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Perceived Overqualification and Cyberloafing: A Moderated-Mediation Model Based on Equity Theory

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Abstract

Cyberloafing is prevalent in the workplace and research has increasingly focused on its antecedents. This study aims to extend the cyberloafing literature from the perspective of perceived overqualification (POQ) among civil servants (government employees). Drawing on equity theory, we examined the effect of POQ on cyberloafing, along with the mediating role of harmonious passion on the POQ–cyberloafing relationship and the moderating role of the need for achievement on strengthening the link between POQ and harmonious passion. Using time-lagged data from a sample of 318 civil servants in China, we found that (1) POQ was positively related to cyberloafing; (2) harmonious passion mediated this relationship; (3) the need for achievement moderated the effect of POQ on harmonious passion as well as the indirect effect of POQ on cyberloafing via harmonious passion. Based on the findings, we discussed theoretical and managerial implications and provided future research avenues.

Keywords Perceived overqualification · Harmonious passion · Cyberloafing

Introduction

The incorporation of Internet technologies and information systems has become critical in achieving maximum work efficiency in the 21st-century knowledge economy (Kidwell 2010; Lytras and de Pablos 2011). Meanwhile, the misuse of Internet resources is becoming rampant (Liberman et al. 2011; Weatherbee 2010). Cyberloafing, as a deviant workplace behavior related to the misuse of Internet resources, describes employees' intentional use of the Internet to engage in activities that are irrelevant to their work during working hours (Lim 2002; Lim and Chen 2012; Mills et al. 2001). Although some scholars have claimed that such behaviors might be restorative (some employees, for example, may consider cyberloafing as a palliative response to adverse work experiences) and not necessarily counterproductive (e.g., Anandarajan and Simmers 2005; Landers and Callan 2014; Lim and Chen 2012), it does not much

alter the fact that these cyber activities including emailing and browsing conducted at the workplace during work hours account for an unproductive use of time and detract employees from fulfilling their work demands. As a result, cyberloafing not only threatens employees' productivity but also further impairs the organizational goals of development (Askew et al. 2011; Lim 2002; Lim and Teo 2005). Thus, it is not surprising that a considerable body of both academic research and practitioner interest has focused on understanding the antecedents of cyberloafing (Askew et al. 2014; Blanchard and Henle 2008; Lim 2002; Sheikh et al. 2015).

However, the extant studies on cyberloafing suffer from several shortcomings. First, most of the prior research concerning the antecedents of cyberloafing has focused on inherent employee characteristics and exterior environmental factors. Little research has given attention to the impact of employees' subjective perceptions on cyberloafing (Liberman et al. 2011). One interesting area in this respect is the exploration of the effect of employee perceived overqualification (POQ) on cyberloafing, upon which no prior research has touched. Second, as the existing studies on cyberloafing mainly investigated this deviant behavior in general management fields such as educational organizations (Akbulut et al. 2016; Prasad et al. 2010) or business enterprises (Sheikh et al. 2015; Varghese and Barber 2017), we know little about

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Fig. 1 The conceptual model of this study
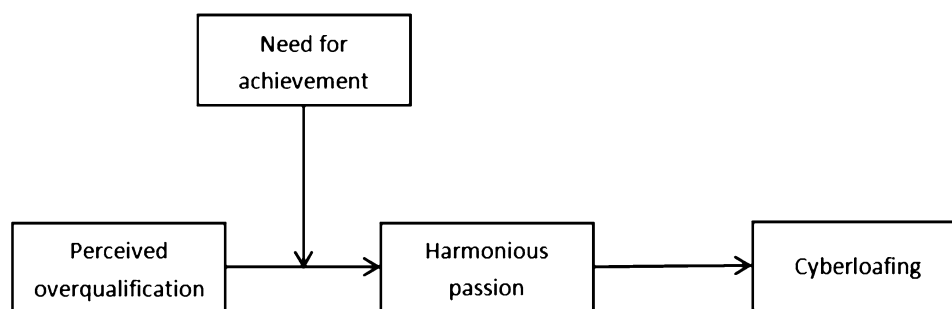
the phenomenon of cyberloafing in the context of civil service, in which it is also rampant (Hernández et al. 2016).

We thus seek to extend the cyberloafing literature from the perspective of employees' subjective perceptions (i.e., POQ), and to investigate whether, how, and when POQ affects employee cyberloafing. The existing research demonstrates that employee POQ is related to several negative employee work attitudes (such as decreased well-being, commitment, and satisfaction) and some damaging workplace behaviors (e.g., withdrawal, counterproductive work behaviors, and turnover) (Bolino and Feldman 2000; Erdogan and Bauer 2009; Fine and Nevo 2008; Liu et al. 2015; Lobene and Meade 2013; Maynard and Parfyonova 2013; Wu et al. 2015). In line with the considerable evidence that POQ adversely affects employees, we propose that POQ can be an important antecedent of employee cyberloafing.

