

## APPENDIX A

### Manipulation Materials in Study 1

#### **Higher task motivation condition:**

The office of a local charity organization is currently suffering a serious noise problem, largely due to its open layout (similar to the one depicted in the following figure). The volunteers report that it is difficult to concentrate on their tasks in this noisy work environment, which affects their productivity. We are reaching out to you for your suggestions, which will greatly improve the work environment for the volunteers and, in turn, enhance their ability to assist vulnerable groups, such as the poor and the disabled.

You can make suggestions from any aspect, in any way, with no limitations or boundaries—feel free to explore all possibilities you like. Please note that this task includes extra monetary rewards; you will earn an extra £1 for each high-quality suggestion you propose. Notably, based on our previous interviews, we are informed that most people find this task very engaging. We hope you will enjoy this task as well.



#### **Control condition:**

The office of a local private organization is currently suffering a serious noise problem, largely due to its open layout (similar to the one depicted in the following figure). The employees report that it is difficult to concentrate on their tasks in this noisy work environment, which affects their productivity. We are reaching out to you for your suggestions, which may help increase employees' performance to some extent.

However, due to the limitations of resources (e.g., office space and cash flow), you cannot make suggestions in any way you like. Instead, you should make suggestions under the detailed requirements we will give later. Please note that this task does not include any extra monetary rewards regardless of the quality of suggestions. To be honest, based on our previous interviews, we are informed that most people find this task less engaging.

**Higher perceived task interdependence:**

You and the other two online Prolific users are responsible for the same task. Thus, you should be highly dependent on each other to propose the most helpful suggestions. Notably, others' input plays an important role in individual idea generation, while people usually underestimate its usefulness. As such, your suggestions should be consistent and complementary to each other to ensure that the organization receives the best possible guidance.

**Lower perceived task interdependence:**

Although you and the other two online Prolific users are responsible for the same task, you will be highly independent of each other when proposing your suggestions. Notably, others' input may play no real role in individual idea generation, while people usually overrate its usefulness. As such, your suggestions do not need to be related or complementary to those of the others, and you can focus solely on providing the best advice you like.

## APPENDIX A

### Manipulation Check Results in Study 1

The data showed that the average level of task motivation ( $M = 4.28$ ,  $SD = .73$ ,  $N = 190$ ) reported by participants in the higher task motivation condition was higher than that ( $M = 3.97$ ,  $SD = .99$ ,  $N = 192$ ) in the control condition,  $t(380) = 3.46$ ,  $p = .001$ . The average level of perceived task interdependence ( $M = 3.60$ ,  $SD = .93$ ,  $N = 191$ ) reported by participants in the higher perceived task interdependence condition was higher than that ( $M = 2.65$ ,  $SD = 1.17$ ,  $N = 191$ ) in the lower perceived task interdependence condition,  $t(380) = 8.80$ ,  $p < .001$ .

## APPENDIX B

### Manipulation Check Results in Study 2

We ran a *t*-test to assess whether our manipulation was successful. The data showed that, in the initial measure, the average level of task motivation ( $M = 5.80$ ,  $SD = 1.03$ ,  $N = 69$ ) reported by participants in the higher task motivation condition was higher than that ( $M = 5.36$ ,  $SD = 1.12$ ,  $N = 67$ ) in the control condition,  $t(134) = 2.38$ ,  $p = .019$ . One month later, the follow-up measure demonstrated the sustained effectiveness of our manipulation, with the average level of task motivation in the higher task motivation condition ( $M = 5.89$ ,  $SD = .96$ ,  $N = 69$ ) remaining significantly higher than that ( $M = 5.20$ ,  $SD = 1.84$ ,  $N = 67$ ) in the control condition,  $t(134) = 2.78$ ,  $p = .006$ .

## **APPENDIX B**

### **The Results of Study 2 without Control Variables**

Prior performance and department indicators were not preregistered as control variables. Yet, regardless of whether the control variables were included, our research findings remained consistent. Thus, to ensure full transparency, we have reported the preregistered analyses without these controls in Table A1. The pattern of results remains consistent regardless of whether these controls are included.

