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When and How Workplace Ostracism Leads to Interpersonal Deviance: The Moderating Effects of Self-control and Negative Affect

Changhua Hua^a, Li Zhao^{b*}, Qile He^{c*}, and Ziguang Chen^d

- a. Department of Business and Administration, School of Business and Management, Shanghai Lixin University of Accounting and Finance, China; Email: huachanghua@foxmail.com
- b. Department of Human Resource Management, School of Business and Administration, Shanghai Lixin University of Accounting and Finance, China; Email: zhao-sfu@hotmail.com
- c. College of Business, Law and Social Sciences, University of Derby, UK; Email: Q.He@derby.ac.uk
- d. College of Business, Law and Social Sciences, University of Derby, UK; Email: z.g.chen@derby.ac.uk

* Corresponding author:

Qile He: College of Business, Law and Social Sciences, University of Derby, Kedleston Road, Derby, DE22 1GB, United Kingdom; Telephone: +44 (0)1332 591 208; Email: Q.He@derby.ac.uk

Li Zhao: Shanghai Lixin University of Accounting and Finance, Shangchuan Road, Pudong New District, Shanghai, 201209, China; Telephone: +86 189 0178 2883; Email: zhao-sfu@hotmail.com

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Highlights

- Workplace ostracism is positively related to interpersonal deviance.
- This positive relationship is stronger when employees are low in self-control.
- Moderating effect of self-control exists only when employees' negative affect is high.

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ABSTRACT

The negative effect of workplace ostracism on employees has attracted increasing attention. This research, drawing on the perspective of negative reciprocity belief, in combination with the self-regulation theory and the person-environment theory, proposes and tests the positive effect of workplace ostracism on interpersonal deviance, which is negatively moderated by self-control (two-way) and further negatively moderated by negative affect (three-way). Based on a three-wave survey of 233 employees in China, we find that workplace ostracism is positively related to interpersonal deviance. This positive relationship is stronger when employees are low in self-control. Furthermore, this moderating effect exists only when employees' negative affect is high. Therefore, this research theoretically explicates the positive relationship between workplace ostracism and interpersonal deviance and the boundary conditions of this relationship, and also proposes a practical way to help managers reduce the occurrence of employees' interpersonal deviation. The theoretical contributions and practical implication have also been discussed.

Keywords: Workplace ostracism; Negative reciprocity belief; Interpersonal deviance; Self-control; Negative affect

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1. Introduction

Workplace ostracism, often known as a type of workplace ‘cold violence’¹, exists in all kinds of organizations in the world (Robinson, O'Reilly, & Wei, 2013; Wu, Yim, Kwan, & Zhang, 2012). A survey based on 262 American company employees shows that 66 percent of respondents claim that they have been systematically ignored by coworkers and have suffered from workplace ostracism (Wu et al., 2012). Previous studies have shown that interpersonal deviance is one of the most serious negative consequences of workplace ostracism (Ferris, Brown, Berry & Lian, 2008; Wu et al., 2012). The prevalence of interpersonal deviance challenges harmonious interpersonal relationships in workplaces (Jahanzeb & Fatima, 2018), and can bring huge economic losses to organizations (Erkutlu & Chafra, 2020). However, our understanding of when and how workplace ostracism causes interpersonal deviance is still limited.

Previous scholars have used a variety of theories, such as social information processing theory (Yang & Treadway, 2018), social exchange theory (Zhao, Peng & Sheard et al., 2013), and the transactional theory of stress (Jahanzeb & Fatima, 2018), to explain the positive relationship between workplace ostracism and interpersonal deviance. However, these studies have limited implications for the boundary conditions of this relationship (e.g., Zhao et al., 2013; Jahanzeb & Fatima, 2018). The discussion surrounding the boundary conditions of this relationship has only emerged rather recently. For example, scholars suggest that individual characteristics may play a moderating role (Fiset, Al Hajj, & Vongas, 2017).

¹ Cold violence (also called emotional abuse) refers to acts such as indifference and alienation that cause others to be mentally and psychologically harmed and violated.

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In this research, we look at the positive relationship between workplace ostracism and interpersonal deviance from a new perspective, i.e., negative reciprocity belief (Gouldner, 1960). The perspective of negative reciprocity belief is rooted in the theory of reciprocity (Gouldner, 1960), which argues that people should pay back those who have hurt them, and that revenge is the correct and appropriate way to deal with unfavorable treatment (Eisenberger, Lynch, Aselage, & Rohdieck, 2004). Based on the perspective of negative reciprocity belief, we may better and more clearly understand the positive relationship between workplace ostracism and interpersonal deviance.

According to the negative reciprocity belief perspective, employees will take ‘an eye for an eye’ approach after being ostracized. However, the self-regulation theory (Hofmann, Friese, & Strack, 2009) suggests that the negative reciprocity effect will be hindered or reduced by strong self-controlling willpower. Hence, the ‘eye for an eye’ approach in responding to workplace ostracism may not only be an impulse, but may also be an appraisal and decision-making process, depending on whether employees can control themselves or not. In other words, people may not blindly follow the eye for an eye approach in responding to workplace ostracism. The response may be buffered by one’s self-control.

Moreover, the person-environment (P-E) fit theory advocates that behavior is the function of the interaction between person and environment (Judge & Ferris, 1992; Kristof, 1996; Schneider, 1987). Hence, negative affect is a key personality factor in interacting with the social environment (Baumann, Kaschel, & Kuhl, 2007). In our research, such a social environment may be formed by different relationships between workplace ostracism and interpersonal deviance under high or low self-control. According to the P-E fit theory, high negative affect employees are less apt to fit into

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the social environment and negative affect may consume self-control resources (Baumeister, Heatherton, Tice, 1995).

On this basis, we will treat self-control and negative affect as important boundary factors in this research. By understanding such boundary factors, we should be able to control the negative influence of workplace ostracism on organizations.

This paper has three theoretical contributions. Firstly, we use the new perspective of negative reciprocity belief that can better explain the relationship between workplace ostracism and negative behavioural reactions (such as interpersonal deviance). For this reason, this paper takes a new research angle to further understanding of this relationship. Secondly, because of this new angle, we link the literature of ostracism and deviance to the self-regulation theory by introducing the boundary factor of self-control (i.e., a first-order moderator), which may moderate the positive relationship between workplace ostracism and interpersonal deviance. Thirdly, we further conjoin the negative reciprocity belief perspective and the P-E fit theory, by putting forward another boundary factor of negative affect (i.e., a second-order moderator), which may further jointly moderate the positive relationship between workplace ostracism and interpersonal deviance. Overall, the findings should inform practitioners on how to reduce the negative influence of workplace ostracism, to better develop employees' interpersonal relationships.