To respond to the calls for further study on cyberloafing (Jia et al. 2013) and to enrich the literature on POQ (Hu et al. 2015; Liu et al. 2015), we explore the underexamined links between POQ and cyberloafing, and extend the scope of the extant research to include a new mechanism underlying the impact of POQ on cyberloafing based on equity theory (Adams 1965; Carrell and Dittrich 1978; Huseman et al. 1987). POQ would raise employees' feelings of being treated unjustly by their organization and employers (Lobene and Meade 2013; Maynard et al. 2014; Sauley and Bedeian 2000). Employees who face such unfair situations may experience more frustration, which will thus decrease their harmonious passion to work. Without enough passion for work, they are more likely to engage in non-work-related activities such as cyberloafing (Dalal 2005; Ambrose et al. 2007). Thus, it is predicted that harmonious passion will be a significant mechanism underlying the effects of POQ on cyberloafing.

In this study, we further aim to unveil a boundary condition under which the negative effect of POQ would be exacerbated or buffered. We obtain this condition by investigating the moderating role of the need for achievement, which is defined as the personal desire to fulfill difficult and challenging goals (McClelland 1987). In line with equity theory, overqualified employees with high need for achievement will have aggravated feelings of inequity due

to their current situation in which their job requirements are not suited to their qualifications and are greatly lacking in challenge (Johnson and Johnson 1996). Accordingly, they tend to be more frustrated when they fail to realize their achievement and are more likely to experience low harmonious passion in their work. Thus, the need for achievement provides an essential boundary condition in the effect of POQ on harmonious passion, which is helpful to understand how and when POQ affects employees' harmonious passion and cyberloafing.

In addition, we particularly expect to enrich the cyberloafing literature within a new context (i.e., government departments in which cyberloafing permeates universally) and explore the influence of POQ on civil servants' cyberloafing. Civil servants, as government sector employees, use the Internet to manage official business, which heightens the potential for engaging in cyberloafing (RuningSawitri 2012). In particular, in China, civil servants constitute a special group due to their huge numbers (7.167 million in total by the end 2015[1]). Under such circumstances, civil servants tend to slack off at work, engaging in cyberloafing such as surfing the Internet and emailing during work hours. Therefore, it is important to identify why such deviant behavior commonly occurs among civil servants in practical terms. The conceptual model for this study is presented in Fig. 1.

Theoretical Background and Hypotheses Development

POQ and Cyberloafing

Cyberloafing was first introduced by Kamins (1995) to describe employees' intentional use of the Internet in the workplace to engage in non-work-related surfing or emailing activities (Lim 2002; Lim and Chen 2012; Mills et al.

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[1] According to the official report of Ministry of Human Resources and Social Security of the People's Republic China. http://www.mohrss.gov.cn/SYrlzyhshbzb/dongtaixinwen/buneiyaowen/201605/t20160530_240967.html.

2001). Existing studies indicate that universality, crypticity, and harmfulness are the three main characteristics of cyberloafing. First, existing studies show that more than 80% of employees send non-work-related e-mails or surf the Internet for entertainment during work hours (Lim and Teo 2005), and more than 60% spend some of their work time on social networking sites (Mercado et al. 2017). This suggests that cyberloafing is a universal phenomenon in the workplace. Second, employees who engage in cyberloafing also stare at their computer screens, which creates the appearance that there is no difference between cyberloafers and those who are actually working. Thus, it is much easier to conceal and more difficult to observe cyberloafing (Lavoie and Pychyl 2001). Third, cyberloafing, such as checking personal e-mails and browsing the web, not only leads to unproductive work time, but also distracts the employees. In addition, employees' personal online activities may put organizations at risk (e.g., accidentally catching a virus) (Lim and Chen 2012). As a result, cyberloafing will inevitably harm employee job performance and organizational goals (Lim 2002).

Given the adverse influence cyberloafing has on organizations and employees, the extant research has paid close attention to the antecedents of cyberloafing to determine why this phenomenon widely occurs (Askew et al. 2014; Lim 2002; Sheikh et al. 2015). However, most attention has been paid to external environmental factors (e.g., organizational policies, job stress) and employees' inherent characteristics (e.g., demographics, personality traits) (Henle et al. 2009; Jia et al. 2013; Jia 2008; Prasad et al. 2010; Runing-Sawitri 2012). There is a dearth of research on the impact of employee POQ—an employee's feeling that their education, skills, and/or experience exceed the basic qualifications for their job (Hu et al. 2015; Johnson and Johnson 1996; Khan and Morrow 1991)—on cyberloafing (Liberman et al. 2011).

From the person-environment-fit perspective (Kristof-brown et al. 2005), POQ mirrors a poor person-job-fit situation, in which the jobs occupied by employees are beneath their qualifications (Maynard and Parfyonova 2013). This raises the feeling that they have not been justly assigned (Lobene and Meade 2013; Maynard et al. 2014; Sauley and Bedeian 2000). According to equity theory, employees seek to maintain equity between the inputs that they bring to work and the outputs that they receive from it (Adams 1963; Ryan 2016). When employees feel they are overqualified compared to their position requirements, they may think that it is unequal in relation to the tradeoff between their inputs (e.g., their education, skills, and experience) and their rewards (e.g., opportunities to show and develop themselves); they tend to believe that they deserve a better position that matches their qualifications to fully show their aptitudes (Johnson et al. 2002). If this demand is not met, they are likely to experience negative emotions and will

decrease their work effort (Liu et al. 2015; Luksyte et al. 2011), thus resulting in the occurrence of workplace deviance such as cyberloafing.