**TABLE A1***Hypothesis Testing: Study 2 without Control Variables*

| Variables                                        | Interaction avoidance | Job performance |             |
|--------------------------------------------------|-----------------------|-----------------|-------------|
|                                                  |                       | Model 1         | Model 2     |
| Task motivation                                  | .25 (.26)             | 1.93 (1.22)     | 2.17 (1.20) |
| Perceived task interdependence                   | -.05 (.13)            | .85 (.62)       | .81 (.61)   |
| Task motivation × Perceived task interdependence | -.38* (.18)           | -.74 (.87)      | -1.09 (.87) |
| Interaction avoidance                            |                       |                 | -.93* (.40) |
| Pseudo- $R^2$                                    | 8.43%                 | 3.00%           | 6.69%       |

*Note.*  $N = 136$ . Task motivation: 0 = control condition, 1 = higher task motivation condition. Unstandardized coefficients are reported. Standard errors are reported in parentheses. Perceived task interdependence was mean-centered prior to the analysis. \* $p < .05$ .

## **APPENDIX C**

### **A Conceptual Replication Study**

#### **Participants and Procedure**

To conceptually replicate prior findings, we conducted a field survey with a sample of 242 employees at a Chinese high-tech company that provides end-to-end platform-level integrated solutions for the electric power industry. These employees were distributed across such departments as marketing, research and development, production, and information technology. Given that this company conducted performance evaluations each quarter, we measured all variables based on participants' self-reports or objective scores from the most recent three months (except for personality traits, which were used in the supplemental analyses), reflecting cross-sectional data. Participation was voluntary, and we assured the participants' confidentiality and anonymity, informing them that the data would be used exclusively for academic research.

In total, 209 employees (response rate = 86.4%) agreed to participate in the study and returned the questionnaire. In the final sample, 76.1% of the employees were male, and 90.0% had obtained a bachelor's degree or above. Their average age was 28.86 years ( $SD = 5.73$ ), and their average tenure in their current organization was 2.94 years ( $SD = 2.37$ ). Participants were given a souvenir (approximately worth 8 RMB) for their participation.

#### **Measures**

Task motivation ( $\alpha = .96$ ), perceived task interdependence ( $\alpha = .93$ ), and interaction avoidance ( $\alpha = .92$ ) were measured using the same scales as in the previous studies. All items were presented on rating scales ranging from 1 to 7. We obtained employees' job performance

data from the company; this variable was measured using multiple objective indicators recorded from objective company records in its internal systems. We included employees' demographics as control variables. Additionally, given that employees belonged to different departments, we controlled for their respective departments in the analysis. Notably, the research findings remained consistent when these control variables were not included.

### **Preliminary Analysis**

We followed the analytic strategy from Study 3 when analyzing the data. Table A2 displays the descriptive statistics and correlations for the variables. We tested our measurement model using CFA. The data fit the hypothesized three-factor model (i.e., task motivation, perceived task interdependence, and interaction avoidance) well:  $\chi^2 = 182.86$ ,  $df = 74$ ,  $p < .001$ ; RMSEA = .08, CFI = .95, TLI = .93, SRMR = .05. This model also had a significantly better fit than the alternative ones (see Table A3).

### **Hypothesis Testing**

As shown in Table A4, the interaction effect of task motivation and perceived task interdependence on interaction avoidance was significant ( $B = -.09$ ,  $SE = .03$ ,  $p = .006$ ). As shown in Figure A1, at lower levels of perceived task interdependence ( $-1 SD$ ), task motivation had a significantly positive relationship with interaction avoidance ( $B = .22$ ,  $SE = .08$ ,  $p = .006$ ); at higher levels of perceived task interdependence ( $+1 SD$ ), this relationship was non-significant ( $B = -.04$ ,  $SE = .10$ ,  $p = .671$ ). Thus, Hypothesis 1 was supported. Supporting Hypothesis 2, interaction avoidance was negatively associated with job performance ( $B = -.52$ ,  $SE = .20$ ,  $p = .011$ ).

The results also indicated that when perceived task interdependence was lower, the indirect effect of task motivation on job performance via interaction avoidance was significant (*indirect effect* =  $-.11$ , 95% CI =  $[-.261, -.013]$ ). In contrast, when perceived task interdependence was higher, this indirect effect was not significant (*indirect effect* =  $.02$ , 95% CI =  $[-.072, .170]$ ). The differences under the two conditions were significant (*difference* =  $.13$ , 95% CI =  $[.011, .344]$ ), which supported Hypothesis 3.

