Ego depletion and self-control: The moderating role of public service motivation

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The importance of self-control failure and employee outcomes in public sector organizations in China is increasing. In this study, drawing on ego depletion theory and public service motivation (PSM) literature, we proposed that PSM would serve as a buffer against the detrimental effect of ego depletion on self-control. We used an experimental design to manipulate ego depletion with 95 Chinese public servant participants. Results showed that self-persuasion intervention can increase state PSM, and this contributes to higher self-control performance after an act of self-control. Results also indicated that higher trait PSM significantly correlates with higher self-control performance after ego depletion. Implications for cultivating PSM of employees in public sector organizations in China are discussed.

Keywords
public service motivation; public sector organization; ego depletion; self-control; self-control failure; self-persuasion intervention

Public servants in China are facing various challenges. They are not only required to control their emotions and suppress their desires at work, but also to handle work-related stress, and manage interpersonal relationships (Song, Zhang, & Zhang, 2014). At the same time, public servants are beset with temptations such as surfing the Internet and taking a nap during office hours (Bucciol, Houser, & Piovesan, 2013). Researchers have found that these efforts exhaust self-control resources, resulting in poor work performance and self-control failure (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Self-control failure is linked to mental and behavioral problems such as procrastination, substance addiction, aggressive behavior, and high-risk sexual behavior (DeBono, Shmueli, & Muraven, 2011). Lu and Huang (2009) have pointed out that in public sector organizations in China, self-control failure is usually correlated with the acceptance of bribes, corruption, neglect of duty, and poor work performance. Therefore, it is important to find ways to curb self-control failure among public servants.

Ego depletion theory is the most efficient framework for understanding self-control failure (Baumeister, Tice, & Vohs, 2018), and of which the central idea is that acts of self-control, such as suppressing emotions and resisting temptation, draw upon a limited self-control resource (Baumeister et al., 1998). When individuals engage in continuous self-control, their performance in subsequent self-control tasks will decrease, because engaging in self-control temporarily depletes the willpower resource, and thereby impairs subsequent self-control tasks (Baumeister et al., 2018). For example, when individuals work overtime, as they are more likely to eat fast food, and eventually spoil their diet (Fan et al., 2015), this depletes self-control resources and causes ego depletion, which results in self-control failure.

Researchers have suggested that factors such as motivation can help to avoid self-control resource depletion (Inzlicht & Schmeichel, 2012). We thus integrated ego depletion theory with public service motivation
(PSM) literature, and empirically examined the moderating effects of different types of PSM on the relationship between ego depletion and self-control.

**Literature Review and Hypothesis Development**

**Ego Depletion and Self-Control**

It is stated in ego depletion theory that individuals’ self-control is achieved by their consumption of self-control resources (Baumeister et al., 1998; Baumeister et al., 2018), which, when depleted, leaves individuals unable to take part in subsequent activities that require an equal amount of effort (Baumeister et al., 2018). Willpower for self-control depends on the availability of self-control resources. The use of willpower depletes individuals’ energy resources, which results in a state of energy deficit, and makes practicing further self-control difficult. Thus, self-control acts like a muscle: When it is depleted, it is no longer available for subsequent tasks (Baumeister et al., 2018).

There is abundant evidence to indicate the domain-general nature of ego depletion: When individuals perform a second self-control task immediately after a previous one, they exhibit poor performance in a knowledge-retrieval test (Englert & Bertrams, 2017), because they will have difficulty in solving problems and reasoning (Schmeichel, Vohs, & Baumeister, 2003). When individuals are ego-depleted, they are more likely to engage in aggressive behavior (Barlett, Oliphant, Gregory, & Jones, 2016), unsafe sexual behavior (Gailliot & Baumeister, 2007), and immoral conduct (Gino, Schweitzer, Mead, & Ariely, 2011). As the ego depletion theory has been applied to various domains in daily life, we speculated that the effects of ego depletion would apply to public servants when their self-control resources are depleted. Thus, we proposed the following hypothesis:

**Hypothesis 1:** When public servants are ego-depleted, their performance in a subsequent self-control task will be worse than that of their nondepleted counterparts.

**Ego Depletion and Motivation**

In their exploration of ways to avoid the aftereffect of ego depletion (e.g., Graham, Bray, & Martin Ginis, 2014), researchers have identified factors that replenish self-regulatory resources. For example, Gilkey (2012) revealed that the need for cognition is an important protective factor for individuals whose self-control resources are depleted, and that under specific circumstances, those with a higher (vs. lower) need for cognition are less likely to be influenced by ego depletion. Schmeichel and Vohs (2009) found that when an individual’s core is activated, the top-ranked value or self-awareness lessened the negative effect of depletion by promoting high levels of mental construal. Martijn et al. (2007) found that when their participants read an article that described an individual’s perseverance, they were immune to ego depletion. All these results imply that the effects of ego depletion can be buffered.

Regarding the role of motivation in overcoming the difficulty of ego depletion (Inzlicht & Schmeichel, 2012), Muraven and Slessareva (2003) showed that sufficient incentives can promote self-control and weaken the negative effects of ego depletion. In their study, they manipulated motivation through different means, namely, by providing participants with valuable information on medical treatment, or promoting their skills, or providing them with more money. Their results consistently showed that self-control does not significantly decrease as is usual after effortful self-control when motivation is activated. Similarly, Vohs, Baumeister, and Schmeichel (2012) found that motivation can counteract the effects of ego depletion in the case of mild depletion. Therefore, ego depletion can be at least partially buffered by motivation.

Drawing on self-determination theory (Ryan & Deci, 2000), Graham et al. (2014) proposed that controlled regulation and autonomous regulation may have a different impact on ego depletion. Controlled regulation involves external rewards: When controlled regulation is activated, individuals perceive their behavior as being controlled by others. They engage in behavior to receive rewards and avoid punishment and guilt, or
to feel social approval (Deci, Olafsen, & Ryan, 2017). In contrast, autonomous regulation concerns internal rewards, with behavior involving freedom of choice, and personal interests and pleasure (Deci et al., 2017). Individuals who are autonomously regulated perceive their behavior as being driven by the activity itself, which results in a consistently better performance (Deci et al., 2017). Graham et al. (2014) showed that, compared with controlled motivation, autonomous motivation benefits self-control performance by strategically conserving self-control strength. To summarize, when individuals are motivated by internal rewards, personal interests, or autonomy, they are more likely to perform better in a second self-control task, thus neutralizing the negative effect of ego depletion.

Public Service Motivation

As researchers have found that PSM correlates significantly with work performance (Leisink & Steijn, 2009), job satisfaction (Homberg, McCarthy, & Tabvuma, 2015), turnover rate (Moynihan & Pandey, 2008), and citizen participation (Coursey, Pandey, & Yang, 2012), this indicates that it is an impetus for the development of public organizations (Ritz, Brewer, & Neumann, 2016).

Perry and Wise (1990) defined public service motivation as “an individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations” (p. 368). Public values and altruism that are intended to do good for others are the core features in this definition, which, however, according to Vandenabeele (2007), captures only the static feature of PSM. Bellé (2014) showed that PSM is also dynamic and fostered by the institutional context. Findings have consistently demonstrated that public servants are motivated mainly by intrinsic (vs. extrinsic) motivators because they have internalized public service values (e.g., Chen & Bozeman, 2013; Park & Word, 2012). Recruitment, self-selection, and socialization all contribute to the internalization of public values and satisfaction of the three basic psychological needs, namely, autonomy, competence, and relatedness, as suggested in self-determination theory (Andrews, 2016). PSM is often regarded as a specific type of intrinsic motivation (Andrews, 2016; Park & Word, 2012), the central feature of which is autonomy. When employees are autonomously driven, they tend to view their job as fun, and their motivation is from internal sources (Deci et al., 2017). Also, if they are motivated by PSM, employees consider their tasks as enjoyable and satisfying, and they will be less vulnerable to ego depletion (Laran & Janiszewski, 2011). Therefore, we proposed the following hypothesis:

Hypothesis 2: When public servants feel ego-depleted, those with higher (vs. lower) trait public service motivation will achieve better self-control performance.

As state PSM is as important as trait PSM in public organizations (Andrews, 2016), we also investigated the role of state PSM in the context of self-control. The findings of several pilot studies (e.g., Aronson, 1999; Bellé, 2013) have demonstrated that self-persuasion intervention is a useful approach to enhance state PSM. Typical self-persuasion intervention involves “the processes of idea reflection and advocacy” (Wright & Grant, 2010, p. 696). Participants in Wright and Grant’s (2010) study contemplated and wrote down the meaning of their jobs in the first process, and publicly advocated the importance of their work in the second process. For the sake of simplicity, our participants completed both processes in writing. Thus, we proposed the following hypothesis:

Hypothesis 3: State public service motivation will be higher for public servants in a self-persuasion intervention (vs. control) condition.

Further, if Hypothesis 3 is validated, participants who are primed with self-persuasion will have higher state PSM and show better self-control performance after ego depletion. Therefore, we proposed the following hypothesis:

Hypothesis 4: When public servants are ego-depleted, state public service motivation will contribute to better performance in a consequent self-control task, particularly for those with higher state public service motivation.
Method

Participants

Participants were 96 public servants, who were enrolled in a part-time Master of Public Administration program at Zhejiang University in China. They were each randomly assigned to one of the two experimental conditions. Of the participants, 42.7% were women, their ages ranged from 23 to 40 years ($M = 31.08$, $SD = 4.12$), and their mean job tenure was 5.63 years ($SD = 1.81$). Their jobs included full-time administrators, management personnel, technicians in healthcare, and employees of educational, financial, and police institutes. They received partial course credit for their participation. As one female participant left the study because of illness, the final $N = 95$ (56 men).

Design

We used a 2 (ego depletion vs. nondepletion) × 2 (self-persuasion intervention vs. control) design.

Procedure and Measures

Public service motivation measurement phase (Phase One). Two weeks before the formal study, all participants completed the PSM survey, which was the baseline measurement of PSM, namely, trait PSM. To measure PSM, we used a Chinese version of Perry’s (1996) 24-item multidimensional measure of PSM. This was validated in the Chinese context by Zhu, Li, and Yan (2012) with 18 items and the four dimensions of attraction to policymaking (three items), social justice (four items), self-sacrifice (six items), and compassion (five items). Participants assessed items on a 5-point Likert scale ($1 = \text{strong disagreement}, 5 = \text{strong agreement}$). A sample item is “Making a difference in society means more to me than personal achievements.” Cronbach’s alpha in this study was .76. In addition, we collected demographic information, namely, gender, age, and job tenure.

Depletion phase. Participants were randomly assigned to either an ego-depletion or nondepletion condition, and they performed each task individually. They were told that the purpose of the study was to examine the influence of taste perception on writing skills. In the taste-perception task (Baumeister et al., 1998), participants were asked to come to the laboratory either before lunch or dinner, and to make sure that they had not eaten anything for at least three hours beforehand. Of the two plates that were on a table in the laboratory, one had 20 tempting cookies fresh from the oven and the other had 20 radishes. Participants were asked to try two or three pieces from one plate to induce a fair taste perception. Participants in the ego-depletion condition were asked to try only radishes. They could smell but not eat the cookies. Participants in the nondepletion condition were asked to try the cookies but not the radishes. Because it is more difficult for most individuals to eat radishes than cookies, the experiment is based on the assumption that eating radishes requires willpower whereas eating cookies does not (Baumeister et al., 1998). The experimenter left the room after fully explaining the requirements to participants.

After 5 minutes had elapsed, the experimenter returned to the laboratory and asked participants to assess how difficult and how effortful it was during the taste perception task on a 5-point Likert scale ($1 = \text{not at all}, 5 = \text{very}$), where higher scores indicate stronger depletion (Chow, Hui, & Lau, 2015). We then measured mood, which is often applied following ego-depletion manipulation to examine if the manipulation affects mood (Bertrams, Englert, & Dickhäuser, 2010). Participants assessed the six items on a bipolar scale (e.g., unhappy – happy, unpleasant – pleasant, bad – good), ranging from -3 to 3 (recoded from 1 to 7, with higher scores indicating more positive mood). Cronbach’s alpha was .96, and the mood was computed as the average of the six items. The experimenter also noted the number of cookies or radishes that had been consumed.

Self-persuasion intervention phase. Participants then completed a writing task (Bellé, 2013) to
manipulate state PSM. Participants in the self-persuasion-intervention (SPI) condition were asked to write an article to introduce the nature and meaning of their job, and to then promote a project to recruit undergraduates to volunteer for that job. To ensure that participants treated the writing task seriously, they were told that their performance would be assessed on the number of volunteers recruited for the next weekend. Participants in the control condition described the campus scenery for visiting foreigners. The writing task lasted about 15 to 20 minutes.

Public service motivation measurement phase (Phase Two). All participants completed the PSM survey, that is, state PSM, for the second time, the purpose of which was to examine the effect of the SPI. Cronbach’s alpha in this survey was .83.

Self-control measurement phase. After participants had finished the previous task and left the laboratory, they each received a handout, in which they were informed that a prestigious professor would give a lecture in the field of management in the near future. As the professor’s lectures always attracted a large audience, the organizer wanted to know how many people were interested in attending. The lecture was possibly going to be held on one night during the weekend (i.e., when there was no class for the participants). Participants were asked to rate how likely it was that they would attend the lecture on a 9-point Likert scale (1 = not at all, 9 = extremely).

A debriefing, which included a probe for suspicion about the true purpose of the study, followed. No participant expressed suspicion.

Results

Manipulation Check

For the manipulation checks for ego depletion, the experimenter ensured that participants had eaten two or three pieces only of one type of food during the taste perception task. Participants in the radish group (M = 3.96, SD = 1.5) reported greater difficulty performing the eating task than did those in the cookie group (M = 2.94, SD = 0.89), t(93) = 4.02, p < .001, with a confidence interval (CI) for difficulty of 95% CI [0.52, 1.53], d = 0.83. Participants in the radish group (M = 3.98, SD = 1.33) also reported greater effort to eat the assigned food than did those in the cookie group (M = 3.09, SD = 0.86), t(93) = 3.89, p < .001, 95% CI [0.44, 1.35], d = 0.81. Thus, the manipulation of ego depletion was successful.

Participants in the radish group reported the same level of mood (M = 4.34, SD = 1.21) as those in the nondepletion condition (M = 4.18, SD = 0.98), t(93) = 0.73, 95% CI [0.28, 0.62], p = .467. Hence, intention to attend the lecture was not because of differential moods engendered by the depletion manipulation. No other difference was found for the PSM baseline between the depletion (M = 3.67, SD = 0.38) and nondepletion condition (M = 3.68, SD = 0.32), t(93) = -0.248, 95% CI [-0.16, 0.12], p = .805. Thus, the two groups were also homogeneous in the trait PSM baseline.

Main Analysis

Descriptive statistics are displayed in Table 1. As preliminary analysis showed that the control variables (i.e., gender, age, tenure) were not significantly related to self-control (Fs < 1, ns), they were not included in further analysis.
Table 1. Descriptive Statistics and Correlations Among Study Variables

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1.60</td>
<td>0.51</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Tenure</td>
<td>5.63</td>
<td>1.81</td>
<td>.19</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Age</td>
<td>31.08</td>
<td>4.12</td>
<td>.19</td>
<td>.40**</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
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<td>–</td>
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</tr>
<tr>
<td>PSM</td>
<td>3.67</td>
<td>0.35</td>
<td>-.04</td>
<td>-.14</td>
<td>-.07</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Group</td>
<td>1.49</td>
<td>0.50</td>
<td>-.07</td>
<td>-.10</td>
<td>.06</td>
<td>-.03</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>SPI</td>
<td>1.49</td>
<td>0.50</td>
<td>-.07</td>
<td>-.08</td>
<td>.03</td>
<td>-.02</td>
<td>-.01</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Self-control</td>
<td>6.40</td>
<td>2.05</td>
<td>.00</td>
<td>-.01</td>
<td>.03</td>
<td>.65**</td>
<td>-.24*</td>
<td>.33**</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Emotion</td>
<td>4.26</td>
<td>1.10</td>
<td>.07</td>
<td>-.05</td>
<td>.02</td>
<td>-.02</td>
<td>.08</td>
<td>-.08</td>
<td>.12</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Difficulty</td>
<td>3.45</td>
<td>1.34</td>
<td>-.04</td>
<td>.06</td>
<td>.14</td>
<td>.11</td>
<td>.39**</td>
<td>-.25*</td>
<td>-.31**</td>
<td>-.10</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Effort</td>
<td>3.54</td>
<td>1.20</td>
<td>.04</td>
<td>.03</td>
<td>.14</td>
<td>-.04</td>
<td>.37**</td>
<td>-.26*</td>
<td>-.25*</td>
<td>-.02</td>
<td>.88**</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>PSM2</td>
<td>3.87</td>
<td>0.54</td>
<td>-.02</td>
<td>-.17</td>
<td>-.16</td>
<td>.64**</td>
<td>.02</td>
<td>.25*</td>
<td>-.48**</td>
<td>-.05</td>
<td>-.08</td>
<td>.00</td>
<td>–</td>
</tr>
</tbody>
</table>

Note. N = 95. PSM = public service motivation, SPI = self-persuasion intervention. PSM and PSM2 on a scale from 1 to 5, self-control between 1 and 9, emotion between 1 and 7, difficulty and effort on a scale from 1 to 5. * p < .05, ** p < .01.

We conducted a hierarchical regression analysis to measure self-control performance, with group (0 = nondepletion, 1 = depletion), SPI (0 = control, 1 = SPI), and trait PSM (continuous, mean-centered) as predictors in the first step, all two-way interactions in the second step, and the three-way interaction in the third step (Cohen, Cohen, West, & Aiken, 2003). For each analysis, multicollinearity statistics were within acceptable limits, indicating low levels of multicollinearity (variance inflation factors < 6.04). Results are shown in Table 2.

Table 2. Multiple Regression Analysis Results for Self-Control Performance

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>B</td>
<td>SE</td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>(Constant)</td>
<td>5.86***</td>
<td>0.24</td>
<td>5.84***</td>
<td>0.29</td>
<td>5.77***</td>
<td>0.29</td>
</tr>
<tr>
<td>PSM</td>
<td>1.27***</td>
<td>0.14</td>
<td>1.50***</td>
<td>0.27</td>
<td>1.878***</td>
<td>0.32</td>
</tr>
<tr>
<td>Group</td>
<td>-.64*</td>
<td>0.28</td>
<td>-.66</td>
<td>0.40</td>
<td>-.63</td>
<td>0.40</td>
</tr>
<tr>
<td>SPI</td>
<td>1.72***</td>
<td>0.28</td>
<td>1.73***</td>
<td>0.40</td>
<td>1.76***</td>
<td>0.40</td>
</tr>
<tr>
<td>Group x PSM</td>
<td>-.29</td>
<td>0.29</td>
<td>-.29</td>
<td>0.29</td>
<td>-.96*</td>
<td>0.43</td>
</tr>
<tr>
<td>SPI x PSM</td>
<td>-.10</td>
<td>0.29</td>
<td>-.10</td>
<td>0.29</td>
<td>-.80</td>
<td>0.44</td>
</tr>
<tr>
<td>Group x SPI x PSM</td>
<td>.07</td>
<td>.57</td>
<td>.06</td>
<td>.57</td>
<td>.07</td>
<td>.57</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.583</td>
<td>.589</td>
<td>.608</td>
<td>.570</td>
<td>.561</td>
<td>.577</td>
</tr>
<tr>
<td>F</td>
<td>42.646***</td>
<td>21.014***</td>
<td>19.284***</td>
<td>42.646***</td>
<td>21.014***</td>
<td>19.284***</td>
</tr>
</tbody>
</table>

Note. PSM = public service motivation, SPI = self-persuasion intervention. * p < .05, *** p < .001.

As predicted, trait PSM positively affected self-control performance, B = 1.27, t(91) = 9.16, p < .001, 95% CI [1.0, 1.55]. Nevertheless, the implication of trait PSM on self-control did not change when other variables were introduced. We had predicted this, because trait PSM is a determinant for effective self-control. At the same time, group had a significant negative effect on self-control, B = -0.64, t(91) = -2.32, p < .05, 95% CI [1.0, 1.55].
indicating that their performance deteriorated in the second self-control task where there was depletion. Thus, Hypothesis 1 was supported. SPI also had an effect on self-control performance, $B = 1.72, t(91) = 6.22, p < .001, 95\% \text{ CI} [1.17, 2.27]$. In Model 2, the negative impact of ego depletion on self-control was attenuated when the two-way interactions of predictors and moderators were introduced, $B = -0.66, t(88) = -1.63, p = .11, 95\% \text{ CI} [-1.46, 0.14]$.

When the three-way interaction of the three variables was added to the regression equation, the effect of trait PSM was more pronounced. As shown in Model 3, trait PSM moderated the effects of ego depletion on self-control, $B = -0.96, t(87) = -2.22, p < .05, 95\% \text{ CI} [-1.81, -0.10]$. The results showed that higher trait PSM can significantly counter the negative effect of ego depletion (see Figure 1). Therefore, Hypothesis 2 was supported. In addition, trait PSM promoted subsequent self-control performance in the nondepletion condition.

![Figure 1. Effects of the interaction between ego depletion and trait public service motivation (PSM) on self-control.](image)

Trait PSM, group, and SPI also interactively influenced self-control, $B = 1.18, t(87) = 2.06, p < .05, 95\% \text{ CI} [0.04, 2.32]$. As shown in Figure 2, higher trait PSM was correlated with higher self-control scores. In addition, when participants were ego-depleted, SPI compensated for the negative influence of depletion on self-control, especially when trait PSM was higher. When participants were not ego-depleted, both trait PSM and SPI promoted better self-control performance. Thus, Hypothesis 4 was supported.
To examine if SPI led to the increase of PSM, we performed a paired $t$ test between baseline and follow-up. Results showed that PSM was significantly higher after SPI ($M = 3.87, SD = 0.54$) compared with baseline ($M = 3.67, SD = 0.32$), $t(94) = 4.54, p < .001, 95\% \text{ CI}_{\text{diff}} [0.11, 0.28], d = 0.94$. No significant difference was found between the ego-depletion group ($M = 0.21, SD = 0.46$) and the nondepletion group ($M = 0.17, SD = 0.37$), $t(93) = 0.40, 95\% \text{ CI}_{\text{diff}} [-0.14, 0.21], p = .69$. However, for the participants in the SPI condition ($M = 0.33, SD = 0.39$), state PSM was higher compared with those in the control condition ($M = 0.05, SD = 0.40$), $t(93) = 3.41, p = .001, 95\% \text{ CI}_{\text{diff}} [0.12, 0.44], d = 0.71$. Thus, Hypothesis 3 was supported.

A subsequent repeated measures analysis of variance showed that SPI had a significant influence on state PSM, $F(1,91) = 12.41, p = .001, \eta^2_p = .12$. Meaningful interaction was identified between group and SPI, $F(1,91) = 9.45, p < .01, \eta^2_p = .09$. A further simple-effect test showed that SPI resulted in more PSM variety for ego-depleted participants compared with non-ego-depleted participants. Results of the simple-effect test are shown in Figure 3.

Figure 2. A three-way interaction among ego depletion/nondepletion (egodep/nondep), self-persuasion intervention (SPI), and trait public service motivation (PSM) to explain self-control.
Discussion

Our results, which showed that ego depletion had an effect on participants’ self-control performance, and that both trait and state PSM played a moderating role between ego depletion and self-control, supported our hypotheses. Our finding that showed that ego-depleted (vs. nondepleted) public servant participants showed lower behavioral intention to attend an extra lecture, was consistent with previous results regarding the aftereffect of ego depletion (e.g., Vohs et al., 2012). This implied that if they exerted self-control continuously, they showed decreased performance in demanding tasks.

Our findings also showed that PSM moderated the relationship between ego depletion and self-control in public sector organizations. PSM is useful in predicting public servants’ and organizations’ performance (Bright, 2007). PSM stimulates employees to regulate themselves to fulfill different situational requirements when the value of the situation is congruent with their own values (Kristof-Brown, Zimmerman, & Johnson, 2005). Individuals are prone to conserve energy or effort, which guides their self-regulation (Baumeister et al., 1998), and when they feel depleted, they prefer passive behavior rather than active and effortful activity (Vonasch, Vohs, Pocheptsova Ghosh, & Baumeister, 2017). PSM, however, moderates the negative aftereffect of ego depletion by encouraging individuals to engage in effortful activity in demanding situations, and to suspend mental passivity.

It is very important that our results revealed not only that trait PSM but also state PSM counteracted the detrimental effects of ego depletion on self-control. On one hand, higher trait PSM was linked to better self-control performance. It appeared that trait PSM functioned as a protective factor for participants to resist different temptations in daily life. On the other hand, activating state PSM was beneficial for participants to strengthen the effects of PSM that compete with self-control resource deficit. As state PSM promoted the performance of participants with both higher and lower PSM, this implied that state (vs. trait) PSM is more
important in public administration. Our results that are consistent with Bellé’s (2013, 2014) findings, demonstrated that SPI could potentially increase state PSM. When participants wrote down their own reflections and public advocacies, the results showed a notable increase in state PSM. This suggested PSM is not a stable trait but is subject to change with contextual cues.

**Theoretical and Practical Implications**

As we demonstrated that SPI enhanced individual levels of PSM, it was possible to go beyond the cross-sectional design that is typical in PSM literature, and to experimentally manipulate PSM and examine how PSM imposed its role on other variables. This can broaden the scope of prediction of PSM (Wright & Grant, 2010). Also, our finding that PSM is dynamic shed light on how to cultivate PSM in public service organizations. Participants with higher PSM not only had greater satisfaction with their job, but were also more prone to dedicate themselves to their job (Taylor, 2008). Public servants with PSM are oriented toward public interests, and the institutional context can help foster their PSM (Andrews, 2016).

Our results have several practical implications. For example, public administrators need to encourage public servants to reflect on their work and on the meaning of public service to facilitate higher PSM, because the institutional context affects the construction of a PSM-based identity (Vandenabeele, 2007). Senior administrators in public organizations also need to develop relevant career programs and provide positive feedback to satisfy employees’ three basic needs (autonomy, competence, and relatedness) as proposed in the self-determination theory, and to foster PSM (Andrews, 2016).

Our finding that subsequent self-control performance will deteriorate when there is ego depletion is also important for public administrators. As self-control deficits are linked to job burnout and poor job performance (Hunt & Madhyastha, 2012), public administrators need to arrange work schedules to ensure that employees have sufficient strength to fight against ego depletion. Public servants themselves should always regulate themselves to work in a nondepleted condition.

**Limitations and Directions for Future Research**

There are several limitations in this study. First, although our results show that trait PSM is significantly correlated with self-control, we cannot conclude that there is a direct relationship between trait PSM and self-control. An unrecognized third factor may covariate with these factors. For example, people with high (vs. low) PSM may be more likely to perform a high level of self-monitoring. Thus, the relationship between trait PSM and self-control remains open to debate.

As our experimental design also limits the scope of prediction, future researchers need to integrate both cross-sectional and experimental designs. Future researchers can also include additional work-related tasks to determine the degree to which employees deplete their resources, and to what extent PSM counteracts the detrimental effects of ego depletion.

Third, because of cost considerations, our sample size was not large, and this may have resulted in sampling bias. Our participants, who were primarily administrators or managers who had worked in the public sector for a number of years, are different from recently employed professionals. Therefore, future researchers should diversify the sample.

In conclusion, we confirmed the aftereffect of ego depletion on subsequent self-control, and the moderating role of PSM in the relationship between ego depletion and self-control. Our results suggest that PSM can be changed over time and influenced by the institutional context, where it can be targeted and heightened, and public servants can effectively regulate themselves in demanding self-control situations and can enhance
their job performance.

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