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**Workplace Ostracism, Paranoid Employees, and Service Performance: A  
Multilevel Investigation**

**Prof. Amer Ali Al-Atwi\***  
Al-Muthanna University  
Semawa, Iraq  
**Email:** [amer@mu.edu.iq](mailto:amer@mu.edu.iq)

**Dr. Yahua Cai**  
Shanghai University of Finance and Economics  
Department of HRM, Shanghai.

**Prof. Joseph Amankwah-Amoah**  
Kent Business School, University of Kent,  
Chatham, Kent ME4 4TE  
TEL: +44 (0) 1634 (88)8870  
**E-mail:** [J.Amankwah-Amoah@kent.ac.uk](mailto:J.Amankwah-Amoah@kent.ac.uk)

## **Abstract**

**Purpose** –Drawing on literature on victim precipitation theory, workplace ostracism, and paranoia, this paper examines the mediating role of workplace ostracism on the paranoia–service-performance relationship. This paper further postulates that team cognitive diversity (TCD) moderates the paranoia–workplace-ostracism relationship.

**Design/methodology/approach** – Data were collected from 228 nurses from a leading hospital located in an eastern province of China. Hypotheses developed from the literature were tested using multivariate hierarchical linear modeling (HLM).

**Findings** – Workplace ostracism had a negative effect on service performance, while TCD had a positive effect on workplace ostracism. Cognitive diversity moderated the paranoia–workplace-ostracism relationship, such that the positive relationship was stronger when group diversity was high.

**Practical implications** – In order to avoid ostracism, multiple communication channels must be created to allow employees to voice their feelings in an appropriate format.

**Originality/value** – This paper develops and tests a model exploring the antecedents of workplace ostracism and its effect on service performance.

**Keywords:** Workplace ostracism, paranoia, team diversity, service performance.

**Paper type:** Research paper.

## Introduction

Ostracism in organizations has recently become a major focus of practitioners' and scholars' attention (Robinson & Schabram, 2019). Because of its importance and popularity, most research on ostracism has tended to focus on why some individuals view themselves as ostracized (perceived ostracism), rather than why some people ostracize others (actual ostracism) (Howard et al., 2020). Perceived workplace ostracism (PWO) defined as the extent to which an individual perceives that he or she is ignored or excluded by others in the workplace (Ferris et al., 2008), it negatively affects employees' job satisfaction, performance, and work engagement (Ferris et al., 2008; Leunget al., 2011). PWO is also connected with undesirable outcomes such as stress, anxiety, turnover, and counterproductive work behaviors (Hitlan et al., 2006). Despite recent progress in studying the effects of PWO (Ferris et al., 2008; Robinson et al., 2013; Wu et al., 2011), the antecedents of this concept are little understood (Gamian-Wilk and Madeja-Bien, 2018; Wu et al., 2015), which is surprising given that many previous studies have explored possible antecedents of behaviors similar to ostracism (e.g. workplace aggression). In addition, although scholars have suggested that cognitive diversity in teams can have varying effects on organizations (Mello & Rentsch, 2015), the potential effects of team cognitive diversity (TCD) on PWO remains largely underexplored. In addressing these gaps in our understanding, we integrated insights from victim precipitation theory (Elias, 1986; see also Aquino & Lamertz, 2004) to contend that paranoia and TCD as predictors for ostracism.

We seek to examine the effect that paranoia – a set of beliefs that includes team members' perceptions of threats, harm, distrust, and persecution by malevolent others (Freeman, 2007; Kramer, 2001) – has on PWO. According to the victim precipitation theory, people with specific beliefs or thoughts exhibit certain behaviors that breach social norms of polite/friendly interactions; thus, they will be more likely to be targeted by others' aggressive behaviors (Elias,

1986). We expect paranoia to have an important role in explaining ostracism because paranoid individuals' perception of ostracism depends on aggressive reactions and such individuals are more likely to interpret negative events as harassment (Rudert et al., 2019).

The study offers important theoretical contributions. First, although several contextual predictors have been proposed regarding what causes individuals to ostracize one another (Robinson et al., 2013; Robinson & Schabram, 2017), few studies have empirically examined them (Howard et al., 2020). We capitalize on unique data from a leading hospital in the Chinese context to respond to recent calls for researchers to highlight unit-level predictors (Gamian-Wilk & Madeja-Bien, 2018) by examining the effect of cognitive diversity for teams (contextual features) on PWO.

In addition, a review of PWO literature reveals that the boundary conditions, i.e. contextual characteristics that influence whether an individual is being ostracized, remain largely unexplored. Notably, the characteristics of both the situation and the individual should not be treated in isolation when predicting ostracism, but rather in conjunction (Wu et al., 2015). According to Aquino and Lamertz's (2004) victimization framework, the roles of perpetrator and victim, and the relationship between them, are embedded within a larger social context, possibly facilitating (or reducing) the perception of aggression. We contribute to the current body of research by distinguishing and clarifying the conditions under which people who exhibit paranoia propositions are more likely to be ostracized by their co-workers, suggesting both that TCD is a contextual antecedent of ostracism, and that it moderates the positive relationship between paranoia and PWO.

Furthermore, this study furthers understanding of the nature and antecedents of PWO (Robinson & Schabram, 2017) by developing and testing a model exploring the paranoia–PWO–SP relationship. Indeed, despite advances in PWO research (Robinson & Schabram, 2019), limited

attention has been paid to the TCD–PWO relationship. Accordingly, examining the TCD–PWO relationship further to foster deeper and better understanding of the antecedents of WO. Practically, this also can help managers to reduce incidences of PWO.

## **1. Theory and Hypotheses**

### **Paranoia and Workplace Ostracism**

Paranoia is a unidimensional construct that is defined as a form of exaggerated distrust that encompasses an array of beliefs, including team members' perceptions of being threatened, harmed, persecuted, and disparaged by malevolent others (Kramer, 2001; Chan & McAllister, 2014). These beliefs are sometimes false or possibly exaggerated, but they often increase the individual's feeling of mistrust in others and that others have deliberate intentions to harm him/her (Freeman, 2007). A paranoid person tends to focus on threat information and has an excessive belief, without justification, that he/she is the target of others' attention (Chan & McAllister, 2014). Past research suggests that paranoia may be treated as either a dispositional trait or a situational characteristic (e.g. Chan & McAllister, 2014). These studies recognize that individuals have different levels of paranoia and these levels are malleable according to situational circumstances (Van Quaquebeke, 2016). Current research assumes that paranoid beliefs or thoughts are visible in ordinary individuals' everyday behavior, especially when under certain arousal conditions, e.g. the feeling that their behavior is monitored by others or they are subject to social threat (Kramer, 1998).

This study bases the expectation that paranoia is positively associated with PWO on victim precipitation theory, which posits that the actions and thoughts of suspicion practiced by some individuals create, over time, intentional punitive reactions by others (Schafer, 1968). One can see how employees with high paranoid thoughts may become a burden on accepted social interaction

norms, not necessarily because of their performance, but because of the distrust which manifests in suspicious behaviors they show towards others, e.g. monitoring others' activities to find signs of malevolence, or trying to view their personal information (Chan & McAllister, 2014; Rudert et al., 2019). As a result, the experience of interacting with such employees is disturbing enough to cause them to be excluded and ignored, as they represent bad exchange partners (Rudert et al., 2019). In general, suspicious behaviors tend to provoke different parallel negative reactions from those at whom these behaviors are directed (Kramer & Schaffer, 2014). Kramer (2001) stated that these negative reactions may take the form of self-protective or defensive social behaviors, e.g. the social withdrawal of those subjected to evaluative scrutiny. Others' social rejection of a paranoid person is consistent with victim precipitation theory (Marret al., 2012), which indicates that victims sometimes initiate the actions that lead to their own victimization (Schafer, 1968).

This paper argues that a paranoid person is more sensitive in interpreting the unintended acts of others as intentional actions towards him/her. This is because paranoid individuals' judgment regarding the intentions of others is subject to a high level of error (Freeman & Garety, 2000; Frith, 2004). Freeman et al. (2015, p. 123) argued that higher levels of paranoia would be associated with higher ratings of perpetrator intent, that the tendency to blame would be greater, and that estimates of actual harm caused would therefore be higher. Thus, any unintentional harm done by others will likely be interpreted with misgivings by the paranoid individual. The following hypothesis is, therefore, proposed:

*H1: Paranoia will have a positive effect on PWO.*

### **Team Cognitive Diversity and WO**

Many conceptual models anchored in victim precipitation theory (e.g. Howard et al., 2020) have indicated that situational factors, e.g. social and psychological-related, can elicit victimizing behaviors from others. Previous studies have described workplace diversity as a situational factor

that makes individuals feel ostracized by colleagues (Robinson et al., 2013; Robinson & Schabram, 2017). TCD is a unidimensional construct which is defined as team members' shared perception of the variation of relatively unobservable characteristics such as attitudes, values, knowledge, and beliefs among individual team members (van der Vegt & Janssen, 2003; Wang, Kim, & Lee, 2016). Dissimilarities in visible or invisible characteristics can be a source of personal differences in the workplace. These differences make individuals define themselves against others using a specific social category (Mayo et al., 2016). These categorizations can lead to miscommunication and negative interpretation (Jehn, 1998). In their theoretical model of workplace aggression, Neuman and Baron (1998) indicates that workplace diversity is one of the social factors that can increase aggressive acts perpetrated by one or more members of a group towards others. They mentioned that diversity puts people closer with many differences, these differences generate feelings of negative affect, decrease levels of interpersonal attraction, lead to mutual stereotyping, and increase potential for aggression. According to Jehn (1998), group members who share similar values and perspectives tend to agree to similarly prioritize and interpret the group's problems. However, those with different values have differences regarding the goals and nature of the work. Jehn (1998) asserted that group members often take these differences personally, resulting in personal animosity, which may make individuals resort to intentional ostracism as a defensive or punitive strategy (Williams & Zadro, 2001). It is worth noting that cognitive diversity in teams is not necessarily associated with worse organizational outcomes or performance (see Mello & Rentsch, 2015 for a review)

Diversity has another implication for ostracism at work as TCD may lead both to intended and unintended ostracism. Unintended ostracism occurs when an individual/group does not deliberately exclude an individual socially but, unconsciously, acts in a way that leads to an individual's ostracization (Ferris et al., 2008). Often, employees may ignore co-workers because

they cannot read the social norms in the surrounding work environment (Robinson et al., 2013).

Thus:

*H2: TCD will have a positive effect on PWO.*

### **Interaction Effect on WO**

In addition to the direct impact on PWO, cognitive diversity may exacerbate the effect of the paranoia. The rationale behind this prediction stems from Aquino and Lamertz's (2004) relational model of workplace victimization. This model assumes that some contextual factors may work as moderator variables that exacerbate exchanges of hostility between provocative victims and reactive perpetrators or, conversely. We assume that cognitive diversity may exacerbate the effect of the paranoia by coloring social perceptions between a victim and a perpetrator. The salience of perceived diversity increases the misreading of appropriate social norms and behaviors in the context of the group and, as a result, causes some members to unintentionally conduct behaviors that do not conform to accepted norms (Robinson et al., 2013). The violation of some social norms and sharing different understandings may provide contextual information to paranoid individuals (victims) that suggest that other members (perpetrators) may have ulterior motives (Fein & Hilton 1994). Once alerted to the possibility of ulterior motives, paranoid individuals will grow their social anxiety and their suspicions increase (Kramer, 1999). They translate this by practicing provocative behaviors towards others, such as not being satisfied with visible behavioral information (Fein, 1996) and becoming more vigilant social auditors than others by scanning social interactions more intensely for signs of rejection or acceptance (Kramer, 2001; Freeman et al., 2005). Such suspicious behaviors increase the likelihood that paranoid individuals are becoming a target of ostracism by others (perpetrators) (Kramer & Schaffer, 2014).

In addition, cognitive diversity may unintentionally draw attention to categorical distinctions within a group (Jehn et al., 1999). The cognitive consequences of categorical

distinctions can distort social perceptions among group members. Accordingly, paranoid individuals "tend to overestimate the extent to which they are under evaluative scrutiny by other group members" (Roberge & Dick, 2010: 302) and drive them to complete missing information (fill in the gaps) in the surrounding landscape by drawing on explanations from social cognitive biases (Combs et al., 2007; Freeman et al., 2005). These aversive psychological states (e.g. seeking threat information and heightened self-consciousness) can generate hostile reactions from colleagues, leading to social withdrawal and ostracism (Marr et al., 2012). Thus:

*H3: TCD will moderate the paranoia–workplace-ostracism relationship, such that the positive relationship will be stronger when team diversity is high.*

### **Mediation Effect on Service Performance**

This paper, following the PWO model of Howard et al. (2020), investigates whether individuals' suspicion can be extended to affect their service performance (SP) by influencing their social relationships. As delivering high-quality caring service is critical in nursing teams, this paper has chosen SP as the dependent variable. Here, SP refers to "service behaviors that follow formalized job descriptions and service scripts and consist of completing core service tasks using standard service procedures" (Raub& Liao, 2012, p. 652).

The negative relationship between PWO and performance can be explained by two arguments. First, the feeling of ostracism is accompanied by different psychological consequences, e.g. the consumption of psychological resources, threat to basic needs, frustration, and disappointment (Robinson et al., 2013). These negative effects reduce ostracized individuals' motivation at work (Zhang &Kwan, 2015), and also lead to time being devoted to personal problems rather than work (Wu et al., 2011). Second, independently of the psychological effects, ostracism entails consequences (such as a lack of access to information and resources) that arise because the ostracized individual loses the benefits that come from his/her association with others

(Al-Atwi, 2017; Robinson et al., 2013). Fewer chances to access critical task-related resources and information leads to lower levels of job performance (Wu et al., 2011; Zhang & Kwan, 2015).

Besides positioning themselves as potential victims of others, paranoid employees commonly misinterpret business situations and threats in the workplace (Freeman & Garety, 2000). By deducing extreme interpretations of others' behavior and gestures, paranoid employees are more likely to misjudge clients' or customers' behaviors, thereby undermining performance (Kramer, 2001).. Arguably, paranoia is an outcome of a poorly managed or dysfunctional workplace environment. Thus, PWO could mediate the paranoia–service-performance relationship. Thus:

*H4: PWO will have a negative effect on SP.*

*H5: PWO will mediate the paranoia–service-performance relationship.*

Similarly, this paper expects that cognitive diversity will impair SP. Cognitive diversity fosters a work context that encourages individuals to disagree about work goals and the means of implementing them (Jehn, 1998). Some individuals consider such differences arising from personal motives as potentially hindering the ability of group members to think collectively to solve problems (De Dreu, 2006). It also hinders their ability to process information because it distracts them from core work tasks, leading to them being overwhelmed in the face of personal differences, rather than thinking about how to improve work (Ntege, 2010). Specifically, this paper hypothesizes, as reflected in the cross-level model (Figure 1), that:

*H6: PWO mediates the TCD–SP relationship.*

**<Figure 1 here>**

## **Method**

Data were collected from a leading hospital located in an eastern province of China. The target sample was nurses, whose duties include caring for patients and responding to patients'

various requirements. Their work activities are structured around team-based arrangements. Specifically, they need to cooperate with other nurses to deliver service(s), and each team has a head nurse overseeing the team's work arrangements. Prior to the surveys, the authors conducted a group interview with the HR director and several nurses. This hospital is prestigious in this province, attracting patients from all over China. The authors were informed that nurses often perceived various levels of co-workers-source ostracisms, which affected their interaction with patients and subsequent SP. This context is suitable for testing the hypothesized model.

A two-wave, multi-source, on-site survey was conducted at a two-month interval. With the help of the HR director, potential participants were gathered in a conference room before the survey. One of the authors was present during the whole survey process. Participants were informed that their answered questionnaires would only be used for this specific research project and that nobody from the hospital would have access to their individual responses. Data were collected from nurses and head nurses. During the survey preparation, the authors designed a unique identifier for each participant to pair nurse and head nurse's responses. The two-month time lag enabled capturing the effects of ostracism over a relatively long period of time. At Time 1, nurses reported their demographic information, including age, gender, educational level, organization tenure, paranoia, and TCD. At Time 2, approximately two months later, nurses reported their PWO. Head nurses rated each nurse's SP. After completing the two-round survey, each participant was given a small gift worth approximately 30RMB.

A total of 280 nurses participated at Time 1, and 232 nurses and 48 head nurses at Time 2. The final matched sample comprised 228 nurses (response rate=81.4%) and 48 head nurses (response rate=100%). Ad hoc *t*-tests were performed to test non-response biases; no significant differences were found between nurses in the Time 2 survey and those who participated in the Time 1 survey.

## **Measures**

The back-translation procedure was followed to translate all measures from English into Chinese (Brislin, 1986). All measures were rated on a seven-point Likert scale, except for paranoia, which used a five-point Likert scale (1=strongly disagree, 5=strongly agree).

### ***Paranoia***

A total of 11 items [1], adopted from Freeman et al. (1995), were used to measure employees' paranoid cognitions (sample item: "I need to be on my guard against others"). Cronbach's alpha was 0.97 for the paranoia variable.

### ***Team Cognitive Diversity***

Four items were taken from Van der Vegt and Janssen (2003) measure to assess employees' cognitive diversity. Respondents indicated to what extent the members of the team differed: (1) in their way of thinking, (2) in their knowledge and skills, (3) in how they viewed the world, and (4) in their beliefs about what is right and wrong. All ratings were on a seven-point Likert-type scale ranging from 'to a very small extent' (1) to 'to a very large extent' (7). Individual responses were aggregated from individual level to compute team-level cognitive diversity. Cronbach's alpha (individual level) was 0.89 for this scale.

### ***Perceived Workplace Ostracism***

A total of 10 items were used, developed by Ferris et al. (2008), to measure PWO. Responses used a seven-point scale (1=never, 7=always; sample item: "Others have ignored you at work"). Cronbach's alpha was 0.98.

### ***Service Performance***

The team leader rated employees' SP using seven items from the scale developed by Liao and Chuang (2004) (sample item: "Being able to help patients when needed"). Cronbach's alpha was 0.92.

### ***Control Variables***

As prior research suggests that employee demographics (i.e. age, gender, education, and organizational tenure) may be associated with PWO and SP (Wang et al., 2017; Wu et al., 2015), the authors controlled for these variables. Age and organizational tenure were measured in number of years. Gender was coded as 1=female and 2=male, while education was coded as follows: 1=less than high school; 2=high school; 3=post high school; 4=associate degree; 5=bachelor's degree; 6=masters or doctoral degree.

### ***Assessment of Common Method***

Following Podsakoff et al. (2003), this study applied several procedural and statistical remedies to mitigate the risk of common method bias. Procedural remedies comprised: using temporal separation between the measurement of study variables by using two-wave data collection; promising anonymity to assure participants of confidentiality; and multi-source data collection (team leader and members).

Regarding statistical remedies, the single common method factor approach was used. Confirmatory factor analysis (CFA) was performed, with the items of all scales loaded upon their respective factors; the authors then added a common method factor to the model and drew paths from it to each indicator. This test revealed that the fit indices of this model ( $\chi^2=131.43$ ,  $df=58$ ,  $CFI=0.97$ ,  $RMSEA=0.07$ ,  $SRMR=0.03$ ) are similar to those in the hypothesized measurement model ( $\chi^2=131.44$ ,  $df=59$ ,  $CFI=0.98$ ,  $RMSEA=0.07$ ,  $SRMR=0.03$ ). Thus, the addition of a common method factor did not improve model fit ( $\Delta\chi^2=0.01$ ,  $df=1$ ,  $ns$ ) and explained only 7% of the total variance, i.e. below the 25% threshold for common method variance (Williams et al., 1989). Therefore, common method variance is unlikely to be strong enough to influence the results meaningfully.

## Results

### Justification for Aggregation

To justify the aggregation of cognitive diversity, inter-rater agreement (mean  $r_{wg}$  and  $r_{wg(j)}$ ) and intra-class correlation (ICCs) tests were computed. The mean  $r_{wg}$  was 0.85 (range=0.69-0.97), indicating a high level of agreement among members within teams (LeBreton & Senter, 2008). The ICC(1) was 0.10 and the ICC(2) was 0.35. The F ratios associated with the ICC1 value were statistically significant. While the ICC(2) value was below the suggested criterion of .70 in the literature, this may be caused by the small group size (average less than five in the sample) (Bliese, 2000). The low ICC(2) does not prevent aggregation, if theoretical support is provided and the rest of the statistics are met ( $r_{wg}$  and ICC(1)) (Chen & Bliese, 2002). Therefore, the results above provided sufficient justification for the aggregation of cognitive diversity to the group level.

### Confirmatory Factor Analysis (CFA)

Based on the fit indices, the authors used CFA to examine whether the variables were empirically distinct. Given the low ratio between sample size and number of items, a parceling approach was used (Marsh & Hocevar, 1988). The items of the measures were parceled according to the item-to-construct balance technique (Little et al., 2002), i.e. a one-factor exploratory factor analysis (EFA) must first be conducted to determine the factor loadings for each individual item. The three items with the highest loadings were set as anchors of the respective parcels and the next three items with the fourth, fifth, and sixth highest factor loadings were alternately assigned to the three parcels in an inverted order, and so on, resulting in three parcels per measure (with the exception that the four items of TCD were retained). This process yielded 13 manifest indicators of four study variables. The authors first tested a four-factor CFA model that included paranoia, PWO, cognitive diversity, and SP. The CFA showed that the measurement model fits the data well ( $\chi^2=131.44$ ,  $df=59$ ,  $CFI=0.98$ ,  $RMSEA=0.07$ ,  $SRMR=0.03$ ) and factor loadings for all items were

significant, demonstrating desirable convergent validity. Because paranoia and PWO have high intercorrelations, we conducted comparisons between the original model and the alternative three-factor model combining these two variables. Results revealed that the alternative model fits the data poorly ( $\chi^2=935.87$ ,  $df=62$ ,  $CFI=0.78$ ,  $RMSEA=0.24$ ,  $SRMR=0.08$ ) when compared with the original model. In addition, we created a two-factor model where we distinguished all the self-evaluated constructs (paranoia, PWO and CTD) from those rated by supervisors (SP). The fit indicators demonstrated that the two-factor model fits the data poorly ( $\chi^2=1372.39$ ,  $df=64$ ,  $CFI=0.67$ ,  $RMSEA=0.30$ ,  $SRMR=0.15$ ) than our original model. These analyses provided support for viewing our measurements as discriminate constructs.

### **Descriptive Statistics**

Means, standard deviations, and correlation coefficients for all variables are presented in Table 1. The correlation coefficients of the main variables are in the expected direction. Following Becker (2005), education was not included as a control variable in the subsequent HLM analyses because this variable did not display significant correlations with both PWO and SP.

<Table 1 here>

### **Test of Hypotheses**

Because the data contained a hierarchical structure in which the individual-level data were nested within team-level data, multivariate hierarchical linear modeling (HLM) with restricted maximum likelihood estimation was used to test the hypotheses. For mediation, the study tested mediation hypotheses using the cross-level mediation procedures outlined by Mathieu and Taylor (2007). The level 1 continuous predictors were group mean centered, the level 1 categorical predictors were uncentered, and the level 2 predictors were grand mean centered (Nezlek, 2011). All indirect effects were tested using Monte Carlo simulations with a sample size of 10,000 and a percentage of confidence set to 95.

## Null Models

Before testing the hypotheses, null models were tested to determine the presence of significance between-group variance in the PWO and SP. Our data support the significance of between-group variation in PWO [ $\tau_{00}=0.16$ ,  $\chi^2(47)=77.61$ ,  $p<0.01$ ,  $ICC(1)=0.12$ ], showing that ostracism had 12% between-group variance. Significant results were also found for SP [ $\tau_{00}=0.12$ ,  $\chi^2(47)=85.14$ ,  $p<0.01$ ,  $ICC(1)=0.15$ ], demonstrating that SP had 15% between-group variance.

## Individual-level Main and Mediating Effects

Paranoia was positively related to PWO ( $\gamma_{40}=0.67$ ,  $p<0.01$ , Model 1), thus H1 was supported (Table 2). The HLM results also revealed that PWO was negatively associated with SP ( $\gamma_{50}=-0.23$ ,  $p<0.01$ , Model 4), supporting H4. For testing mediation hypothesis, this study regressed SP on PWO and paranoia simultaneously. Table 2 reveals that the effect of PWO on SP after controlling for paranoia was significant ( $\gamma_{50}=-0.15$ ,  $p<0.05$ , Model 5). The finding showed that paranoia had a significantly negative indirect effect on SP ( $B = -0.11$ ,  $SE = 0.05$ , 95% CI = [-0.21– -0.01]) through WO. Thus, H5 was supported.

<Table 2 here>

## Group-level Main and Mediating Effects

Table 2 indicates that TCD was positively related to PWO ( $\gamma_{01}=0.53$ ,  $p<0.01$ , Model 2), supporting H2. In order to test the indirect effect between TCD and SP by ostracism (2-1-1 mediation), the authors regressed SP on TCD and PWO simultaneously. The effect of PWO on SP ( $\gamma_{10} = -0.23$ ,  $p<0.01$ , Model 6) was significant after controlling for TCD. Our Monte Carlo simulations findings demonstrated that TCD had a significantly negative indirect effect on SP ( $B = -0.08$ ,  $SE = 0.03$ , 95% CI = [-0.14 – -0.02]) through WO; therefore, H6 was supported.

## Cross-level Interaction Effects

In testing Hypothesis 3, we aimed to examine whether TCD would moderate the relationship between paranoia and ostracism at the individual level. This hypothesis was tested using a “slopes-as-outcomes” model, where the variance in the slope across teams is expected to be significantly related to cognitive diversity. Following Hofmann and Gavin (1998), the authors tested cross-level moderation by estimating the significance of cross-level interaction ( $\gamma_{11}$ ) after controlling for group-level, between-group interaction (the interaction term of group-mean paranoia and TCD as predictors of the intercept). The results in Table 2 show that TCD significantly moderates the cross-level interaction between paranoia and PWO significance ( $\gamma_{41} = 0.33, p < 0.01$ , Model 3), supporting H3.

Following Rights and Sterba' (2019) recommendations on quantifying a pseudo-R squared, we estimated the level of variance in ostracism accounted for by the cross-level interaction effects. HLM's results showed that the increment in PWO variance explained by cross-level interaction is 6.48%.

To ensure that the direction of the significant cross-level interactions was aligned with expectations, the authors plotted the individual-level relationships for high and low TCD conditions (Figure 2) (Preacher et al., 2006). As expected, paranoia had a stronger association with PWO when TCD was high (+1 SD) rather than low (-1 SD). A simple slopes test indicated that the relationship is stronger for those who perceive higher cognitive diversity ( $\gamma = 2.09, p < 0.01$ ) compared with those who perceive lower cognitive diversity ( $\gamma = 1.36, p < 0.01$ ).

**<Figure 2 here>**

Finally, we used Rockwood's (2017) MLMed macro in SPSS to test whether the effect of paranoia on SP via PWO was moderated by cognitive diversity. This finding indicated a significant moderated mediation index, estimate =  $-0.025$ , CI 95% [LL =  $-0.054$ , UL =  $-0.002$ ], with a significant mediating effect for employees high in cognitive diversity, estimate =  $-0.10$ , SE =  $0.050$ ,

CI 95% [LL = -.20, UL = -.01], and a significant mediating effect but weaker for members low in cognitive diversity, estimate = -.05, SE = .02, CI 95% [LL = -.11, UL = -.006].

### **Discussion and Implications**

Drawing on the victim precipitation theory, we proposed and tested a multilevel model of PWO and examined paranoia and cognitive diversity as antecedents of SP, with PWO as an underlying mediating mechanism. Then, we investigated how paranoia and cognitive diversity interact to enhance SP. Using data from a leading hospital located in China, we found that paranoia and cognitive diversity had a positive effect on PWO. A key finding from our study was that TCD moderates the paranoia–workplace-ostracism relationship in such a way that the positive association was stronger when group diversity was high. Besides these observations, results also demonstrate that PWO mediated the paranoia–service-performance relationship and the team-cognitive-diversity–service-performance relationship.

Our findings have several theoretical implications. First, although there is a growing body of research on PWO and its effects (Howard et al., 2020), lacking in the current literature is deep insights on the potential antecedents of PWO. Existing research has called for further research into both individual and contextual level antecedents of PWO (Gamian-Wilk and Madeja-Bien, 2018; Wu et al., 2015). We took a step forward to address this call by examining both the individual (paranoia) and contextual(cognitive diversity) level antecedents of PWO. A second contribution of our research is that it deepens our understanding by explaining under what circumstances employees view themselves as being ostracized as a retaliatory reaction from others towards their provocative behaviors. The results revealed that paranoid employees who perceived high levels of cognitive diversity were more likely to be ostracized by others and vice versa. These results not only bolster Aquino and Lamertz’s (2004) relational model of workplace victimization, which

assume that some contextual factors may exacerbate exchanges of hostile between victims and perpetrators, but also expands it by assuming TCD as an additional contextual factor for the factors proposed in their model. Third, although the relationship between PWO and SP has been researched (e.g., Leung et al., 2011), our research is one of the first attempts to empirically demonstrate the independent and joint effects of paranoia and cognitive diversity on SP and to incorporate PWO as a mediated mechanism for those effects. Moreover, past studies argue for considering additional individual- and context-level factors to predict SP (Liao and Chuang, 2004). Thus, the request to consider additional antecedents has been answered.

From a practical standpoint, the results suggest that workplace ostracism had a negative effect on SP, which indicates a need for effective organizational mechanisms for identifying and dealing with early signals of perceived ostracism or exclusion. This is important given that ostracism has also been found to be costly to organizations and leads to decline job performance (Wu et al., 2011), and employees withholding effort (Scott, Restubog, & Zagenczyk, 2013). Moreover, our findings demonstrate a need for organizations to provide channels for potentially ostracized employees to voice their concerns. Given that workplace ostracism involves ostracized individuals and ostracizers (Gooley, Zadro, Williams, Svetieva & Gonsalkorale, 2015), there is a need to create multiple communication channels in organizations through multiple and diverse events and team-building exercises. These would go a long way in creating ladders of opportunities for social interactions to help minimize perceived ostracism. By demonstrating care and instituting more cross-cultural and cross-functional teams, organizations improve the exchange of ideas as well as create a fertile ground to minimize instances of ostracism.

By equipping managers with a new set of skills toward cultivating collaborative and inclusive work environments, organizations would be better able to identify and resolve potential

cases of ostracism. Given that employees withholding their efforts and opinions have been identified as a contributory factor in organizational collapse (Amankwah-Amoah, 2014), it is essential that managers and organizations become more attentive to “silent” employees and devise effective measures such as group gathering events, training schemes and team-based projects to facilitate interaction, and thus help to minimize PWO. This would create conditions that allow potentially ostracized employees to contribute fully to creativity and innovation efforts within the firm.

### **Limitations and Future Directions**

This study has limitations associated with the data and context. First, this study relied on one hospital, precluding the generalization of results to other hospitals across China. Also, most hospitals in China, and other developing nations, are unlikely to be classified as “leading” hospitals, further reducing generalizability. Future studies could extend these findings using data from other sectors. Second, this study utilized a relatively small, sector-specific sample. The hospital sector has its own processes, routines, codes of conduct, deep-rooted culture, and rules, often curtailing or influencing individuals’ latitude to act. Thus, the sector possesses more constraints and hindrances that have direct and indirect effects leading to, or contributing to, paranoia and PWO. This study’s findings around paranoia and PWO might also be country-specific, suggesting the future use of a large, cross-country data sample. Third, although we performed required analyses to show that common method variance may not be an issue, our variables are still cross-sectional single source data.

## Endnotes

1. The authors used items 1–11. Items 12–18 were considered too sensitive following a pilot interview of the survey target.

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Table 1

*Means, Standard Deviations, and Zero-order Correlations*

Variable	Means	SD	1	2	3	4	5	6	7	8
1. Age	3.78	1.47								
2. Gender	1.39	0.48	0.18**							
3. Education	4.10	0.74	0.14*	0.25**						
4. Organization tenure	6.29	4.25	0.22**	0.16*	0.03					
5. Paranoia	2.23	1.23	-0.01	0.12	0.06	-0.07				
6. Workplace ostracism	1.91	1.14	-0.02	0.18**	0.05	-0.04	0.75**			
7. Team cognitive diversity	3.30	1.07	-0.04	0.13*	0.12	-0.06	0.43**	0.46**		
8. Service performance	3.98	.890	0.22**	0.17**	0.08	0.29**	-0.30**	-0.30**	-0.25**	

*Notes.*  $n = 228$  and 48 teams. Team cognitive diversity values are for individual perceptions before aggregation to the team level. \*\* $p < 0.01$ , \* $p < 0.05$ .

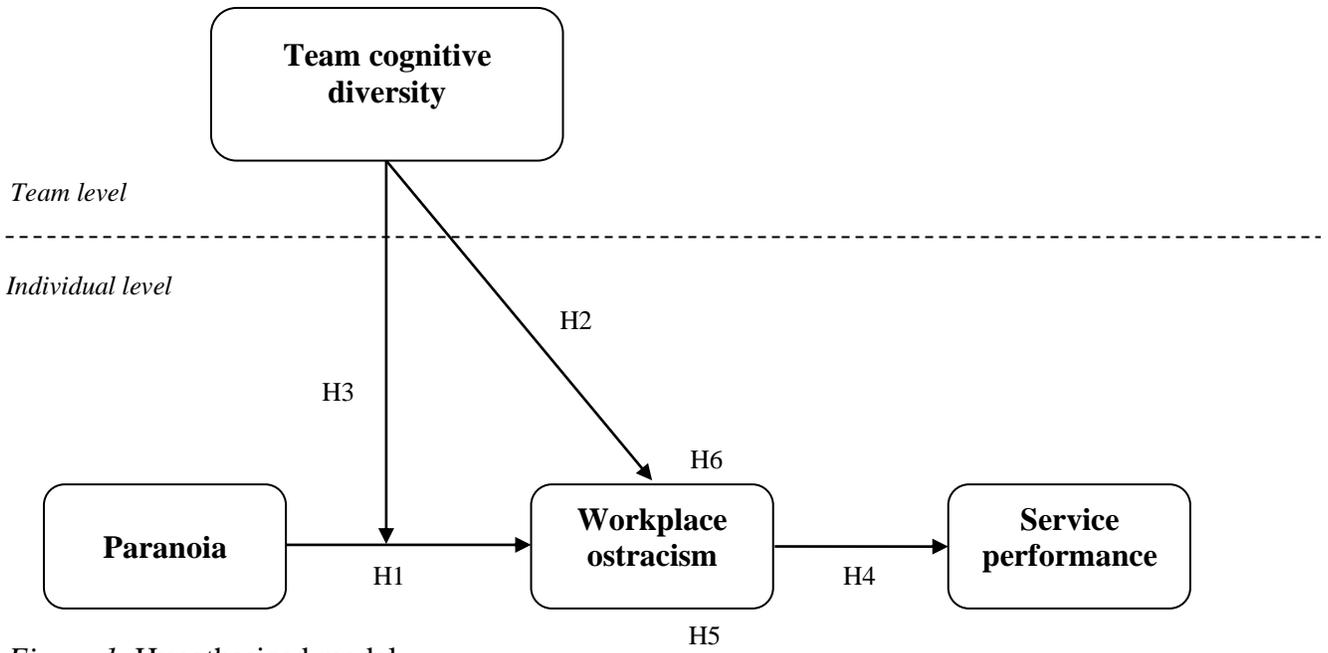


Figure 1. Hypothesized model.

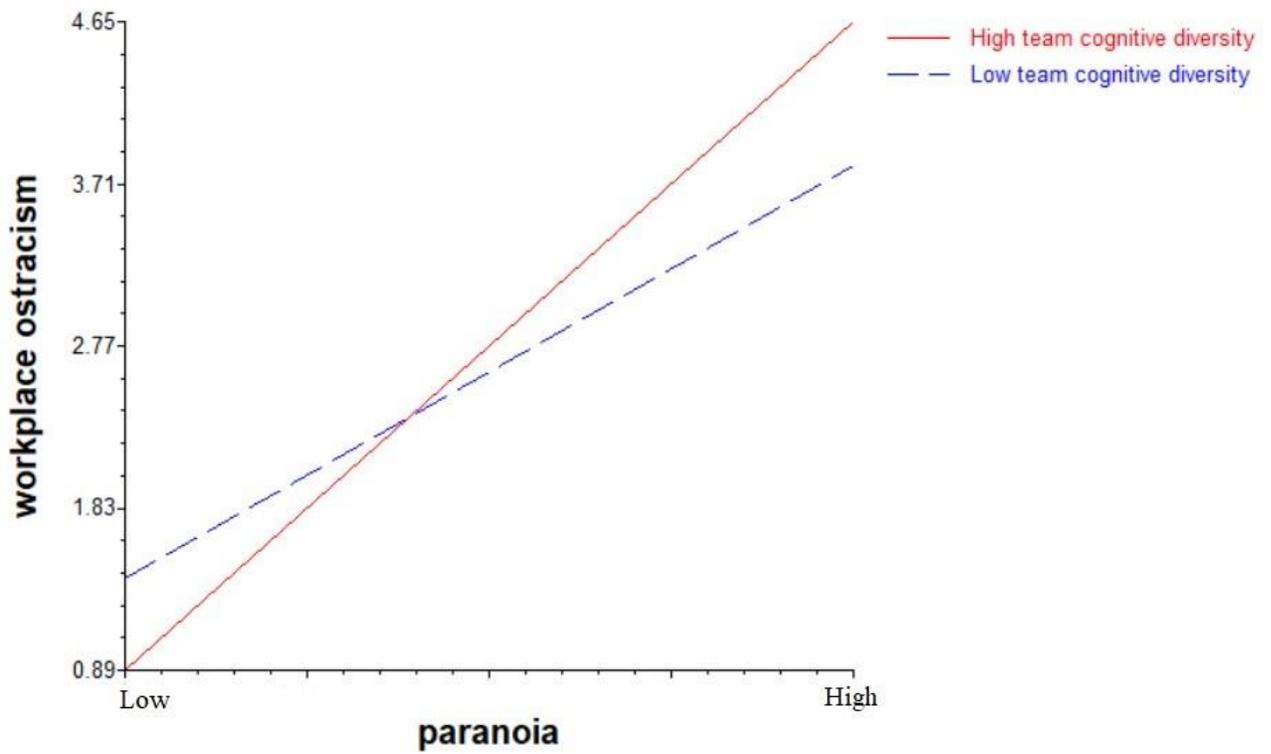


Figure 2. Team cognitive diversity as a moderator of the paranoia–workplace ostracism relationship.

**Table 2***Hierarchical Linear Modeling Results*

Effect	Parameter	Ostracism				Performance			
		(Null Model)	(Model 1)	(Model 2)	(Model 3)	(Null Model)	(Model 4)	(Model 5)	(Model 6)
<b>Fixed effects</b>									
<b>Level 1</b>									
Intercept	$\gamma_{00}$	1.91**(0.09)	1.45**(0.20)	1.46**(0.21)	1.68**(0.17)	3.96**(0.07)	3.46**(0.18)	3.48**(0.18)	3.48**(0.18)
Age	$\gamma_{10}$		-0.02(0.04)	-0.03(0.04)	-0.03(0.04)		0.06(0.05)	0.06(0.05)	0.06(0.05)
Gender	$\gamma_{20}$		0.33*(0.15)	0.32*(0.15)	0.16(0.11)		0.35**(0.11)	0.34**(0.11)	0.35**(0.11)
Organization tenure	$\gamma_{30}$		-0.00(0.02)	-0.00(0.02)	0.00(0.01)		0.04**(0.01)	0.05**(0.01)	0.04**(0.01)
Paranoia	$\gamma_{40}$		0.67**(0.07)	0.67**(0.07)	0.62**(0.06)			-0.10*(0.05)	
Workplace ostracism	$\gamma_{50}$						-	-0.15*(0.07)	-0.23**(0.07)
<b>Level 2</b>									
Cognitive diversity	$\gamma_{01}$			0.53**(0.18)	0.23(0.17)				-0.17(0.11)
<b>Cross-level interaction</b>									
Cognitive diversity x Paranoia	$\gamma_{41}$				0.33**(0.10)				
<b>Random effects</b>									
Level 1 variance	$\sigma^2$	1.16	0.56	0.55	0.52	0.68	0.54	0.53	0.53
Level 2 variance	$\tau_{00}$	0.15	0.29	0.20	0.02	0.12	0.15	0.15	0.15
Deviance		704.95	587.61	578.90	527.74	587.71	560.49	563.36	562.84

Notes. n=228 and 48 teams. Entries are estimations of the fixed effects ( $\gamma_s$ ) with robust standard errors. Standard errors are in parentheses. \*\* p <

0.01, \* p < 0.05.