### **Supplemental Analyses**

We conducted additional analyses to check the robustness of our results in this study. Specifically, we measured personal traits (i.e., extraversion,  $\alpha = .93$ ; collectivism,  $\alpha = .93$ ; belief in the value of teamwork,  $\alpha = .83$ ) and then tested whether these variables moderated our model. The results showed that they did not significantly moderate the relationships between task motivation and interaction avoidance. Although the theory chosen as our framework allowed us to focus on interaction avoidance as the mediator in our model, other alternative mechanisms may exist. In particular, task motivation strongly influences employees' investment of resources in their work. Thus, to show the uniqueness of interaction avoidance in our model, we measured work effort (De Cooman et al. 2009; a sample item is "I thought of myself as a hard worker";  $\alpha = .94$ ), work time during the week (Major et al. 2002; "How many hours did you work in an average week? Include time spent doing job-related work at home"), and attention on work (Rothbard 2001; a sample item is "I spent a lot of time thinking about my work";  $\alpha = .90$ ). First, after controlling for those alternative mediators in the analysis, our hypotheses were still supported. Second, we included them as parallel mediators and compared them with interaction

avoidance. Our hypotheses were still supported, but perceived task interdependence did not moderate the effect of task motivation on work effort ( $B = .01$ ,  $SE = .02$ ,  $p = .731$ ) and attention on work ( $B = .04$ ,  $SE = .03$ ,  $p = .131$ ). Please see the online supplemental materials for details.

## **Discussion**

This study supported our hypotheses based on objective performance data, thereby confirming the robustness of our findings. In particular, the results indicated that the temporal gap between the measured variables did not significantly affect the conclusions. This analysis further extends the generalizability of our hypotheses to different populations and contexts.

**TABLE A2***Descriptive Statistics and Correlations Among the Variables*

| Variables                         | <i>M</i> | <i>SD</i> | 1    | 2      | 3      | 4    | 5      | 6       | 7     |
|-----------------------------------|----------|-----------|------|--------|--------|------|--------|---------|-------|
| 1. Gender                         | .76      | .43       |      |        |        |      |        |         |       |
| 2. Age                            | 28.86    | 5.73      | .06  |        |        |      |        |         |       |
| 3. Education                      | 2.98     | .47       | -.02 | -.12   |        |      |        |         |       |
| 4. Organizational tenure          | 2.94     | 2.37      | .18* | .29*** | -.19** |      |        |         |       |
| 5. Task motivation                | 5.72     | 1.22      | .03  | .11    | -.12   | .13  |        |         |       |
| 6. Perceived task interdependence | 4.98     | 1.44      | .11  | -.10   | .04    | -.04 | .24*** |         |       |
| 7. Interaction avoidance          | 2.59     | 1.38      | .02  | .26*** | -.01   | .02  | .08    | -.28*** |       |
| 8. Job performance                | 82.05    | 4.40      | -.05 | .10    | .00    | .17* | .08    | .04     | -.15* |

*Note.*  $N = 209$ . Gender: 0 = female, 1 = male. Education: 1 = technical secondary school, 2 = college degree, 3 = bachelor's degree, 4 = master's degree. Organizational tenure is measured in years. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**TABLE A3***Model Fit Results for Confirmatory Factor Analyses*

| Models                                                                                    | $\chi^2$ | <i>df</i> | $\Delta\chi^2$ ( $\Delta df$ ) | RMSEA | CFI | TLI | SRMR |
|-------------------------------------------------------------------------------------------|----------|-----------|--------------------------------|-------|-----|-----|------|
| <i>Model 0</i> : The hypothesized three-factor model                                      | 182.86   | 74        |                                | .08   | .95 | .93 | .05  |
| <i>Model 1</i> : Combining task motivation and perceived task interdependence as a factor | 969.52   | 76        | 786.66*** (2)                  | .24   | .56 | .48 | .22  |
| <i>Model 2</i> : Combining all variables as a factor                                      | 1448.62  | 77        | 1265.76*** (3)                 | .29   | .33 | .21 | .30  |

*Note.*  $N = 209$ .  $\Delta\chi^2$  is compared with the hypothesized three-factor model (Model 0). Abbreviations: RMSEA = root-mean-square error of approximation; CFI = comparative fit index; TLI = Tucker–Lewis index; SRMR = standardized root-mean-square residual.

