium materials”, whereas a creative idea is “Dawn to dusk. Seamless fit. You don’t wear the glasses—you wear the wind.” The raters showed substantial agreement in their evaluations: ICC1 = 0.87 ($p < 0.001$) and ICC2 = 0.93 ($p < 0.001$). Therefore, we averaged the two raters’ scores to obtain a single creativity score.

9. Study 3: results

9.1. Manipulation checks

To perform manipulation checks, we conducted one-way analyses of variance (ANOVAs). The results revealed significant effects of the help type manipulations on both receiving autonomous help, $F(2, 565) = 70.60, p < 0.001, \eta^2 = 0.20$, and on receiving dependent help, $F(2, 565) = 89.94, p < 0.001, \eta^2 = 0.24$. Participants in the receiving autonomous help condition ($M = 6.15, SD = 0.63$) scored significantly higher in receiving autonomous help than did those in the receiving dependent help condition ($M = 5.01, SD = 1.18; t(378) = 11.40, p < 0.001, d = 1.21$) and those in the receiving no help condition ($M = 4.94, SD = 1.39; t(376) = 11.00, p < 0.001, d = 1.12$). Similarly, participants in the receiving dependent help condition ($M = 5.23, SD = 1.32$) scored significantly higher in receiving dependent help than did those in the receiving autonomous help condition ($M = 3.47, SD = 1.62; t(378) = 11.73, p < 0.001, d = 1.19$) and those in the receiving no help condition ($M = 3.32, SD = 1.66; t(376) = 12.73, p < 0.001, d = 1.27$). Thus, our manipulations were effective.

9.2. Hypothesis testing

Table 5 presents descriptive statistics and correlations among the study variables. In support of Hypotheses 1 and 2, the ANOVA results revealed a significant effect of the type of help received on creativity, $F(2, 565) = 17.62, p < 0.001, \eta^2 = 0.06$. Participants in the condition of receiving autonomous help ($M = 3.74, SD = 0.97$) scored higher in creativity than those in the no help condition ($M = 3.44, SD = 1.04$): $t(376) = 2.73, p = 0.01, d = 0.30$. Participants in the condition of receiving dependent help ($M = 3.12, SD = 1.06$) scored lower than those in the no help condition ($M = 3.44, SD = 1.04$): $t(376) = -2.91, p = 0.007, d = 0.31$.

The ANOVA results also revealed a significant effect of the type of help received on intrinsic motivation, $F(2, 565) = 21.12, p < 0.001, \eta^2 =$

Table 5
Means, Standard Deviations, and Correlations among Variables—Study 3.

Variable	Mean	SD	1	2	3
1 Receiving AH	0.33	0.47			
2 Receiving DH	0.33	0.47	−0.50**		
3 Intrinsic motivation	5.86	0.66	0.23**	−0.23**	
4 Creativity	3.43	1.05	0.21**	−0.21**	0.33**

Notes. $N = 568$. For receiving AH, 1 = receiving autonomous help, 0 = receiving dependent help or receiving no help; for receiving DH, 1 = receiving dependent help, 0 = receiving autonomous help or receiving no help.

* $p < 0.05$.
** $p < 0.01$ (two-tailed).

0.07. Participants in the condition of receiving autonomous help ($M = 6.07$, $SD = 0.57$) had greater intrinsic motivation than those in the no help condition ($M = 5.85$, $SD = 0.63$): $t(376) = 3.14$, $p = 0.002$, $d = 0.37$. Participants in the condition of receiving dependent help ($M = 5.65$, $SD = 0.71$) had lower intrinsic motivation than those in the no help condition ($M = 5.85$, $SD = 0.63$): $t(376) = -2.86$, $p = 0.006$, $d = 0.30$. Table 6 presents the results of these comparisons.

Next, we conducted path analyses to test the mediation effects using Mplus 7.4. We coded the three conditions using two dummy variables (Hayes, 2013), with the receiving no help condition as the comparison group⁸ (see the note under Table 5 for details). As shown in Table 7, receiving autonomous help was positively related to intrinsic motivation ($B = 0.22$, $SE = 0.06$, $p < 0.001$), and receiving dependent help was negatively related to intrinsic motivation ($B = -0.20$, $SE = 0.07$, $p = 0.003$). When intrinsic motivation was included in the equation, receiving autonomous help was no longer significant for creativity ($B = 0.20$, $SE = 0.10$, $p = 0.054$), and the effect of receiving dependent help was reduced ($B = -0.23$, $SE = 0.10$, $p = 0.03$). Meanwhile, intrinsic motivation was positively related to creativity ($B = 0.46$, $SE = 0.06$, $p < 0.001$), supporting its mediating role. Notably, adding intrinsic motivation to the model increased the explained variance in creativity from $R^2 = 0.06$ to $R^2 = 0.14$ ($\Delta R^2 = 0.08$), yielding a Cohen's f^2 of 0.09, which represents a small-to-medium effect size (Cohen, 1988).

We further conducted a bias-corrected bootstrapping procedure with 10,000 replications to examine the indirect effects (Edwards and Lambert, 2007). The indirect relationship between receiving autonomous help and creativity via intrinsic motivation was 0.10 (95% CI = [0.049, 0.171]), and the indirect relationship between receiving dependent help and creativity via intrinsic motivation was -0.09 (95% CI = $[-0.170, -0.035]$). On our 7-point creativity scale, the indirect path for receiving autonomous help corresponds to an increase of 0.10 scale points through intrinsic motivation. Given the total difference between the receiving autonomous help and no help conditions ($M_{ah} = 3.74$, $M_{nh} = 3.44$, $M_{diff} = 0.30$), this motivational mechanism accounts for one-third of the total creativity gain. Similarly, for dependent help, the negative indirect effect of -0.09 relative to the no-help baseline ($M_{dh} = 3.12$, $M_{nh} = 3.44$, $M_{diff} = -0.32$) indicates that the mediation path explains nearly one-third of the total decrease in creativity. Taken together, these results support Hypotheses 3 and 4.

10. General discussion

Our objective was to theorize and examine the negative impact of receiving dependent help on creativity and the mechanism behind this effect. Theoretically, receiving dependent help undermines the fulfillment of autonomy and competence needs, which in turn decreases intrinsic motivation and ultimately leads to lower recipient creativity on subsequent tasks.⁹ The results from three studies indicated that receiving dependent help from coworkers had a negative effect on recipient creativity in subsequent tasks, whereas receiving autonomous help had a positive effect. Furthermore, these relationships were mediated by intrinsic motivation. To provide complementary insights, we also utilized data from the two field studies to examine the joint effects of autonomous and dependent help through a variable-centered

approach (i.e., interaction effects) and a person-centered approach (i.e., latent profile analyses). The results are available in online Supplemental Material I.

10.1. Implications for theory and research

We advance research on the role of help in creativity in several ways. First, helping behavior is often assumed to be beneficial, despite considerable variability in its actual helpfulness (Dalal and Sheng, 2019). In the creativity domain, this assumption is reflected in research that has primarily focused on the positive effects of help on creativity (see Harrison et al., 2022, for a review). Joining an emergent stream of research (Fisher et al., 2025), we modify the positive view by revealing that receiving dependent help can hinder recipients' creativity in later tasks within the same domain. This extension is made possible through the application of the autonomous-dependent help typology (Nadler, 1997, 1998). Prior frameworks in the literature on the role of help in creativity have focused primarily on the source (Madjar et al., 2002), the frequency/depth (Fisher et al., 2018), or the content (informational vs. emotional) (Madjar, 2008) of help. In contrast, our typology centers on the inherent tension in receiving help, specifically, the balance between instrumentality and independence. Consistent with prior research demonstrating varying levels of benefits of help (Hargadon and Bechky, 2006; Madjar, 2008; Madjar et al., 2002), we reveal that receiving autonomous help enhances recipients' creativity in subsequent tasks. Extending prior research, we demonstrate that while dependent help may have instrumental value (Chernyak-Hai et al., 2024), it undermines recipients' subsequent creativity, revealing a largely overlooked harmful aspect and emphasizing the importance of how help is delivered.

We also provide new insights into previous research on the role of help types in creativity. Specifically, our research suggests that the positive findings on sources of help (e.g., work and nonwork support in Madjar et al., 2002) could be attributed to the autonomous elements in the help received. For instance, an inspection of Madjar et al.'s (2002) measurement suggests that autonomous help is a key component of support from both work and nonwork sources (e.g., "My supervisor discusses with me my work-related ideas in order to improve them"). However, receiving help does not inherently entail an autonomy-supportive experience (Nadler, 2020). Fisher et al. (2018) argued that although deep help is especially beneficial for confronting complex problems, it may become counterproductive when a helper's intense involvement threatens autonomy. Directly speaking to this possibility, we reveal that this shift occurs when the received help becomes directive or solution-oriented, thus transforming it into a dependent form of help. Prior research on types of help (e.g., work vs. nonwork in Madjar et al., 2002; informational vs. emotional in Madjar, 2008) can yield more nuanced new insights by explicitly incorporating the autonomous-dependent distinction. For instance, informational support delivered in a dependent manner may hamper creativity, whereas that delivered in an autonomous manner should facilitate creativity. The insight is that the manner in which help is delivered—whether in an autonomous or a dependent way—matters beyond its content, source, or technical quality.

Second, we extend research on the role of help in creativity that has explored various specific mechanisms. For instance, Madjar et al. (2002) identified positive mood as a mechanism linking work and nonwork help to recipient creativity, as such support can naturally elevate mood. Adopting the autonomous-dependent distinction, we demonstrate intrinsic motivation as a mechanism, given its foundation in autonomy and competence—two core psychological needs. Although intrinsic motivation has long been understood as vital for creativity, its role in the context of help—where help may both promote and undermine key precursors of intrinsic motivation—is particularly important to explore. This motivation mechanism helps explain why certain types of help, such as dependent help, can harm recipients' creativity in later tasks within the same domain. It underscores the importance of motivational

⁸ We also used effect coding and contrast coding to check whether our results are robust to alternative coding strategies. The planned pairwise contrasts (autonomous help vs. no help, dependent help vs. no help, and autonomous help vs. dependent help) yielded identical patterns of statistical significance regardless of the coding strategy employed.

⁹ We examined perceived autonomy and perceived competence as underlying mechanisms through which receiving autonomous help and dependent help influence intrinsic motivation in two earlier experiments. The experiments and results were moved to our online supplements during the review process. For details, please refer to online Supplemental Material H.

Table 6

Means (Standard Deviations in Parentheses) of Receiving Autonomous and Dependent Help (Manipulation Check), Intrinsic Motivation, and Creativity across Experimental Conditions – Study 3.

Variable	Conditions			M difference		
	Receiving autonomous help (A)	Receiving dependent help (B)	Receiving no help (C)	A – B	A – C	B – C
MC: Receiving AH	6.15 (0.63)	5.01 (1.18)	4.94 (1.39)	1.14**	1.21**	0.07
MC: Receiving DH	3.47 (1.62)	5.23 (1.32)	3.32 (1.66)	–1.76**	0.15	1.91**
Intrinsic motivation	6.07 (0.57)	5.65 (0.71)	5.85 (0.63)	0.42**	0.22**	–0.20**
Creativity	3.74 (0.97)	3.12 (1.06)	3.44 (1.04)	0.62**	0.30**	–0.32**

Notes. $N = 568$. $N_A = 190$, $N_B = 190$, $N_C = 188$. Abbreviations: Receiving AH = receiving autonomous help; Receiving DH = receiving dependent help; MC = manipulation check.

* $p < 0.05$.

** $p < 0.01$ (two-tailed).

Table 7

Results of Hypothesis Tests—Study 3.

Variable	Total effect	Mediation effect	
	Creativity	Intrinsic motivation	Creativity
Receiving AH	0.30** (0.11)	0.22** (0.06)	0.20 (0.10)
Receiving DH	–0.32** (0.11)	–0.20** (0.07)	–0.23* (0.10)
Intrinsic motivation			0.46** (0.06)
R^2	0.06	0.07	0.14
ΔR^2			0.08

Notes. $N = 568$. Unstandardized coefficients are presented. Standard errors are shown in parentheses. For receiving AH, 1 = receiving autonomous help, 0 = receiving dependent help or receiving no help; for receiving DH, 1 = receiving dependent help, 0 = receiving autonomous help or receiving no help.

* $p < 0.05$.

** $p < 0.01$ (two-tailed).

quality—specifically, intrinsic motivation—beyond generalized affect or mere content transfer, in accounting for why some types of help hinder creativity while others facilitate it.

Moreover, the motivational mechanism expands the nascent literature on the downside of receiving help for recipient creativity. Grounded in the reciprocity norm in social exchange (Emerson, 1976), Mueller and Kamdar (2011) argue that individuals who seek help feel obligated to reciprocate it by assisting others, which diverts time and energy away from creative tasks and ultimately hinders their own creativity. However, they did not differentiate between types of help, particularly those that may foster dependency and thus harm creativity. We control for interpersonal reciprocity (help-giving) to more precisely demonstrate the intrinsic motivation mechanism. More importantly, we reveal that research into the downside of help in creativity can benefit from incorporating how help is delivered, as this can generate new insights. For instance, reciprocity costs may vary by how help is delivered. It is possible that receiving dependent help engenders lower reciprocity costs because the recipient enjoys it less due to its controlling nature. Similarly, while deep help or one-time help has limitations, these limitations may depend on whether such help is delivered in a dependent or autonomous manner. The limitation of deep help is more likely to arise when such help is delivered in a dependent manner and becomes a takeover (Fisher et al., 2018), but less likely to occur when it is delivered in an autonomous manner.

10.2. Practical implications

Our study has several practical implications for recipients and helpers aiming to foster creativity at work. Recipients should be aware that although receiving dependent help resolves their problems immediately, it erodes intrinsic motivation, ultimately limiting their creativity in later tasks. However, receiving autonomous help benefits recipients' creativity by fueling their intrinsic interests and equipping them to approach subsequent creative challenges more independently.

Recipients, therefore, should seek autonomous rather than dependent help, particularly when facing problems that require independent problem solving in the future.

Helpers need to be mindful of how they provide help in creative tasks to avoid negative consequences. Creative employees tend to engage in help-giving to bolster their reputations, as doing so can signal their problem-solving capabilities (Carnevale et al., 2021). We suggest that although dependent help may signal helpers' competence, it may also increase recipients' concern about protecting their creative reputation because it undermines their autonomy and competence. In contrast, autonomous help supports recipients' independence and capability, making it less likely to trigger such concerns. We therefore encourage creative employees to provide help in autonomous forms whenever possible, which not only strengthens their own creative reputation but, more importantly, meaningfully supports recipients' development and creativity.

10.3. Limitations and directions for future research

Our study has several limitations that point to interesting future directions. First, we treated autonomous and dependent help as distinct dimensions rather than opposite ends of the same continuum, which allowed us to discern the specific impacts of each type of help. This approach also implies that the two types of help can co-occur, pointing to potential interaction effects. Although our supplementary analyses (see Supplemental Material I) yielded nonsignificant interactions in both Study 1 and Study 2, these results are tentative because we measured overall experiences of receiving help instead of focusing on event-level configurations of help types. For example, we did not determine whether autonomous and dependent help were received as a complementary “package” addressing different facets of a single problem (e.g., obtaining a quick solution to a technical issue while getting tools for solving major aspects of the problem) or whether they targeted different problems faced by the recipient. This distinction matters because co-occurrence may be synergistic when the two types of help complement each other by addressing different aspects of a problem (e.g., a minor technical issue versus core aspects). However, it can be antagonistic when they send inconsistent signals that undermine the effectiveness of each type (e.g., each help type targeting a different problem). Similar ambiguity is present in prior work reporting the interaction effects of leader autonomous and dependent help (e.g., Zhu et al., 2021), which also did not clarify the patterns of their combination. Future research should develop event-level, configuration-specific measures of autonomous and dependent help to explore potential interaction effects.

Second, we focused on creativity as an overall construct. As a result, we measured overall creativity instead of novelty and usefulness separately. One potential direction for future research is to examine whether autonomous and dependent help differentially affect novelty and usefulness.

Third, our measure of receiving autonomous help from coworkers

included the phrase “so that I can solve the problem on my own in the future” in every item. This uniformity could artificially inflate internal validity and limit theoretical coverage. This lack of variation in phrasing across items might therefore have impacted the predictive performance of the scale. Future research should further refine the measure despite that it has been developed and validated.

Fourth, while we show the harmful effect of receiving dependent help on creativity, we do not intend to portray dependent help as *inherently* detrimental. Rather, we characterize these creativity decrements as “contextual costs” occurring specifically within the same work domain, and we caution against overgeneralizing these findings to tasks in unrelated domains or to different functional contexts. For example, receiving dependent help can create more room for creativity (i.e., path clearing) when directed toward mundane, noncreative work, thus removing obstacles and allowing employees to concentrate on creative work (Fisher et al., 2018). Furthermore, in situations where efficiency and speed are critical, such as tasks with tight deadlines, receiving dependent help may yield clear benefits (e.g., swift and actionable solutions). In such contexts, the immediate instrumental value of receiving dependent help may outweigh its potential costs to autonomy or competence, enhancing extrinsic motivation and improving the efficiency aspect of performance. Future research should examine the effects of receiving dependent help on extrinsic motivation and efficiency performance, alongside its boundary conditions. Additionally, the detrimental consequences of receiving dependent help may attenuate over time as recipients’ motivational state potentially reverts toward its baseline. Future research could thus employ longitudinal designs to examine the temporal duration and potential decay of these effects.

Fifth, recipient characteristics, such as recipients’ level of expertise, may shape the effects of receiving autonomous help and dependent help. Individuals with greater expertise may be better able to adapt and integrate such help in ways that minimize dependency and support later problem solving, thereby reducing potential harm to intrinsic motivation and creativity in subsequent tasks. For example, proficient individuals may be less sensitive to the negative signals of low competency or high dependency that come with receiving dependent help, making them more resilient to its motivational costs. Although we controlled for education level and organizational tenure as proxies for general and organization-specific knowledge and skills, we encourage future research to directly test the moderating influence of expertise levels.

Finally, female employees comprised a relatively small proportion of participants in Study 1 (33.33%) and Study 2 (25.00%) due to the sampled industries and positions. Study 1 included employees from the technology, energy, manufacturing, banking, chemical, and construction industries, with the majority holding positions in R&D, IT, operations, and marketing. Study 2 sampled employees in R&D positions within the technology industry. According to the *China Statistical Yearbook on Science and Technology* (National Bureau of Statistics and Ministry of Science and Technology, 2024), women constituted 22.49% of R&D personnel in Chinese enterprises. Similarly, the *Report on the Development of Chinese Women in the New Era* (Liu and Zhang, 2023) reports that women comprised approximately 25% of scientific and technological talent in the information technology field in 2022. The sex composition of our samples mirrors these figures, especially in the technology sector. We encourage future research to replicate our study in sectors with greater female representation.

Organizational Relevance and Contribution Statement

Our research is practically relevant and significant for helpers and help recipients within organizations. While receiving dependent help may resolve immediate issues, it can erode intrinsic motivation and ultimately limit recipients’ creativity in future tasks. However, receiving autonomous help benefits recipients’ creativity by fostering intrinsic motivation. Therefore, helpers must be mindful of how they provide help in creative tasks to avoid unintended negative consequences. Recipients should seek autonomous rather than dependent help, particularly when facing problems that are likely to recur or require

independent problem solving in the future.

Author Note

We have no known conflict of interest to disclose. This research was funded by National Natural Science Foundation of China (No. 72132001; 72110107002; 72572022) and Research Grants Council of Hong Kong (No. 16501220).

Declaration of Generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the authors used GPT-5.2 in order to improve the readability and language of the manuscript. After using this tool/service, the authors reviewed and edited the content as needed and further asked a professional copyeditor to improve it. The authors take full responsibility for the content of the published article.

CRediT authorship contribution statement

Ziyi Li: Writing – original draft, Methodology, Formal analysis, Conceptualization. **Yaping Gong:** Writing – review & editing, Methodology, Conceptualization. **Yong Zhang:** Writing – review & editing, Resources, Investigation, Funding acquisition. **Lirong Long:** Supervision, Resources, Funding acquisition, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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