2. Theory and hypothesis development

2.1 Theory review

Interpersonal deviance refers to behaviour where employees deviate from the inherent norms of the organization and thus cause harm to their colleagues, such as

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spreading rumors, favouring one another, sexual harassment, verbal attack and even bodily harm (Jahanzeb & Fatima, 2018). Interpersonal deviance has been studied under different kinds of organizational concepts, such as counterproductive work behaviour (Yang & Treadway, 2018), aggressive behaviour (Twenge, Baumeister, Tice, & Stucke, 2001), anti-social behaviour (Aquino & Douglas, 2003). Previous psychologists have described aggressive behavior as an appraisal and decision-making process based on personal factors and situational factors through present internal states concerning cognition, affect and arousal (Anderson & Bushman, 2002).

Although some researchers conducted studies focusing on the cause of employees' interpersonal deviance (Arthur, 2011; Singh, 2019; Papachristopoulos & Xanthopoulou, 2019), most researchers focus on personal factors in explaining deviant behaviour, such as interpersonal justice (Holtz & Harold, 2013), hostile attribution bias and negative reciprocity beliefs (Wu, Zhang, Chiu, Kwan & He, 2014) and non-compassionate feelings (Zoghbi-Manrique-de-Lara & Guerra-Baez, 2018). Recently, some scholars have begun to explore organizational/contextual factors and have found that workplace ostracism is at least partly responsible for employees' workplace deviance (Peng & Zeng, 2017; Yan, Zhou, Long, & Ji, 2014; Yang & Treadway, 2018; Zhao et al., 2013). Workplace ostracism is defined as the degree to which employees feel ignored or isolated by others in the workplace (Ferris et al., 2008). Ostracism can be manifest by colleagues as systematically ignoring the employee, colleagues intentionally leaving the area when the employee enters, or colleagues failing to return greetings (Wu et al., 2012).

As stated in the literature, how to deal with the negative influence of ostracism

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depends greatly on individual differences (Coyne, Gundersen, Nelson & Stockdale, 2011; Wu, Liu, Kwan & Lee, 2016). Recently, some studies have shown that individual characteristics, such as social self-efficacy (Fiset & Bhave, 2021), resilience (Jiang et al., 2021), proactive personality and political skill (Zhao et al., 2013) can exacerbate or mitigate the effects caused by ostracism. Few researchers pay attention to the role of self-control and negative affect and their joint effect on the positive relationship between workplace ostracism and interpersonal deviance.

The theory of reciprocity (Gouldner, 1960) argues that people conduct social exchange/interaction under the norm of reciprocity, which holds the belief that “people should help those who have helped them, and people should not injure those who have helped them” (Gouldner, 1960, p.172). Rooted in the theory of reciprocity, negative reciprocity belief engenders the idea that people should pay back those who have hurt them (Gouldner, 1960). The perspective of negative reciprocity belief advocates that revenge is the right and proper way to deal with unfavorable treatment (Gouldner, 1960; Eisenberger et al., 2004). Therefore, based on the perspective of negative reciprocity belief, we may better understand the positive relationship between workplace ostracism and interpersonal deviance.

According to negative reciprocity belief perspective, if the return does not meet those expectations and/or even negative things, such as workplace ostracism, people will perceive inequivalent reciprocity, then, people will react “in sentiment of retaliations where the emphasis is placed not on the return of benefits but on the return of injuries” (Gouldner, 1960, p.172), which means that they will take the eye for an eye approach. Negative reciprocity belief has been widely used to explain individuals’ negative

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behaviour, such as domestic violence (Cordova, Jacobson, Gottman, Rushe, & Cox, 1993), workplace deviance (Biron, 2010; Greco, Whitson, O'Boyle, Wang, & Kim, 2019) and knowledge hiding (Zhao, Xia, He, Sheard, & Wan, 2016), in family life or the workplace.

Therefore, from the perspective of the negative reciprocity belief, we put forward the positive relationship between workplace ostracism and interpersonal deviance. However, according to the self-regulation theory (Hofmann, Friese, & Strack, 2009) self-control is a willpower operated by a dual-system (i.e., impulse system and self-control system). The result of self-control is determined by the interaction between this dual-system and trait/state regulatory variables (e.g., high/low trait self-control). Therefore, based on the self-regulation theory, the eye for an eye approach as the response to workplace ostracism may not just be an impulse, but also an appraisal and decision-making process, depending on whether employees can control themselves or not. For employees with high self-control, due to strong regulatory willpower, the negative reciprocity effect of workplace ostracism on interpersonal deviance can be inhibited or weakened. On the other hand, for employees with low self-control, the emotional-driven negative reciprocity response tends to be stronger. Therefore, it is reasonable to argue that self-control is an important boundary factor for the relationship between workplace ostracism and interpersonal deviance.

Moreover, according to the P-E fit theory, people's behavior is the function of the interaction between person and environment (Judge & Ferris, 1992; Kristof, 1996). People will fit better when they reach certain similar characteristics with the environment (Schneider, 1987). According to the P-E fit theory, negative affect being a

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key personality trait (Watson & Clark, 1992) will affect a person's interaction with the social environment. In this research, such a social environment can be formed by the different relationships between workplace ostracism and interpersonal deviance under high or low self-control. For example, when employees' negative affect is high, their cognitive self-control will need to compensate for the liability of negative affect and take a primary role in regulating the negative reciprocity effect of workplace ostracism on interpersonal deviance. On the other hand, the low negative affect of employees will inhibit the negative reciprocity effects no matter what the level of self-control. Therefore, we argue that negative affect tends to underplay self-control, and acts as another important boundary condition of the positive relationship between workplace ostracism and interpersonal deviance.

Therefore, we combine the negative reciprocity belief perspective (Gouldner, 1960) with the self-regulation perspective and the P-E fit theory, and propose our theoretical model in Figure 1, which depicts the relationship between workplace ostracism and interpersonal deviance; this relationship is moderated by self-control (the first-order moderating effect), and further moderated by negative affect (the second-order moderating effect).

===== Figure 1 about here =====

2.2 Study hypotheses

2.2.1 Workplace ostracism and interpersonal deviance

According to the negative reciprocity belief perspective, revenge is the correct and appropriate way to respond to unfavorable treatment (Gouldner, 1960; Eisenberger et

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al., 2004). Therefore, interpersonal deviance can be regarded as a revenge action guided by the negative reciprocity belief, which can be caused by workplace ostracism. As such, according to the negative reciprocity belief perspective, employees usually exhibit behaviour closely related to aggressive memory to respond to workplace ostracism, such as aggression concepts (e.g., hurt, harm) and retaliation script (e.g., pain, ridicule), negative appraisal and attribution (Anderson & Bushman, 2002).

Workplace ostracism usually has two motives, either purposeful or non-purposeful, and both of these types of ostracism are likely to lead to interpersonal deviances (Robinson et al., 2013). *Purposeful ostracism* occurs when an actor “is aware of his or her inaction to socially engage another and does so intentionally” (Robinson et al., 2013, p.209). Thus, purposeful ostracism is aimed at hurting the target or helping other actors. Obviously, purposeful ostracism may create a negative reciprocity norm in workplace interaction. It is not surprising that the target makes "sinister attributions" to an actor's behaviour (Robinson et al., 2013, p.210), especially when the target has never treated the actor in a friendly manner or provided help in the past. In this case, the target will be guided by negative reciprocity belief and tend to believe that it is acceptable to retaliate towards the actor, that is, tit for tat (Gouldner, 1960). This, in turn, might cause the target to engage in more interpersonal deviance revenge, such as gossip, rumors and personal attacks on the actor.

Compared with purposeful ostracism, the non-purposeful type of ostracism may actually be more common in the workplace. *Non-purposeful ostracism* occurs “when actors are unaware that they are engaging in behaviours that serve to socially exclude another” (Robinson et al., 2013, p.209). Actions include ostracism due to actors being lost in thought, or forgetful of another. Non-purposeful workplace ostracism can also

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cause the rise of "sinister attributions" (Robinson et al. , 2013, p.210). Being ostracized by others threatens one's need for self-esteem, belongingness, control and meaningful existence (Smith, Morgan, & Monks, 2017). People are particularly sensitive to clues when they are excluded by others (Spoor & Williams, 2007). Once feeling excluded by others, employees are more likely to be biased in making more personalized attribution to others' behaviour and believing that others are being malicious to them, even though there is obvious information to provide benign explanations (Fenigstein & Venable, 1992). Therefore, it is reasonable to believe that non-purposeful ostracism may also lead to "sinister attributions" and interpersonal deviance. Overall, no matter purposeful or non-purposeful, workplace ostracism can lead to employees' interpersonal deviance. Therefore,

H1: Workplace ostracism is positively related to employees' interpersonal deviance.

2.2.2 Moderating effect of self-control on the relationship between workplace ostracism and interpersonal deviance

Recently, scholars have increasingly realized that how to deal with the negative influence of ostracism (such as interpersonal deviance) depends on individual differences (Coyne et al., 2011; Wu et al., 2016). According to the self-regulation theory (Hofmann, Friese, & Strack, 2009), the tit for tat approach in responding to workplace ostracism may not just be an impulse, but an appraisal and decision-making process, depending on whether employees can control themselves or not (Robinson, 1998; Anderson & Bushman, 2002). In other words, people do not simply follow the eye for an eye approach blindly to respond to workplace ostracism. Such an approach may be

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buffered by one's self-control.

Self-control is a highly adaptive and unique human characteristic, which enables people to transcend and change their own responses and even themselves, so as to achieve consistency with society and other social or organizational standards (Baumeister, Gailliot, DeWall & Oaten, 2006). Some evidences also show that one's self-control can underplay the effects of the negative reciprocity belief by overriding automatic tendencies to engage in aggression (e.g., Restubog et al., 2010) and by predicting good adjustment, less pathology, and interpersonal success (Tangney, Baumeister, & Boone, 2004). Therefore, to scrutinize potential boundary conditions of the relationship between workplace ostracism and interpersonal deviance, we propose that self-control moderates the positive relationship between workplace ostracism and interpersonal deviance.

For employees with high self-control, according to the self-regulation theory (Hofmann, Friese, & Strack, 2009), strong regulatory willpower inhibits the role of impulsive force, hence the self-control system plays a deliberate assessment role and thus effectively inhibits or weakens the negative reciprocity effect of workplace ostracism on interpersonal deviance. As mentioned earlier, interpersonal deviance under the guidance of negative reciprocity belief may not be an impulse, but a higher-order cognitive process (Anderson & Bushman, 2002). Therefore, high self-control can help one to search for alternative views of the situation, so as to reduce the revenge tendency as a return to another's ostracism. It can suppress the expression of anger-inducing thoughts (Restubog et al., 2010). Although employees with a negative belief in reciprocity firmly believe that revenge is a correct and proper way to discourage

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ostracism, and revenge fulfillment would produce pleasure (Eisenberger et al., 2004), high self-control is an important internal faculty, which can help employees to resist temptation and hold back from acting on their impulses (DeWall, Baumeister, Stillman, & Gailliot, 2007).

For employees with low self-control, however, the simplistic emotional-driven negative reciprocity response (i.e., the eye for an eye approach) tends to be stronger. Low self-control means that employees lack the willpower to suppress impulse force and are dominated by automatic emotional responses.

Therefore, based on the perspective of negative reciprocity belief and the self-regulation theory, we hypothesize,

H2: Employees' self-control negatively moderates the positive relationship between workplace ostracism and interpersonal deviance, such that the higher the level of the employee's self-control, the less positive the relationship between workplace ostracism and interpersonal deviance.

2.2.3 Three-way moderating effect of negative affect

To respond to the call for research on individual differences on the positive relationship between workplace ostracism and interpersonal deviance (Coyne et al., 2011; Wu et al., 2016), we further propose that employees' negative affect is a key personality factor in interacting with the social environment (in this research, it refers to the different relationships between workplace ostracism and interpersonal deviance under high or low self-control).

According to the P-E fit theory, people's behavior is the function of the interaction between person and the environment (Judge & Ferris, 1992; Kristof, 1996; Schneider,

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1987). Previous researchers commonly conceptualize mood in terms of positive affectivity/affect (PA) and negative affectivity/affect (NA) (Watson, Clark & Tellegen, 1988). Here, negative affect refers to the tendency of individuals to experience fear, anger, sadness, guilt, contempt, disgust and other negative emotions continuously across time and situations (Watson & Clark, 1992). Nevertheless, people present different sensitivities to negative affect (Baumann, Kaschel, & Kuhl, 2007), and affect regulation can consume one's limited self-control resources (Baumeister, Heatherton, Tice, 1995). Although we argue that self-control can negatively moderate the positive relationship between workplace ostracism and interpersonal deviance, people in a persistent negative affect state may experience self-control failure because of ego resource depletion (Baumeister, Heatherton, Tice, 1995). In other words, when the negative affect of an individual is high, it will consume a lot of limited self-control resources and subsequently make self-control attempts more likely to fail (Baumeister, Heatherton, Tice, 1995). The exhaustion of self-regulation resources will make employees pay more attention to hostile information to prove that it is necessary and reasonable for them to take retaliatory actions, rather than cognitive strategies to divert their attention from hostile information (Fischer, Greitemeyer, & Frey, 2008). Therefore, according to the P-E fit theory, employees with high negative affect are not fit for working in such social environment, because they may respond more aggressively to workplace ostracism than those with low negative affect.

However, a lack of negative affect (i.e., low negative affect) inhibits the negative reciprocity effect, no matter what the level of self-control is. This is because the low level of negative affect does not consume excessive self-control resources, and hence

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underplays the moderating role of self-control in the relationship between workplace ostracism and interpersonal deviance. Therefore, we argue that after negative moderation through self-control, the positive relationship between workplace ostracism and interpersonal deviance will be further moderated negatively by negative affect. We expect that the inhibiting moderating effect of self-control on the negative reciprocity effect of workplace ostracism on interpersonal deviance occurs only when negative affect is high, and the moderating effect of self-control disappears when negative affect is low. Therefore,

H3: Negative affect negatively moderates the negative moderating effect of self-control on the positive relationship between workplace ostracism and interpersonal deviance, such that: with high negative affect, the positive relationship between workplace ostracism and interpersonal deviance is stronger when self-control is low than when it is high; while with low negative affect, the positive relationship between workplace ostracism and interpersonal deviance remains the same across the different levels of self-control.

3. Method

3.1 Procedure and sample

Extant research shows that workplace ostracism can be found in many industries, such as manufacturing, construction, finance, information technology services, wholesale and retail (Gao & He, 2019), being more likely to occur in large-sized, state-owned enterprises or private enterprises (Gao & He, 2019). Workplace ostracism is also widespread in various organizations in China (Yan, Zhou, Long & Ji, 2014). Given

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that China is a fast-emerging economy and has the world's largest workforce in the manufacturing industry, we have chosen China as the main context to generate evidence of the relationship between workplace ostracism and interpersonal deviance and its boundary conditions through a questionnaire survey.

In this research, primary data was collected from a private petrochemical equipment manufacturing company in the Xinjiang Autonomous Region, in the north-western part of China, which has about 500 employees and was established in 1998.

To reduce the potential common method bias, we executed the data collection in three waves over a period of six months (i.e., with three-month intervals) (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). In the first wave (T1), 420 questionnaires were distributed to employees. The respondents were asked to provide basic demographic information, such as age, gender and tenure in the organization, and their perceptions of workplace ostracism. We received usable survey responses from 334 employees, with a response rate of 79.5%. Three months later, in wave two (T2), questionnaires were distributed to the same 334 respondents, asking them to evaluate their level of self-control and level of negative affect. Since 5 employees had left the company, only 329 employees actually received the questionnaires. 281 usable survey responses were received, with a response rate of 85.4%. Finally, three months after the second wave, in wave three (T3), questionnaires were distributed to the 281 respondents, asking them to evaluate their interpersonal deviance. Since 3 more employees had left the company, only 278 employees received the questionnaires. 233 employees returned the complete questionnaires, with a response rate of 83.8%. Therefore, our total useable matched and compiled response rate is 55.5% (233/420). Of the 233 employees, 74.2% were male. The average age was 33.38 years (SD = 5.74), and the

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average tenure in the organization was 4.92 years (SD = 3.43).

The survey was conducted with the assistance of the Head of the Human Resource Management Department of the company. Before the formal survey, a complete list of workers at the production line (anonymized but with basic demographic information and staff ID) was obtained with the help of the HR manager. Respondents were randomly selected from this list. To ensure anonymity, administration of our survey does not involve the assistants of senior managers such as the Head of the Human Resource Management Department, production line manager, and top-managers of the company. Each respondent was also allocated a number in order to match and count respondents in all three waves of the questionnaire survey. Three survey assistants were recruited and trained. These assistants were required to explain to the respondents the academic purpose of this research, research content, anonymity of data processing, confidential use of data, and also ask respondents to offer formal consent to the survey. Moreover, the respondents were informed that they could quit the survey at any time without any reason. Before distributing the questionnaires, survey assistants marked questionnaires and return envelopes with matching identifying numbers before placing them into sealed envelopes. Those envelopes were then distributed to each respondent personally by the survey assistants. Respondents were asked to put the completed questionnaires into the return envelopes, seal them, and then put the sealed return envelopes into a designated mailbox located in a private area of the company for later collection by the research assistants. After three waves of survey, researchers made sure all personal identifiers were removed from the collected dataset, apart from the allocated numbers used to match the respondents of the three waves of the survey.

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3.2 Measures

We adopted existing scales of workplace ostracism, self-control, negative affect, and interpersonal deviance from previous literature, with minor adjustments to fit the context of the current research (see Appendix).

In particular, workplace ostracism was measured following Ferris et al. (2008) with ten items, using a 5-point Likert-type scale (ranging from 1 = strongly disagree to 5 = strongly agree). A sample item was “Others ignored you at work.” The Cronbach’s alpha coefficient was 0.89 (Time 1).

The measurement of self-control was adopted from Scott and Scott (1965) with five items of a Likert-type scale (ranging from 1 = strongly disagree to 5 = strongly agree). A sample item was “I am very patient with others.” The Cronbach’s alpha coefficient was 0.75 (Time 2).

The measurement of negative affect was adopted from Watson, Clark, and Tellegen (1988) with ten items. Respondents indicated whether adjectives, such as “nervous”, “afraid”, and “upset” generally described how they felt at work. Again a 5-point Likert-type scale was used with responses ranging from 1 (= not at all likely), to 5 (= extremely likely). The Cronbach’s alpha coefficient was 0.91 (Time 2).

The measurement of interpersonal deviance was adopted from Bennett and Robinson (2000) with seven items (ranging from 1 = never to 5 = daily). A sample item was “Said something hurtful to someone at work.” The Cronbach’s alpha coefficient was 0.86 (Time 3).

We controlled for employee demographics, such as age, gender and tenure in the organization, because previous research suggests that these variables may affect employee responses to interpersonal mistreatment (Aquino & Douglas, 2003). Age and

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tenure in the organization were self-reported in years. Gender was a binary variable with male coded as “0” and female coded as “1”.

Following the commonly used back translation procedure, the questionnaire was translated from English into Chinese and then back translated into English by two independent bilingual researchers to ensure equivalency of meaning (Brislin, 1980). Before the formal survey, a pilot study with 35 staff from 10 Chinese companies in different industries was conducted. According to the results of the pilot study, the semantics and expression of some items in the scale was further adjusted to help the respondents to fully understand.

4. Results

4.1 Data quality, validity, and reliability

In addition to the three-waved survey method adopted, to ensure common method bias was not a threat, several other procedures were followed. First, we made sure that all items in each construct were randomly presented (Dillman, Smyth, & Christian, 2014). Second, we used Harman's (1976) one-factor test to check all the items, and the results show four factors with eigenvalues greater than 1 which account for 61.30% of the variance, hence suggesting that common method bias was not a major concern in this study.

Although the survey scales were adopted from previous literature, this does not preclude the necessity to further check the reliability and validity of the scales. Therefore, Confirmatory Factor Analysis (CFA) was employed to examine the convergent and discriminant validity of key variables. The fit index of the overall four-

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factor model ($\chi^2 = 757.609$, $df=458$, $\chi^2 /df=1.654$; CFI =0.910; RMSEA =0.053) suggested the hypothesized model was a good model fit (Hair, Black, Babin, Anderson & Tatham, 2006).

Furthermore, the discriminant validity was also tested by contrasting a four-factor model against alternative models (Henseler, Ringle & Sarstedt, 2015). Model comparison results, which are reported in Table 1, revealed that the hypothesized four-factor model was considerably better than any of the alternative models (Cheung & Rensvold, 2002). Thus, the discriminant validity of the four key constructs in the study was supported. All four constructs were applied in the following analyses.

===== Table 1 about here =====

Table 2 shows the means, standard deviations, and correlations of the independent, dependent, moderating, and control variables.

===== Table 2 about here =====

4.2 Test of hypotheses

To test the research hypotheses, we conducted a stepwise hierarchical moderated multiple regression analysis (Cohen, Cohen, West & Aiken, 2003). The variables used in the interaction terms were mean centered in order to reduce multicollinearity (Aiken & West, 1991). Table 3 presents the results.

===== Table 3 about here =====

In model 2, workplace ostracism is positively related to interpersonal deviance ($b = 0.22$, $p < 0.01$). Thus, H1 is supported.

In model 4, self-control significantly and negatively moderates the relationship between workplace ostracism and interpersonal deviance ($b = -0.14$, $p < 0.05$).

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Therefore, H2 is supported.

The nature of the significant interaction is examined by plotting values of plus and minus one standard deviation from the means of workplace ostracism and self-control (Cohen et al., 2003). As shown in Figure 2, according to the results of simple slope tests, the relationship between workplace ostracism and interpersonal deviance is more positive ($b = 0.36, p < 0.01$) when employees are low in self-control than when employees are high in self-control ($b = 0.08, n.s.$). This result suggests that the positive relationship between workplace ostracism and interpersonal deviance happens only when employees' self-control is low. This result further supports H2.

===== Figure 2 about here =====

In model 5, the results show that the three-way interaction among workplace ostracism, self-control, and negative affect is significantly and negatively related to interpersonal deviance ($b = -0.15, p < 0.05$). Therefore, H3 is supported.

Figure 3 shows the three-way interaction effect among workplace ostracism, self-control and negative affect on interpersonal deviance. Figure 3a demonstrates the interaction effect of workplace ostracism and self-control on interpersonal deviance for employees with high negative affect, while Figure 3b shows the effect for employees with low negative affect. The results of simple slope tests suggest that workplace ostracism is positively related to interpersonal deviance ($b = 0.50, p < 0.01$) only when employees have low self-control and high negative affect.

===== Figure 3 about here =====

5. Discussions and conclusion

More and more studies have shown an increase in interest in how to reduce the

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interpersonal deviant behaviour of employees. To formulate effective intervention measures, it is necessary to build more in-depth understanding of the causes of interpersonal deviance and related boundary conditions. In this research, based on the perspective of negative reciprocity belief, we focused on the effect of workplace ostracism as an important driver of interpersonal deviance. We then examined the moderating roles of an employee's self-control and further negative affect in the positive relationship between workplace ostracism and interpersonal deviance based on the self-regulation theory and the P-E fit theory respectively, which only have limited coverage in the extant literature. Based on our survey of employees in a manufacturing company in China, the following findings are obtained. Firstly, workplace ostracism has a significant positive effect on employees' interpersonal deviance. Secondly, this positive relationship is stronger under a lower level of self-control than under a high level of self-control. Thirdly, employees' negative affect has a further moderating effect on the interaction between workplace ostracism and self-control and on interpersonal deviance. Overall, the positive relationship between workplace ostracism and interpersonal deviance exists only when employees have low self-control and high negative affect.

5.1 Theoretical contributions

This research has three theoretical contributions. Firstly, this research explains the positive relationship between workplace ostracism and interpersonal deviance from a new perspective, i.e., the negative reciprocity belief (Gouldner, 1960). Previous research has used a variety of theories to explain the positive relationship between workplace ostracism and interpersonal deviance, for example, social information

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processing theory (Yang & Treadway, 2018), social exchange theory (Zhao et al., 2013) and the transactional theory of stress (Jahanzeb & Fatima, 2018). However, previous research has limited implications for the boundary conditions of this relationship (e.g., Zhao et al., 2013; Jahanzeb & Fatima, 2018). The negative reciprocity belief perspective (Gouldner, 1960) can better and more logically explain the positive relationship between workplace ostracism and interpersonal deviance. In line with the negative reciprocity belief perspective, finding of this research suggests that workplace ostracism may increase the tendency of employees to take interpersonal deviant behaviour, such as revenge, for another's ostracism. Therefore, this research has taken a new angle to research this relationship (i.e., the positive relationship between workplace ostracism and interpersonal deviance).

Secondly, this research introduces a boundary factor (i.e., self-control as a first-order moderator), based on the above new research angle, and drawing on the self-regulation theory (Hofmann, Friese, & Strack, 2009), which may negatively moderate the positive relationship between workplace ostracism and interpersonal deviance. The result suggests that employees with a low level of self-control are more likely to display interpersonal deviant behaviour if they are ostracized. Although previous researchers have explored some moderating factors of individual characteristics (e.g., Fiset & Bhave, 2021; Jiang et al., 2021; Zhao et al., 2013), employees' self-control has been largely ignored in the literature, especially from the perspective of the negative reciprocity belief. This finding echoes Wu et al.'s (2016) call that ostracized employees' reactions, when facing the relationship between workplace ostracism and interpersonal deviance, may be different. By doing so, we enrich the literature of ostracism and

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deviance by identifying self-control as a boundary condition through a combined use of the negative reciprocity belief perspective and the self-regulation theory.

Thirdly, this research introduces another boundary factor (i.e., negative affect as a second-order moderator), which may jointly moderate the positive relationship between workplace ostracism and interpersonal deviance with self-control, based on a combined use of the negative reciprocity belief perspective and the P-E fit theory. Negative affect can lead to attentional bias on negative information, thus offsetting the efforts of self-control. Hence, negative affect serves as a second order factor to enhance the negative moderating effect of self-control. This finding further echoes Wu et al.'s (2016) call for research about ostracized employees' different reactions, when facing the relationship between workplace ostracism and interpersonal deviance, by introducing negative affect as the moderator. Employees with high negative affect may not be suitable/fit for working in an employment/social environment with chances of workplace ostracism, because they may respond more seriously to workplace ostracism than those with low negative affect. Therefore, we further enrich the literature of ostracism and deviance by identifying negative affect as another boundary condition based on the combined use of the negative reciprocity belief perspective and the P-E fit theory.

According to these research findings, if either self-control or negative affect is taken into consideration, conclusions drawn by neglecting the three-way interaction may be incomplete and lead to a lopsided understanding of the positive relationship between workplace ostracism and interpersonal deviance.

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5.2 Practical implication

This research has three important managerial implications. First, in this research, we have used the new perspective of negative reciprocity belief to explain the relationship between workplace ostracism and interpersonal deviance. The findings may alert managers to the possibility of the eye for an eye approach happening in response to workplace ostracism, which may, for example, increase interpersonal deviance. Therefore, managers should pay more attention to reducing possible workplace ostracism in order to create positive ethos in the workplace (i.e., less interpersonal deviance). Organizations need to create a friendly working environment for employees to avoid workplace ostracism, and to encourage cooperation and knowledge sharing, to avoid excessive competition and to create convenient communication channels between employees (see also Cheng, Lei, & Lan, 2019; Chen, Chen, & Portnoy, 2009). By doing so, employees can become more productive (Luthans, Norman, Avolio, & Avey, 2008).

Second, this research introduced employee's self-control as a first-order moderator, which negatively moderates the influence of workplace ostracism on interpersonal deviance. Therefore, managers, especially HR managers, can use this finding to help organizations to prevent and reduce the negative outcomes caused by workplace ostracism (i.e., interpersonal deviance). For example, organisations should include the evaluation of self-control levels of candidates in the recruiting process, provide more targeted personal training and develop employee assistance programmes. Adequate measures for evaluating a candidate's self-control may potential play a key role in HRM contexts. For instance, to integrate such measures with assessment center techniques

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based on the measurement of person and task environment characteristics (Thornton & Potemra, 2010).

Third, from the result of the second-order moderating effect of negative affect on the relationship between workplace ostracism and interpersonal deviance, managers can better understand how employees' personalities fit within the relative employment/social environment and that it really matters. In this research, low negative affect can reduce the negative influence of workplace ostracism on interpersonal deviance. Therefore, even though workplace ostracism exists, in order to let employees better fit the employment/social environment, it is better for managers, especially HR managers, to assign those employees with low level of negative affect, rather than those with high level of negative affect to take certain jobs. Moreover, organizations can take action to help employees to improve their ability to control negative affect. This is in line with a quasi-experimental study conducted by Milot (2019), which suggests that employee assistance programmes on mental health may be effective in helping employees to reduce psychological distress, including reduced symptoms of depression and anxiety (Milot, 2019). Personal emotion management training can be provided for employees in need to help them to improve their self-awareness and emotional control.

5.3 Limitations and future research

This research has three limitations which offer opportunities for future research. Firstly, although the empirical data based on a three-wave survey design can effectively reduce the influence of common method bias, this research also suffers from subjective ratings to measure workplace ostracism, self-control, negative affect, and

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interpersonal deviance. Subjective measures are widely used in previous studies for measuring employees' internal feelings (e.g., Bennett & Robinson, 2000; Holtz & Harold, 2013; Wu et al., 2014). This research has also taken a variety of remedies to reduce subjective rating errors, such as randomising survey items and ensuring anonymity (Dillman, Smyth, & Christian, 2014). Nevertheless, future research would be better off using objective indicators or a combination of subjective and objective indicators to eliminate the measurement errors of the subjective ratings.

Secondly, given that the empirical results were based on the sample located in China, this should be noted when generalizing the findings. Future research may be conducted in other geographical regions to improve result generalizability. Moreover, in this research, the empirical data was collected from a manufacturing company, where workplace ostracism is very common. This helps us to increase the possibility of testing our research model with related variable variances. Future researchers could extend the empirical research into other industries.

Thirdly, this research examines two individual moderating variables, namely self-control and the negative affect. However, individual responses might be affected by other factors such as the hierarchical status in organizations or the level of his/her social support from supervisors (Fiset et al., 2017). Therefore, future research could explore other factors that would help organisations to mitigate the negative consequences of workplace ostracism on interpersonal deviance.

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Table 1. Confirmatory factor analysis

Model	χ^2	df	TLI	CFI	RMSEA
Four-factor model	757.609	45	0.90	0.91	0.053
		8			
Best three-factor model	973.750	46	0.83	0.85	0.069
Negative affect and self-control combined		1			
One-factor model	2349.06	46	0.39	0.43	0.132
	8	4			

Notes: TLI is the Tucker-Lewis index; CFI the comparative fit index; and RMSEA the root-mean-square error of approximation

Table 2. Means, standard deviations, and correlations

Variables	1	2	3	4	5	6	7
1. Age							
2. Gender	0.06						
3. Tenure in the organization	0.47**	0.02					
4. Workplace ostracism	-0.04	0.11	0.08	(0.89)			
5. Self-control	-0.00	-0.09	0.08	-0.09	(0.75)		
6. Negative affect	-0.01	0.03	-0.00	0.34**	-0.17**	(0.91)	
7. Interpersonal deviance	-0.05	0.09	-0.14*	0.21**	0.11	-0.08	(0.86)
Mean	33.38	0.26	4.92	1.96	3.53	2.10	2.49
S.D.	5.74	0.44	3.43	0.61	0.52	0.75	0.63

Notes: $n = 233$; ** $p < .01$; * $p < .05$

Bracketed values on the diagonal are the Cronbach's alpha value of each scale.

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Table 3. Hypotheses testing

	Interpersonal deviance (T ₃)				
	M ₁	M ₂	M ₃	M ₄	M ₅
Control variables					
Age	0.01	0.03	0.03	0.05	0.03
Gender	0.10	0.07	0.07	0.06	0.06
Tenure in the organization	-0.15*	-0.17*	-0.17*	-0.17*	-0.15*
Independent variable					
Workplace ostracism (T ₁)		0.22**	0.20**	0.14*	0.13†
Moderators					
Self-control (T ₂)			-0.03	-0.01	-0.01
Negative affect (T ₂)			0.04	0.00	-0.03
Two-way interactions					
WOS × SC				-0.14*	-0.14*
WOS × NA				0.16*	0.09
NA × SC				-0.08	-0.09
Three-way interaction					
WOS × SC × NA					-0.15*
R ²	0.03	0.08	0.08	0.14	0.16
F	2.27†	4.53**	3.12**	3.86**	3.92**
ΔR ²	0.03	0.05	0.00	0.06	0.02
ΔF	2.27†	11.02**	0.33	5.00**	3.99*

Notes: $n = 233$; ** $p < .01$; * $p < .05$; † $p < .10$.

WOS = Workplace ostracism; NA = Negative affect; SC = Self-control.

Figure 1. Theoretical model

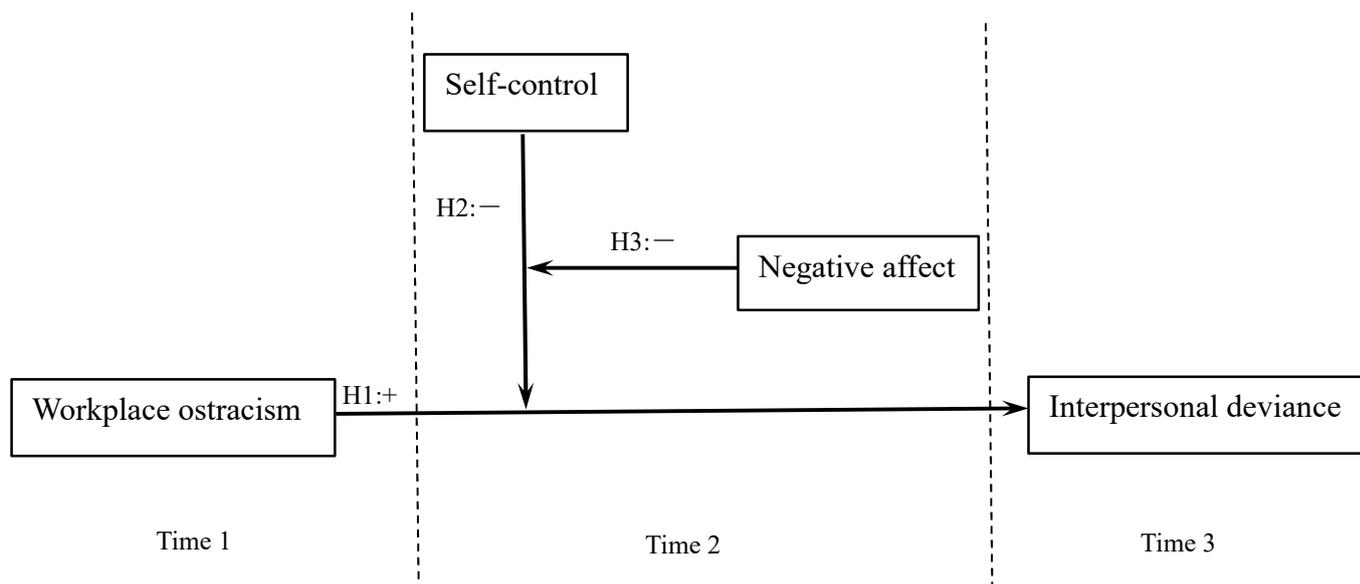
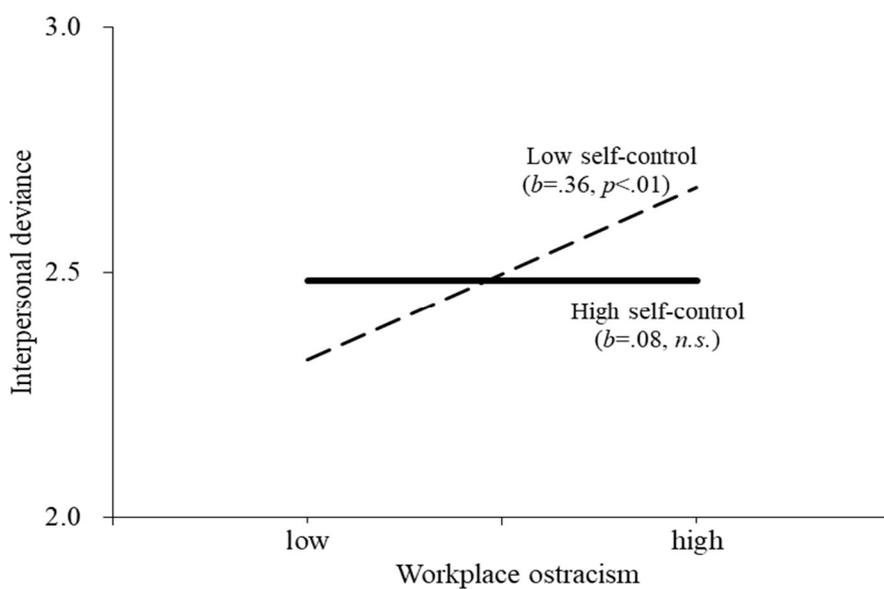


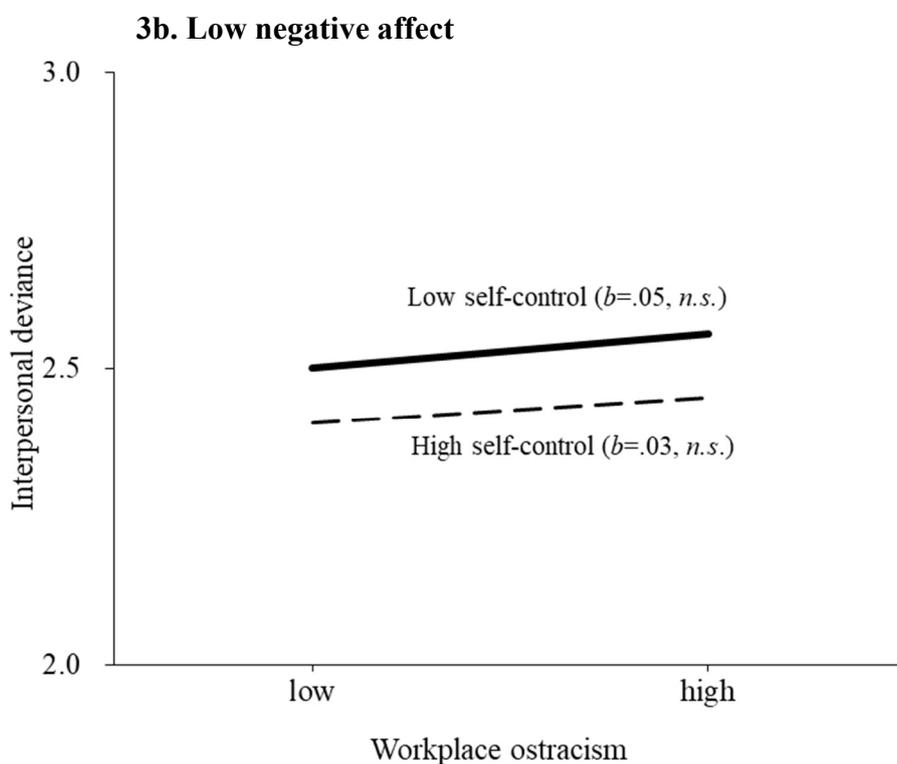
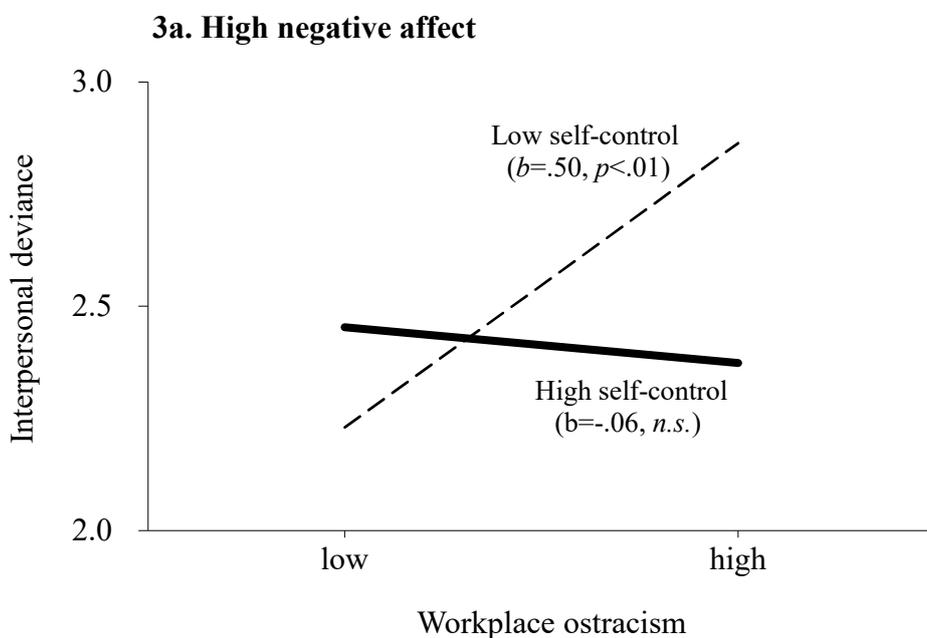
Figure 2. Interaction effect of workplace ostracism and self-control on interpersonal deviance



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Figure 3. Joint moderating effects of workplace ostracism, self-control, and negative affect on interpersonal deviance



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Appendix

Main constructs and survey items

Main constructs	Items
Work ostracism (Source: Ferris et al. 2008)	<ol style="list-style-type: none"> 1. Others ignored you at work 2. Others left the area when you entered 3. Your greetings have gone unanswered at work 4. You involuntarily sat alone in a crowded lunchroom at work 5. Others avoided you at work 6. You noticed others would not look at you at work 7. Others at work shut you out of the conversation 8. Others refused to talk to you at work 9. Others at work treated you as if you weren't there 10. Others at work did not invite you or ask you if you wanted anything when they went out for a coffee break
Interpersonal deviance (Source: Bennett & Robison 2000)	<ol style="list-style-type: none"> 1. Made fun of someone at work 2. Said something hurtful to someone at work 3. Made an ethnic, religious, or racial remark at work 4. Cursed at someone at work 5. Played a mean prank on someone at work 6. Acted rudely toward someone at work 7. Publicly embarrassed someone at work
Self-control (Source: Scott, 1965)	<ol style="list-style-type: none"> 1. I am very patient with others 2. For whatever reasons, I will not lose my temper 3. I often practice my self-control 4. I can keep a gentle manner when others are angry at myself 5. I will not vent my anger even if I have a reason to do so
Negative affect (Source: Watson, Clark & Tellegen et al., 1988)	<p>My emotions are often:</p> <ol style="list-style-type: none"> 1. Irritable 2. Alert 3. Ashamed 4. Inspired 5. Nervous 6. Determined 7. Attentive 8. Jittery 9. Active 10. Afraid