\*\*\* $p < .001$ .

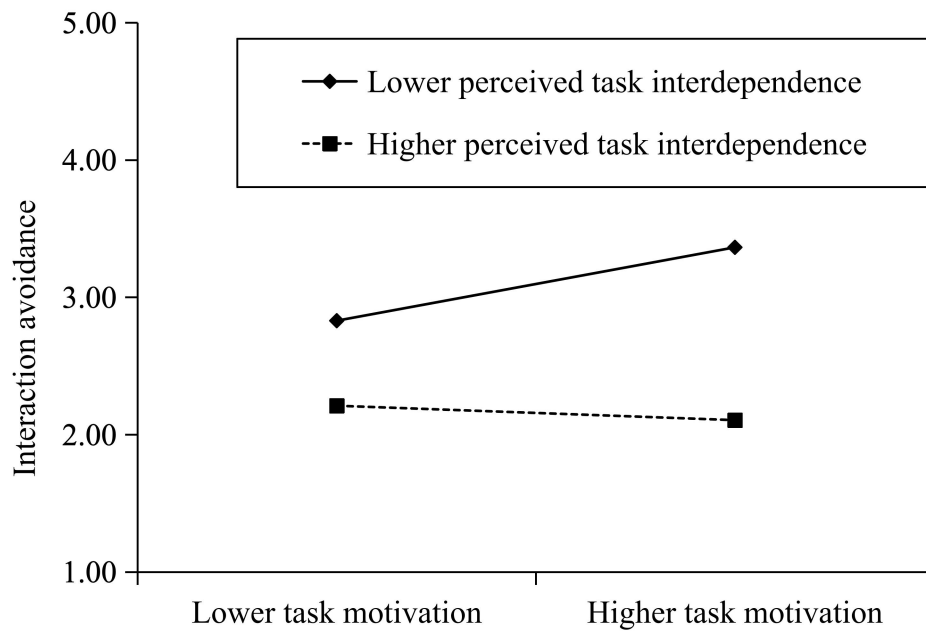
**TABLE A4***Hypothesis Testing*

| Variables                                        | Interaction avoidance | Job performance |             |
|--------------------------------------------------|-----------------------|-----------------|-------------|
|                                                  |                       | Model 1         | Model 2     |
| Gender                                           | .23 (.24)             | −1.07 (.86)     | −.96 (.85)  |
| Age                                              | .06*** (.01)          | .05 (.07)       | .08 (.06)   |
| Education                                        | .12 (.21)             | .27 (.62)       | .33 (.57)   |
| Organizational tenure                            | −.05 (.05)            | .34 (.17)       | .32 (.19)   |
| Task motivation                                  | .09 (.08)             | .27 (.17)       | .31 (.17)   |
| Perceived task interdependence                   | −.33*** (.07)         | .20 (.14)       | .03 (.17)   |
| Task motivation × Perceived task interdependence | −.09** (.03)          | .05 (.06)       | .01 (.06)   |
| Interaction avoidance                            |                       |                 | −.52* (.20) |
| Department fixed effects                         | Yes                   | Yes             | Yes         |
| Pseudo- $R^2$                                    | 20.59%                | 8.21%           | 10.29%      |

*Note.*  $N = 209$ . Unstandardized coefficients are reported. Standard errors are reported in parentheses. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**FIGURE A1**

*The Interaction Effect of Task Motivation and Perceived Task Interdependence on Interaction Avoidance*