Equity theory further indicates that individuals actively restore equity when they are under circumstances of inequity (Carrell and Dittrich 1978; Huseman et al. 1987). In the case of POQ, employees may feel unfair due to the organization putting them in a mismatching position (Liu and Wang 2012), and they are likely to turn to their personal resources to deal with the unfair treatment. Accordingly, they will reduce their investment in working resources, which will then lead to the occurrence of deviant workplace behaviors (i.e., cyberloafing) (Aquino et al. 1999; Skarlicki and Folger 1997). Therefore, it is logical to expect that POQ will be an important driving factor in employee cyberloafing. Accordingly, we propose the following hypothesis:

Hypothesis 1 POQ is positively related to cyberloafing.

The Mediating Role of Harmonious Passion

Harmonious passion is defined as an individual's positive feelings of autonomously enjoying their work and their willingness to invest time and energy in the job (Fernet et al. 2014; Vallerand et al. 2003), thus suggesting strong motivation to be involved in that specific work (Houlfort et al. 2015; Trépanier et al. 2014). This refers to the self-directed internalization of work into one's identity (e.g., a feeling that the work is meaningful and important) (Vallerand et al. 2003; Vallerand and Houlfort 2003) without any external pressure (e.g., a feeling of social acceptance) (Burke et al. 2015; Dubreuil et al. 2014). Thus, harmonious passion is basically affected by employee subjective factors, which can be controlled by themselves (Dubreuil et al. 2014; Forest et al. 2012). As mentioned above, POQ refers to an employee's subjective feelings that their qualifications exceed the needs of their job (Hu et al. 2015; Johnson and Johnson 1996; Khan and Morrow 1991). We therefore posit that such feelings of overqualification will affect employee harmonious passion.

In line with the equity theory (Adams 1965; Huseman et al. 1987; Ryan 2016), an employee will judge the decisions of an organization (e.g., how to allocate their working position), and subsequently react to attitudes and behaviors based on their perceptions of these decisions either fair or unfair. Overqualified employees believe they have been unjustly positioned by organizations in which their qualifications go beyond their position requirements (Hu et al. 2015). They naturally tend to think their jobs are unable to completely show their aptitudes and satisfy their career development pursuits (Johnson et al. 2002). As a result, they may become depressed (Maynard et al. 2014), and their harmonious passion for work will decrease (Fernet et al. 2014;

Vallerand et al. 2003). In particular, situations in which over-qualified employees work with colleagues who just hold the right or even less than adequate qualifications may further reinforce these employees' feelings of unfairness in their workplace (Erdogan et al. 2011). This will make them feel that they do not belong and will hamper their inclination to internalize the work into their identity (Vallerand et al. 2003). That is, POQ damages employees' fondness for work and decreases their harmonious passion (Johnson and Johnson 2000).

Moreover, equity theory suggests that employees are attentive to the equity of situations within the workplace (Tabibnia et al. 2008), and they tend to react to their organizations' actions (Colquitt et al. 2006; Greenberg 1987). That is, with decreased harmonious passion for work in unjust overqualification situations, employees are apt to respond in ways similar to engaging in cyberloafing. The extant research suggests that harmonious passion is related to an expansive list of various outcomes, regardless of positive or negative behaviors (Burke et al. 2015; Edwards and Rothbard 2000; Ho et al. 2011). Higher harmonious passion certainly promotes positive work outcomes, while lower harmonious passion provokes deviant activities (e.g., cyberloafing) (Fernet et al. 2014; Houlfort et al. 2015). Therefore, employees with low harmonious passion are more likely to engage in non-work-related cyberloafing (Dalal 2005; Ambrose et al. 2007). Thus, we propose that POQ negatively affects employee harmonious passion, which in turn promotes the occurrence of cyberloafing. Accordingly, we propose the following hypothesis:

Hypothesis 2 Harmonious passion mediates the relationship between POQ and cyberloafing.

The Moderating Role of the Need for Achievement

The need for achievement, an involuntary motivation that drives people to perform well or improve their performance, is defined as the desire to fulfill difficult and challenging goals for personal reasons (McClelland 1987). Individuals with a high level of need for achievement tend to exhibit their abilities by accomplishing difficult tasks while maintaining consistently high standards (McClelland and Watson 1973; Pang 2010; Schultheiss et al. 2014). Such individuals consistently seek immediate feedbacks on their performance, so they can improve in the future (Boyatzis and Kolb 1995). In contrast, individuals with a low level of need for achievement might be tempted to maintain the status quo, and they lack the ambition to pursue challenging goals and exert less effort on continuous improvement (Loon and Casimir 2008). Clearly, when an individual holds a position in which the requirements are below their skills, experience, and knowledge, he or she may respond differently depending on his

or her need for achievement, and differential work passion may be triggered.

Equity theory (Adams 1963, 1965; Carrell and Dittrich 1978; Huseman et al. 1987; Ryan 2016) demonstrates that employees who perceive that they are overqualified considering that their input into work and their return got from work are unequal. Such feelings are particularly prominent for individuals with high need for achievement. On the one hand, overqualified employees with a high need for achievement have an intrinsic motivation to demonstrate their abilities in accomplishing difficult tasks and performing well in their positions (Pang 2010); on the other hand, they feel that the requirements of their job are below their qualifications and fail to provide a challenge. Such a contradictory situation will depress them and restrain their harmonious passion for their work (Luksyte et al. 2011). That is, overqualified employees who have a high need for achievement may suffer more from such a person-job mismatch (i.e., overqualification); thus, they are more vulnerable to a decrease in harmonious passion for their work. In other words, overqualified employees with high need for achievement will have more intense feelings of unfair that their job requirements are far below their abilities and that they lack challenge. Therefore, they will feel more frustration from failure to achieve and are thus more likely to experience low harmonious passion.

However, overqualified employees with a low need for achievement essentially lack the ambition to become involved in their work and tend to maintain the status quo. Thus, they are relatively insensitive to a person-job mismatch and will not necessarily experience decreased harmonious passion. That is, under the POQ situation, employees who hold low need for achievement may be less sensitive to declines in their harmonious passion, as they feel less inequity in their current positions. Accordingly, they are less likely to respond with lower levels of harmonious passion. Accordingly, we propose the following hypothesis:

Hypothesis 3 Need for achievement moderates the negative relationship between POQ and harmonious passion such that the negative relationship is stronger when employees have a high need to achieve.

Based on the above arguments, we propose an integrated framework in which harmonious passion mediates the impact of POQ on cyberloafing, and need for achievement moderates the relationship between POQ and harmonious passion. Hence, it is logical to predict that the indirect effect of POQ on cyberloafing via harmonious passion will be stronger among employees with a high need for achievement. Accordingly, we propose the following hypothesis:

Hypothesis 4 Need for achievement moderates the indirect effect of POQ on cyberloafing via harmonious passion such

that the indirect effect is stronger when employees have a high need to achieve.

Method

Sample and Procedures

We collected data from the Anhui province of China in three stages, which helps reduce potential common method variance (Podsakoff et al. 2003). In the first-wave survey (T1), the respondents were asked about their levels of POQ, need for achievement, and demographic information. In the second-wave survey (T2), which was conducted 2 months later, the participants reported their feelings of harmonious passion. After another 2 months, in the third-wave survey (T3), the respondents rated their cyberloafing.

Using name lists provided by the director of personnel and a coding system, we ensure that the three-stage surveys were obtained from the same participants. In the first wave, 456 usable questionnaires were returned, yielding a response rate of 85.23%. In the second wave, 382 questionnaires were returned, a response rate of 83.77%. In the third wave, 318 completed questionnaires were received, a response of 83.25%. To summarize, our final sample includes 318 respondents. Of the 318 respondents, 60.4% were male. They varied in age, and 49.7% of the participants ranged from 26 to 35 years old. With regard to their educational background, 3.8% of the respondents held a high school degree or below, 75.5% had a bachelor's degree, and 20.8% had a master's or doctoral degree.

Measures

We conducted the survey in China, and appropriate translation and back-translation procedures to ensure the reliability and validity of the survey instrument (Brislin 1980). Furthermore, to guarantee that all items were applicable to the research context, we pretested all the items with a small group of civil servants following the recommendations from Schaffer and Riordan (2003). The respondents provided their responses on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

POQ

We used a nine-item scale, originally developed by Maynard et al. (2006), to measure employee perceptions that their education level, skills, abilities, training, and working experience exceeded job requirements. A sample item was "I have more abilities than I need to do my job." Cronbach's alpha was 0.75.

Harmonious Passion

We measured employee's harmonious passion with a seven-item scale developed by Vallerand et al. (2003). This scale has been applied to a Chinese sample and has demonstrated high scale validity. For example, "I am completely taken with my job." Cronbach's alpha for this scale was 0.81.

Need for Achievement

We measured employee need for achievement with a seven-item scale developed by Steers and Braunstein (1976). A sample item was "I do my best work when my job assignments are fairly difficult." Cronbach's alpha was 0.71.

Cyberloafing

We measured cyberloafing using an abridged five-item version of Lim's (2002) cyberloafing scale (De Lara et al. 2006), including four items that refer to browsing activities and one item to e-mail activities. A sample item was "I use the Internet at work to visit websites and digital newspapers to seek information for personal reasons." Cronbach's alpha for this scale was 0.87.

Control Variables

Following previous research (Lim and Chen 2012), we chose employees' gender, age, education, and tenure as the control variables in our study. In addition, perceived underpayment has been considered associated with withdrawal behavior (Maynard et al. 2006); thus, we include perceived underpayment as a control variable, as we could not ignore the possibility that perceived low pay related to POQ provokes cyberloafing. The item is "To what extent do you think you are being paid less in your current job than others who have a similar education background?" (Maynard et al. 2006).

Results

Non-response Bias and Common Method Bias

According to Armstrong and Overton's (1977) recommendation, we examined non-response bias to enhance the validity of our study. The results indicated that there were no significant differences among these variables ($p > 0.05$) that would harm the results of our study.

In addition, since these control variables were self-reported, our research might be affected by common method bias (Podsakoff et al. 2003). As Harman (1976) suggested, we administered a single-factor test to examine the underlying seriousness of common method bias. Six factors had

Table 1 Results of the confirmatory factor analysis of the measures of the variables used in the study

Model	χ^2	df	χ^2/df	IFI	CFI	RMSEA
Baseline model (four-factor model)	531.07	293	1.81	0.90	0.90	0.05
Three-factor model 1: harmonious passion and need for achievement were combined into one factor	725.25	296	2.45	0.82	0.82	0.07
Three-factor model 2: POQ and harmonious passion were combined into one factor	757.68	296	2.56	0.81	0.81	0.07
Three-factor model 3: POQ and need for achievement were combined into one factor	776.56	296	2.62	0.80	0.80	0.07
Three-factor model 4: harmonious passion and cyberloafing were combined into one factor	915.51	296	3.09	0.74	0.74	0.08
Three-factor model 5: need for achievement and cyberloafing were combined into one factor	762.67	296	2.58	0.81	0.80	0.07

N = 318

IFI incremental fit index, *CFI* comparative fit index, *RMSEA* root-mean-square error of approximation

Table 2 Means, standard deviations, and correlations of all variables in the study

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	1.60	0.49									
2. Age	2.87	1.38	0.10								
3. Education	2.21	0.58	0.02	0.09							
4. Tenure	2.46	1.11	−0.01	0.40**	0.14**						
5. Underpayment	3.32	1.04	0.03	0.06	−0.003	0.04					
6. POQ	3.24	0.64	0.003	−0.06	−0.02	−0.07	0.19**	(0.75)			
7. Harmonious passion	3.79	0.64	0.07	−0.10	0.03	−0.04	−0.07	−0.41**	(0.81)		
8. Need for achievement	4.02	0.59	0.03	0.01	−0.01	−0.03	−0.01	−0.16**	0.29**	(0.71)	
9. Cyberloafing	1.93	0.75	−0.05	0.13**	0.05	0.07	0.07	0.29**	−0.39**	−0.27**	(0.87)

N = 318

Gender: "1" = male; "2" = female; Education: "1" = high school diploma or less; "2" = bachelor's degree; "3" = postgraduate degree or above

p < 0.05; **p* < 0.01; Cronbach's alpha appears in parentheses along the diagonal

eigenvalues larger than 1, with the first factor accounted for 23.16% of the variance. Since the first factor accounted for a small proportion of the total variance, and several factors emerged, common method bias did not appear to be a serious problem for our research (Podsakoff et al. 2003).

Confirmatory Factor Analysis

All variables included in this study were collected from the same source, and we therefore conducted a series of confirmatory factor analyses (CFAs) to examine the distinctiveness of our study constructs (Anderson and Gerbing 1988). The four-factor measurement model (i.e., POQ, harmonious passion, need for achievement, and cyberloafing) yielded a great model fit, with $\chi^2 = 531.07$, df = 293, IFI = 0.90, CFI = 0.90, and RMSEA = 0.05 (see Table 1). Furthermore, to determine the discriminant validity, we examined several alternative measurement models and compared them with the baseline model (the four-factor model) (Cheung and Rensvold 2002). As shown in Table 1, the baseline model fit the data better than any of the alternative models. In other words, the four key variables in our study demonstrated good distinctiveness. Therefore, discriminant validity was also confirmed.

Descriptive Statistics

Table 2 reports the means, standard deviations, and correlations of all variables in this study. The results show that POQ is positively correlated with cyberloafing ($r = 0.29$, $p < 0.01$) and negatively correlated with harmonious passion ($r = -0.41$, $p < 0.01$). Moreover, harmonious passion is negatively correlated with cyberloafing ($r = -0.39$, $p < 0.01$). These results provide initial support for our hypotheses.

Hypothesis Testing

We conducted hierarchical multiple regression analyses to test the first hypothesis by entering the control variables and POQ in separate steps when setting cyberloafing as the dependent variable. As indicated in Table 3, POQ is positively associated with cyberloafing ($\beta = 0.30$, $p < 0.01$, Model 6). Thus, Hypothesis 1 is supported.

Hypothesis 2 predicts that harmonious passion mediates the relationship between POQ and cyberloafing. The results show that POQ is negatively associated with harmonious passion ($\beta = -0.43$, $p < 0.01$, Model 2) and that harmonious passion is negatively related to cyberloafing ($\beta = -0.38$,

Table 3 Results of hypotheses testing

	Harmonious passion				Cyberloafing			
	M1	M2	M3	M4	M5	M6	M7	M8
Control variable								
Gender	0.08	0.08	0.07	0.07	−0.06	−0.07	−0.04	−0.04
Age	−0.11	−0.13*	−0.13*	−0.13*	0.12	0.13*	0.08	0.09
Education	0.04	0.03	0.04	0.04	0.04	0.04	0.05	0.05
Tenure	0.00	−0.03	−0.02	−0.04	0.02	0.03	0.02	0.03
Underpayment	−0.06	0.02	0.02	0.02	0.06	0.003	0.04	0.01
Independent variable								
POQ		−0.43**	−0.39**	−0.32**		0.30**		0.17**
Mediator								
Harmonious passion							−0.38**	−0.31**
Moderator								
Need for achievement			0.23**	0.24**				
Interaction								
POQ×need for achievement				0.16**				
F	1.36**	12.50**	14.47**	14.13**	1.63**	6.53**	10.19**	10.20**
ΔF	1.36**	66.76**	21.37**	9.10**	1.63**	30.26**	51.63**	28.70**
R^2	0.02	0.19	0.25	0.27	0.03	0.11	0.16	0.19
ΔR^2	0.02	0.17	0.05	0.02	0.03	0.09	0.14	0.08

$N = 318$

*$p < 0.05$; **$p < 0.01$

$p < 0.01$, Model 7). After adding harmonious passion, the positive effect of POQ on cyberloafing decreases ($\beta = 0.17$, $p < 0.01$, Model 8); however, harmonious passion remains negatively related to cyberloafing ($\beta = -0.31$, $p < 0.01$, Model 8). Thus, Hypothesis 2 is partially supported.

In addition, we conducted a bootstrapping analysis to test the statistical significance of the indirect effect. The indirect effect of POQ on cyberloafing through harmonious passion is estimated at 0.15 with a 95% bias-corrected confidence interval [0.09, 0.22]. As the bias-corrected confidence interval does not include zero, the indirect effect is considered statistically significant, providing additional support for Hypothesis 2.

To test Hypothesis 3, we used a moderated regression analysis to examine the moderating effect of need for achievement. Before performing the analysis, we mean-centered both the independent variable (POQ) and the moderator (need for achievement) to avoid potential multicollinearity (Aiken and West 1991). As shown in Table 3, the interaction between POQ and need for achievement is positively related to harmonious passion ($\beta = 0.16$, $p < 0.01$, Model 4). To better present the nature of the moderating effect, we adopted Aiken and West's (1991) procedures for computing slopes one standard deviation above and below the mean of need for achievement to plot the interaction. Figure 2 shows the interaction pattern, which is consistent with our hypothesis. Specifically, POQ is more negatively

related to harmonious passion when need for achievement is high ($\beta = -0.31$, $p < 0.01$) rather than low ($\beta = -0.10$, $p < 0.05$). Therefore, Hypothesis 3 is supported.

We used Edwards and Lambert's (2007) bootstrapping procedures to test Hypothesis 4 (moderated mediation). As shown in Table 4, the indirect effect of POQ on cyberloafing through harmonious passion varies significantly across levels of need for achievement ($\Delta\beta = 0.09$,
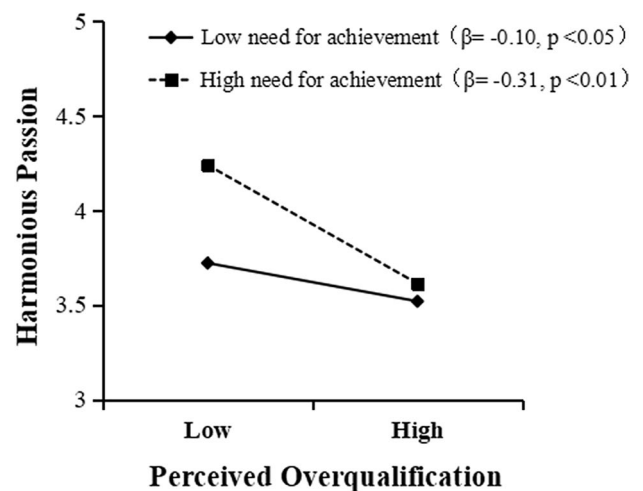

Fig. 2 Interactive effects of POQ and need for achievement on harmonious passion

Table 4 Results of the moderated path analysis

Moderator variable	POQ (X) → harmonious passion (M) → cyberloafing (Y)				
	Stage		Effect		
	First	Second	Direct effects	Indirect effects	Total effects
	(P_{MX})	(P_{YM})	(P_{YX})	($P_{YM}P_{MX}$)	($P_{YX} + P_{YM}P_{MX}$)
Simple paths for low need for achievement	−0.16*	−0.32**	0.12	0.05*	0.17
Simple paths for high need for achievement	−0.49**	−0.28**	0.23**	0.14**	0.37**
Differences	−0.33**	0.04	0.11	0.09*	0.20*

Low need for achievement refers to one standard deviation below the mean value of need for achievement; high need for achievement refers to one standard deviation above the mean value of need for achievement. Tests of differences for the direct, indirect and total effects were based on bias-corrected confidence intervals obtained from bootstrapping estimates

P_{MX} path from POQ to harmonious passion, P_{YM} path from harmonious passion to cyberloafing, P_{YX} path from POQ to cyberloafing

$N = 318$

*$p < 0.05$, **$p < 0.01$

$p < 0.05$). Specifically, the indirect effect of POQ on cyberloafing through harmonious passion is stronger when need for achievement is high ($\beta = 0.14$, $p < 0.01$) as opposed to when it is low ($\beta = 0.05$, $p < 0.05$). Hence, Hypothesis 4 is verified. Furthermore, Table 4 indicates that the difference in need for achievement in the first-stage effects is significant ($\Delta\beta = -0.33$, $p < 0.01$). Concretely, the effect of POQ on harmonious passion is stronger when need for achievement is high ($\beta = -0.49$, $p < 0.01$) rather than low ($\beta = -0.16$, $p < 0.05$), providing further support for Hypothesis 3. These results also demonstrate that need for achievement does not moderate the effect of harmonious passion on cyberloafing ($\Delta\beta = 0.04$, *n.s.*) or the direct effect of POQ on cyberloafing ($\Delta\beta = 0.11$, *n.s.*). In brief, the results of the moderated path analysis support the first-stage moderation (Hypothesis 3) and the moderated indirect effect through harmonious passion (Hypothesis 4).

Discussion

We explored the linking mechanism underlying POQ and cyberloafing in a sample of Chinese civil servants. Grounded in equity theory, we focused on the mediating role of harmonious passion and the moderating role of need for achievement. Using a time-lagged research design, we concluded that POQ negatively affects harmonious passion. This, in turn, increases the possibility of cyberloafing. Moreover, need for achievement strengthens the negative effect of POQ on harmonious passion and further moderates the indirect effect of POQ on cyberloafing through harmonious passion.

Theoretical Implications

This study contributes theoretically in several respects. First, we expand the cyberloafing literature from the perspective of employees' subjective perceptions by introducing a new antecedent—POQ. Although many researchers have called for more attention to be paid to the significant issues of cyberloafing and its antecedents (Jia et al. 2013; Liberman et al. 2011; Sheikh et al. 2015), the existing research has largely ignored the influence of POQ on cyberloafing. Our study not only responds to researchers' calls for more work on cyberloafing and its antecedents, but it also enriches the cyberloafing literature in providing new empirical evidence of an inherent relationship between POQ and cyberloafing.

Second, our research draws upon the equity theory to provide new and comprehensive insight for understanding the underlying mechanisms of the impact of POQ on cyberloafing. In line with equity theory, we suggested that POQ, as an unjust situation in the employment relationship, decreases employee harmonious passion, thus leading to cyberloafing. By doing so, we advanced an understanding of the causal process from POQ to cyberloafing and offered a complete framework for understanding how POQ affects employees' harmonious passion and cyberloafing. Furthermore, this study also contributes to research on the equity theory. Our research suggested that employees not only consider their time, effort, and enthusiasm as inputs that they bring to a job, but also regard their qualifications such as education, skills, and experience as contributions to the organizations. They may expect a fair return for what they contribute to their jobs. Our findings demonstrated that perceived inequity would arise in the case of feeling that they are overqualified, which might further lead to decreased harmonious passion and cyberloafing.

Third, we found an alternative factor (i.e., need for achievement) when addressing the boundary condition that strengthens the negative effect of POQ. Our findings demonstrate that a high level of need for achievement can serve as an amplifier of the decline in harmonious passion that results from POQ. By investigating the moderating role of need for achievement, we offer a new and vital boundary condition in which POQ can be more or less detrimental to employees' emotions and performance (Smith and Frank 2005). Last but not the least, by examining our conceptual model with a distinctive sample of public sector employees (Huma et al. 2017; RuningSawitri 2012), our study not only enriches the literature on POQ and cyberloafing in a new and important context—the public sector—but also enhances the external validity of the impact of POQ on employee cyberloafing.

Managerial Implications

Our study indicates that when civil servants experience POQ, they tend to have low levels of harmonious passion and sluggish working attitudes, becoming distracted and engaging in cyberloafing. This is not only costly to the government sector but also causes great damage to the public welfare. Thus, the findings of the current research will benefit policy-making and, in particular, the supervisors in the public sector to make decisions about how to control cyberloafing by focusing on important factors such as POQ.

First, administrators in the public sector should pay close attention to the recruitment process with which they select applicants, so that they select those who best fit the job instead of those who are overqualified. During the recruitment process, HR departments should provide detailed job previews so that applicants can have a clear and deep understanding of the job. Second, after employees are enrolled, managers should make efforts to achieve the best allocation of human resources and place subordinates in the right positions to prevent the occurrence of POQ. Third, administrators should keep a watchful eye on changes in employee mindset and make quick adjustments to employees' positions when they demonstrate that they exceed the experience, skills, and abilities required for their positions. In particular, for higher-qualified employees, managers can implement measures such as providing challenging tasks, building a supportive working environment, and delegating the proper level of authority to enhance employees' harmonious passion and thus lessen their cyberloafing.

This study also shows that employees' harmonious passion has a significant negative impact on cyberloafing, while POQ impairs harmonious passion. To reduce employee cyberloafing, proper interventions should be implemented when negative emotions occur and employee working passion decreases. Managers should consider the changes in their subordinates' moods and aim to help them maintain positive emotions and passion for their work to guard against the adverse influence of POQ on emotion to the greatest extent possible. For example, improved communication between leaders and members, and additional collective activities, can be implemented to improve participation and the sense of collective honor.

Furthermore, our findings suggest that need for achievement accelerates the negative effects of POQ on harmonious passion. That is, employees who have a high need to achieve will experience greater declines in harmonious passion when they face POQ. Thus, it is crucial for managers to guide their employees appropriately based on their individual need for achievement through career training and development planning. In this way, employees will be able to adjust their expectations and retain a positive mindset toward their careers.

Limitations and Future Research Directions

Our study suffered from several limitations that should be addressed in future research. First, as the key variables highlighted in this research were all obtained from the same source and through self-reporting, the results could be affected by common method bias (Podsakoff et al. 2003). In the present study, we carried out a three-stage data collection approach aimed at reducing this threat (Johnson et al. 2011; Podsakoff et al. 2012). Moreover, the single-factor test that we performed shows that common method bias is not a serious problem in this study; however, as cyberloafing is a sensitive topic, the respondents may not have given completely honest answers due to social desirability bias (Fisher 1993). Therefore, we encourage the use of alternative methods to self-reporting in investigating cyberloafing.

Second, we did not distinguish among different types of overqualification. Maynard (2011) has suggested that many studies assume that employees want to make the most of their talents and desire higher pay. However, some people voluntarily work in jobs for compensation that is significantly lower than what they are capable of earning. This type of "intentional mismatch" (Maltarich et al. 2011) may be common, as there are many examples of individuals pursuing personal interests or fulfilling family responsibilities. In addition, some individuals may voluntarily choose jobs for which they are overqualified to gain work experience with the goal of obtaining higher positions in the future (Dekker et al. 2002; Liu et al. 2014). Researchers argue that the results from such cases of voluntary overqualification would be quite different. They suggest that different types of overqualification may have different impacts on employees (Liu et al. 2015). Thus, it is also uncertain whether POQ will affect cyberloafing in similar ways if employees voluntarily choose less challenging positions. We hope further research will

examine the effects of different types of overqualification on civil servants' harmonious passion and cyberloafing.

Third, although the equity theory used in this study provides a new perspective to understand how POQ influences cyberloafing, there may be other theoretical frameworks that could explain the internal mechanism. For instance, self-regulatory theory and deprivation theory have been used to address the underlying mechanism between POQ and work-related outcomes (Hu et al. 2015; Zhang et al. 2016). In addition, as equity theory is considered as one of the justice theories, thus broad perspectives of organizational justice theories such as procedural justice and interactional justice can be used to investigate potential mechanisms underlying the overqualification-negative emotion link (Colquitt et al. 2006; Dusterhoff et al. 2014; Greenberg 1987; Tseng and Kuo 2014). In this study, harmonious passion only partially mediated the influence of POQ on cyberloafing; thus, we hope that future research will probe alternative mediating processes of POQ based on other theoretical frameworks to open the "black box" of the relationship between POQ and cyberloafing.

Fourth, we took an individual-based approach to study how individuals with different levels of need for achievement will view their overqualification situation and regulate themselves effectively in their work. In addition to need for achievement, future research can explore other boundary conditions in which the negative effect of POQ will be buffered or exacerbated. Additionally, future studies may wish to base on other theoretical perspectives to interpret the moderation effect. For example, organizational contingent factors may play a crucial role in turning overqualification into real advantages, such as perceptions of organizational justice climate and perceived organizational support. Will a stronger perceived justice climate or more perceived organizational support weaken the negative effects of POQ? Those topics should be further investigated.

Finally, the respondents share a cultural background in the Chinese context (a collectivistic cultural setting), in which individuals place a heavy emphasis on power distance and harmonious interpersonal relationships (Hofstede 2001). The acceptance of POQ in China may be different from that in other countries. For example, Hu et al. (2015) found that employees with collectivist attitudes are less likely to perceive themselves as overqualified and are more tolerant of POQ. Thus, overqualification may be a more prevalent phenomenon among Chinese employees, and it is possible that we have underestimated the effect of POQ on cyberloafing. We call for more research to be conducted in culturally diverse situations.

Conclusion

We employed the equity theory to examine whether, how, and when POQ influences cyberloafing among civil servants in China. By adopting a time-lagged approach, we found a mediating role of harmonious passion in the relationship between POQ and cyberloafing. In addition, need for achievement strengthens both the negative effect of POQ on harmonious passion and the indirect effect of POQ on cyberloafing through harmonious passion. We hope that our findings will stimulate future research to advance the theoretical understanding of the impacts of POQ and other factors in preventing cyberloafing in various types of workplaces.

Compliance with Ethical Standards

Conflict of interest The author declares that there are no conflicts of interest. This manuscript is not previously published or being considered by another journal.

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