## APPENDIX D

### A Supplemental Study

#### Participants and Procedure

To verify the negative relationship between interaction avoidance and job performance even when objective task interdependence is low, we collected data from a sample of 150 barbers located in the same city in China via Sojump (similar to MTurk or Prolific), a platform in China that helps researchers recruit participants for academic survey projects. According to O\*NET (Occupational Information Network)—an authoritative database supported by the U.S. Department of Labor that provides task-related characteristics (e.g., task interdependence) for nearly a thousand occupations—the objective task interdependence of barbers is considered to be low (the score was 2.35 on a scale ranging from 1 to 5). Notably, barbers ranked 7th lowest out of 879 occupations in terms of the “importance of communicating with supervisors, peers, or subordinates.” Among the 150 barbers in our sample, 52.70% were male, 33.30% had finished technical secondary school, and 24% had obtained a college degree or above. Their average age was 33.79 years ( $SD = 6.63$ ), and their average tenure in their current salon was 5.57 years ( $SD = 3.87$ ). Participants were compensated about 8 RMB for their participation.

#### Measures

Participants reported their level of interaction avoidance ( $\alpha = .95$ ) over the past month using the same scale employed in the previous studies (ranging from 1 to 7). We collected three objective performance indicators over the past month: (1) Your total service revenue: \_\_\_\_\_ (RMB); (2) The total number of customers you served: \_\_\_\_\_ (people); and (3) Compared to other members in your barbershop, how would you rate your job performance? (ranging from 1 = much lower than other members to 7 = much higher than other members). Although the third

indicator appears subjective, we followed up with an additional question to clarify whether this performance assessment was based on the barbershop's objective performance ranking or the respondent's personal judgment (Option A: based on the barbershop's objective performance ranking; Option B: based on personal judgment). A total of 90.70% of participants selected Option A, which means that this rating is largely indicative of objective performance outcomes.

To rule out alternative explanations, we controlled for gender, age, education, organizational tenure, industry tenure, attendance days, job rank, salon size, and the average amount spent by each customer at the salon. Without any control variables, we still reached a consistent conclusion.

## **Results**

Our data showed that even in this objectively low task interdependence occupation, interaction avoidance is still negatively associated with performance outcomes. These findings are presented in Table A5.

**TABLE A5***A Supplemental Study with Control Variables*

| Variables                                              | Total service revenue<br>(log-transformed) | Total number of serviced customers | Comparative job performance |
|--------------------------------------------------------|--------------------------------------------|------------------------------------|-----------------------------|
|                                                        | Model 1                                    | Model 2                            | Model 3                     |
| Gender                                                 | .00 (.04)                                  | -12.63 (9.97)                      | -.17 (.16)                  |
| Age                                                    | -.01 (.01)                                 | 1.47 (1.46)                        | -.01 (.02)                  |
| Education                                              | .01 (.02)                                  | 1.15 (5.27)                        | .07 (.08)                   |
| Organizational tenure                                  | -.00 (.01)                                 | -2.08 (2.30)                       | .01 (.04)                   |
| Industry tenure                                        | .00 (.01)                                  | -.73 (2.14)                        | .06 (.03)                   |
| Attendance days                                        | .01 (.01)                                  | 2.90 (2.34)                        | .06 (.04)                   |
| Job rank                                               | .11*** (.03)                               | -6.03 (7.27)                       | .22 (.12)                   |
| Salon size                                             | .01* (.00)                                 | 2.43** (.72)                       | .02 (.01)                   |
| The average amount spent by each customer at the salon | .00 (.00)                                  | -.26*** (.05)                      | .00*** (.00)                |
| Interaction avoidance                                  | -.08*** (.02)                              | -22.77*** (4.78)                   | -.16* (.08)                 |
| $R^2$                                                  | 42.30%                                     | 35.00%                             | 37.50%                      |

*Note.*  $N = 150$ . Unstandardized coefficients are reported. Standard errors are reported in parentheses. Without any control variables, we still reached a consistent conclusion.

Organizational tenure and industry tenure were measured in years. Job rank: 1 = Apprentice or below, 2 = Junior barber, 3 = Intermediate barber, 4 = Senior barber, 5 = Salon manager/partner or higher. The average amount spent by each customer at the salon was measured in RMB. The total service revenue was measured in RMB and log-transformed. We assessed comparative job performance using a single item asking participants to evaluate their performance relative to other barbers in their shop (1 = much lower than other members, 7 = much higher than other members). Notably, 90.70% of participants suggested that this comparative job performance assessment was based on the barbershop's objective performance ranking. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .