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## Research article

# Informational justice and employee knowledge hiding behaviours: Mediation of organizational identification and moderation of justice sensitivity

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## ABSTRACT

**Purpose:** – This study examines the effects of information justice on employee knowledge hiding via the mediation of organizational identification, and further investigates how justice sensitivity moderates these effects.

**Design/methodology/approach:** Data were collected through a questionnaire survey with 250 working individuals in China. Confirmatory factor analysis was conducted to test the validity and reliability of the construct measurement. Regression analyses were then used for hypothesis tests.

**Findings:** Informational justice is negatively associated with evasive hiding and playing dumb behaviours but positively associated with rationalized hiding behaviour through the mediation of organizational identification. In addition, justice sensitivity moderates the relationship between informational justice and organizational identification.

**Practical implications:** Managers should deliver informational justice in their workplace interactions with subordinates in counteracting workplace knowledge hiding, and pay special attention to employees with higher justice sensitivity who possess critical knowledge to the organization.

**Originality/value:** This study identified informational justice in the leader-follower exchange domain as a predictor of employee knowledge hiding, and examined specific mediation mechanism and boundary effects.

## 1. Introduction

Knowledge sharing not only realizes the flow of knowledge from the knowledge contributor to the knowledge receiver, but also improves the ability of both parties to understand and apply knowledge in improving task performance [1]. However, in reality, many employees are reluctant to share knowledge with their colleagues [2–4]. They even deliberately withhold the information that their colleagues need [5]. This phenomenon is referred as knowledge hiding, defined as an individual's behaviour to intentionally conceal knowledge or prevent the disclosure of confidential information [5]. Scholars have attempted to understand the negative consequences of knowledge hiding. For example, knowledge hiding was found to undermine creativity [6,7], disrupting the transfer of information resources [6], and prompting turnover [5]. Given these negative impacts, it is critical that organizations identify the reasons why

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employees engage in knowledge hiding and find ways to minimize such behaviours.

Researchers have identified many antecedents of knowledge hiding in the workplace context [8]. These antecedents include, but are not limited to, personality [9], abusive supervision [10], job insecurity [11], workplace incivility [12], task conflict [13], and organizational culture [14]. These antecedents pertain to employees' personal characteristics, job nature, supervisor style and organization climate and environment. Although supervisors play an active agent role in their daily management interactions with employees, except for the concept of abusive supervision [10], little research has explored other types of supervisor-related factors that could affect employees' knowledge hiding.

In the literature, interpersonal relationship was identified to be a crucial factor influencing individual's knowledge hiding [5]. In this regard, Connelly et al. [5] testified that interpersonal distrust among colleagues affects employees' knowledge hiding. Connelly and Zweig [15] argued that a deterioration of interpersonal relationships is an important predictor of knowledge hiding. Employees' workplace behaviour is largely affected by their interpersonal relationship with supervisors [16].

In employees' interpersonal relationships with their supervisors, supervisors' fair conduct and equitable attitude seem to be an important determinant of the relationship quality. However, it is unclear how a supervisor's behaviour of executing informational justice as a particular form of fair conduct affects knowledge hiding among the subordinates. Knowledge behaviour in the workplace context naturally deals with information exchanges between employees. Supervisors' informational justice in their interactions with subordinates would possibly work as a social cue for employees to form their relevant knowledge-related behaviour, leading to either sharing or hiding. According to social learning theory [17], employees could use such social cues in the workplace to inform their social learning and adapt their own workplace behaviour. Drawing on social exchange theory [18], one party offers a service or contribution to the other and expects a return in future; the other party receiving the service or help would feel obliged to reciprocate. Employees may reciprocate in different ways, such as being more committed to the organization, being more satisfied with the job and exhibiting more positive attitudes toward the organization [19,20]. Loi et al. [21] illustrated that in a high-level leader-member exchange relationship, employees tend to classify themselves as a member of the organization and trust the organization, thus reducing their willingness to hide knowledge from colleagues. In this process, employees' organization identification, functions as a mediator between leader-member relationship and knowledge hiding behaviour. Employees could reciprocate by reducing destructive knowledge management behaviours, such as knowledge hiding [22]. However, if knowledge hiding is rationalized to be good to the organization, employees could practice knowledge hiding as a goodwill behaviour toward the organization.

Individuals have different degrees of sensitivity to informational justice [23]. Employees with higher justice sensitivity tend to capture information relating to supervisor justice immediately, and analyse and evaluate the degree of respect and importance that the organization attaches to them by comparing the treatments that they receive with what is received by other colleagues [24]. Blakely et al. [25] identified that justice sensitivity moderates the relationship between organizational justice and organizational citizenship behaviour (OCB). Thus, it is reasonable to postulate that justice sensibility would moderate the relationship between informational justice and knowledge hiding.

Building on the identified research gap above, the current study aims to examine how informational justice can influence employees' knowledge hiding behaviours through the mediation of organizational identification; it further tests the moderating role of justice sensitivity in the relationship between informational justice and organization identification as well as the mediation effect. The major motivation for us to focus on supervisor-rated information justice in the workplace as a potential under-examined antecedent to knowledge hiding lies in our belief that supervisors are more active agent in the workplace that can bring positive change in the workplace. We hope our study could bring evidence-based insights that both human resource managers and workplace supervisors can draw on to foster desirable knowledge related behaviours among employees in the workplace.

## 2. Theory background and hypotheses development

### 2.1. Informational justice and knowledge hiding behaviours

Informational justice is defined as the quality of justice treatment received by employees in interpersonal communication, including accurate, sufficient and timely expression and interpretation of information about positions, decisions and actions taken by others [26]. Informational justice, as a specific form of social exchange, can effectively improve employees' acceptance and tolerance of negative information or decisions, thus reducing employees' deviant behaviour in the workplace. For example, Greenberg [27] suggests that a detailed and polite explanation of temporary pay cuts could reduce negative behaviours caused by insufficient pay, such as corporate theft and staff turnover. Au and Leung [28] argue that information justice represents one party's recognition and respect for the other's ability, which will lead both parties to reach an agreement in work and increase cooperative behaviours.

The social exchange theory posits that the relationship between people is based on reciprocity, trust, honesty, mutual assistance, equality and mutual benefit [18]. A person who acts positively toward another person will indirectly trigger similar reciprocal behaviour from that person. When one person perceives the other person's negative behaviour or inappropriate behaviour (e.g., unfair treatment), he or she develops a sense of distrust – a fear that the other person may cause harm. This distrust often leads to negative behaviours, such as reducing willingness to share information, rejecting the transfer of tacit knowledge or implementing knowledge hiding behaviours [28,29]. On the contrary, a supervisor's justice treatment will make employees feel respected, appreciated and recognized, and in turn respond positively in the workplace due to justice treatment [28]. In other words, when employees perceive informational justice, they prefer to cooperate with coworkers to achieve the success of the organization, instead of pretending to be ignorant or telling others wrong information [30].

Research has shown that justice perceptions significantly influence knowledge hiding behaviours. For example, Ghani et al. [31]

proved that among higher education students, interactional justice is negatively related to all three forms of knowledge hiding behaviours including evasive hiding, playing dumb, and rationalized hiding. In another recent study, Oubrich et al. [32] found that organizational justice has a negative impact on knowledge hiding.

On the other hand, informational justice would have a different effect on rationalized hiding behaviour, because rationalized hiding behaviour implies no intention to deceive [5]. Employees are inclined to work on rationalized hiding behaviours when the corporate norms require the protection of certain information confidentiality [33]. In this context, employees consider their rationalized hiding behaviours to be honest, altruistic and guided by their abilities and moral values, which match the expectations of supervisors and the organization [15]. As such, employees who perceive a higher level of informational justice are more inclined to work on rationalized hiding behaviour for the benefit of the organization.

Based on the above literature inquiry, we raise the following hypotheses.

**Hypothesis 1a.** Informational justice is negatively related to employees' evasive hiding behaviour.

**Hypothesis 1b.** Informational justice is negatively related to employees' playing dumb behaviour.

**Hypothesis 1c.** Informational justice is positively related to employees' rationalized hiding behaviour.

## 2.2. Mediating role of organizational identification

Organizational identification was defined by Ashforth and Mael ([34], p.34) as an employee's "perception of oneness with or belongingness to the organization". There is a process of incorporating the perception of oneself as a member of a particular organization into one's general self-definition [35–37]. From the perspective of social exchange, organizational identification is seen as a means to give back to the organization by increasing the degree of recognition and affiliation of the organization. Specifically, informational justice conveys positive information about employees' status in the organization, and shows that leaders appreciate and recognize employees' abilities and honestly treat them equally and respectfully [26]. Similarly, such justice treatment satisfies employees' psychological need to be respected and make employees reciprocate in ways that benefit the organization, such as engaging in voluntary behaviours of knowledge sharing and exhibiting positive work attitudes [19]. In the group engagement model, Tyler and Blader [38] demonstrated that whether employees are treated fairly in the process of interacting with their supervisors leads to positive discretionary behaviour by initiating an identity judgment of the particular organization. Therefore, we speculate that informational justice will have a positive effect on organizational identification.

Organizational identification reduces employees' negative knowledge management behaviours through their judgement of whether their behaviours match the interests of the organization [22]. Both playing dumb and evasive hiding can be regarded as an intentional act of non-cooperation and deception by employees, and hence are in conflict to organizational interests [33]. Serenko and Bontis [22] found that deception leads to the retention of important knowledge within individuals, thus blocking the free flow and transmission of organizational information. Employees with strong organizational identification tend to undertake tasks that are beneficial to the organization. When they realize that playing dumb or evasive hiding will bring disadvantages to their organization, they will greatly reduce these behaviours. However, employees with higher organizational identification are more inclined to work on rationalized hiding behaviours to be consistent with the organizational interests [5].

Based on the above discussions, we propose.

**Hypothesis 2a.** Organizational identification mediates the relationship between informational justice and employees' evasive hiding behaviour.

**Hypothesis 2b.** Organizational identification mediates the relationship between informational justice and employees' playing dumb behaviour.

**Hypothesis 2c.** Organizational identification mediates the relationship between informational justice and employees' rationalized hiding behaviour.

## 2.3. Moderating role of justice sensitivity

Justice sensitivity is a personality trait that refers to the degree of difference in people's perception and response to unfair treatment [24]. Justice sensitivity affects individuals' emotions and behaviours associated with fairness [23]. For instance, Schmitt et al. [39] discovered that the retaliatory response of laid-off employees to former employers depends directly on their sensitivity to informational justice during their tenure. Furthermore, Schmitt and Dörfel's [40] study showed that justice sensitivity not only guides an individual's organizational citizenship behaviour through its direct effect on justice perception, but also amplifies the influence of unfair perception on behaviour.

Individuals often compare with co-workers in the workplace in terms of status, resources, and interests in order to obtain a full self-awareness [41]. Through the evaluation of the above aspects, employees decide whether to increase organizational identification [24]. Specifically, high justice sensitive employees are inclined to observe the fair treatment of colleagues and compare it with the treatment they receive themselves to assess the extent they are valued by the organization. This comparative perception of respect and status gives employees a sense of superiority or inferiority, which in turn strengthens or weakens their identification of the organization [21]. Hence, higher justice sensitivity improves the impact of informational justice on employees' organizational identification and can effectively suppress the intention of knowledge hiding.

On the contrary, employees with lower justice sensitivity are slow to perceive and respond to informational justice. The impact of social comparison on them is minimized by the lack of ability to quickly capture information relevant to supervisor fairness in their organization. Therefore, even if employees are treated fairly by their supervisors, people with lower justice sensitivity may ignore the support and encouragement from supervisors and thus do not deliberately strengthen their identification with the organization.

Based on the above discussions, we propose the following hypothesis.

**Hypothesis 3.** Justice sensitivity moderates the relationship between informational justice and employees' organizational identification, such that the positive association is stronger when employees hold high rather than low levels of justice sensitivity.

As justice sensitivity is likely to moderate the relationship between information justice and organizational identification, the mediation of organizational identification between information justice and knowledge hiding (i.e., indirect effect of information justice on knowledge hiding) may also be moderated by justice sensitivity. We thus propose.

**Hypothesis 4a.** Justice sensitivity moderates the indirect negative effect of informational justice on evasive hiding via organizational identification, such that for those with higher justice sensitivity, the negative effect will be stronger.

**Hypothesis 4b.** Justice sensitivity moderates the indirect negative effect of informational justice on playing dumb via organizational identification, such that for those with higher justice sensitivity, the negative effect will be stronger.

**Hypothesis 4c.** Justice sensitivity moderates the indirect positive effect of informational justice on rationalized hiding via organizational identification, such that for those with higher justice sensitivity, the positive effect will be stronger.

The conceptual framework of this study is illustrated in Fig. 1.

### 3. Methods

#### 3.1. Sample and procedures

We collected data using Creator of Data and Model (Credamo), a platform in China resembling Amazon Mechanical Turks. First, we published a 1-min screening survey on the platform to find eligible respondents by the following criteria: 1) current full-time employment status, 2) working in a team that has more than three members, and, (3) the presence of a direct supervisor in the working team. As our study focussed on knowledge hiding, employees working in team would be in a more relevant setting in demonstrating knowledge hiding behaviours. Therefore, we set "working in a team" as one screening criterion. We then asked eligible respondents to fill out the formal questionnaire on a voluntary basis. As we used online questionnaire survey, as per the survey platform's policy, participating in the survey was voluntary and respondents' completion of the survey would indicate their consent to participate in the survey.

Our population is defined as employees in an organization who have a direct reporting line manager as their supervisor. As different industries may have different nature for their organizations, it is not possible to conduct a probabilistic random sampling. Instead, we employed a convenience sampling method through the survey company. Our data collection was conducted in March 2021. Eventually, we received 279 responses with participants working in a variety of industries including manufacturing, construction, finance, information technology services, wholesale and retail industries. Among the 279 who completed the screening survey, 250 passed the eligibility and attention checks, resulting in an 89.6% response rate. Respondents who completed the screening survey and passed the eligibility and attention checks received 3 Chinese Yuan as an incentive and were eligible to continue with the study. The 250 respondents received an additional 6 Chinese Yuan after they completed the formal survey. Providing small amount of monetary incentive is a common practice by the survey company to reward participation. 46% of the 250 respondents were male and 54% of them were female. The average age was 30.76 years old and average organizational tenure was 5.58 years. 74.8% of the respondents reported to have a bachelor's degree.

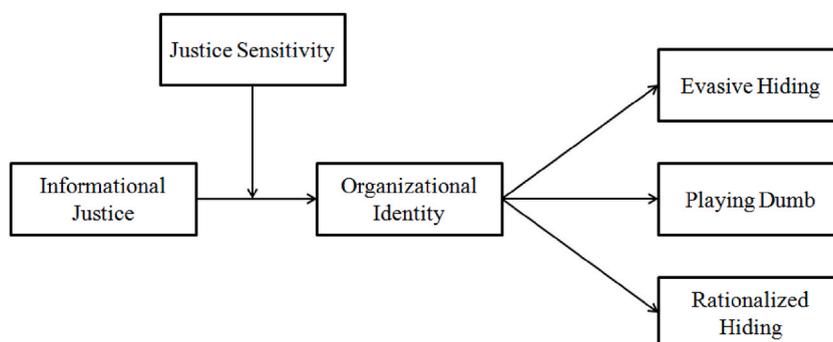


Fig. 1. Theoretical model.

### 3.2. Measures

We followed the translation-back translation process to translate the English measurements into Chinese. All items were assessed using a 5-point Likert scale from 1 “strongly disagree” to 5 “strongly agree”.

**Informational justice.** We measured informational justice using Colquitt’s [26] 5-item scale. One sample item is “My supervisor will give a reasonable explanation for the decision-making procedures at work”.

**Justice sensitivity.** We measured justice sensitivity using Schmitt et al.’s [24] 10-item scale. An example item is “It bothers me when others receive something that ought to be mine”.

**Organizational identification.** We used Smidts et al.’s [42] 5-item scale to measure organizational identification. An example item is “I fully recognize this organization”.

**Knowledge hiding.** We measured the three dimensions of knowledge hiding, namely evasive hiding, playing dumb, and rationalized hiding using Connelly et al.’s [5] 12-item scale. Each dimension was assessed with four items. Example items are “I give my colleague some information, but not what he/she really needs” (evasive hiding), “even though I know, I would say I don’t know” (playing dumb) and “I honestly told my colleague that I could not answer his/her questions” (rationalized hiding).

As the measures used are all well tested in the workplace context, we adopted the original items without any changes.

**Control variables.** We include gender, education, age, and job tenure as control variables in the study [43].

### 3.3. Data analysis

As we adopted established measures in our research, we use AMOS 22.0 to run confirmatory factor analysis to test the measurement qualities (reliability and validity) before testing the hypotheses. After confirming the measurement reliability and validity, we applied a series of regression analyses to test the hypotheses.

## 4. Results

### 4.1. Discriminant validity and inter-construct correlations

We use AMOS 22.0 software to conduct a series of confirmatory factor analyses (CFAs) to verify the discriminant validity of the constructs in the model. We estimated the six-factor model and checked the following fit indices: the model’s overall Chi-square, comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA). The results indicate that the six-factor model fit the data well ( $\chi^2/df = 757.71/499 = 1.69$ , CFI = 0.90; TLI = 0.90; RMSEA = 0.05) (see Table 1). The results therefore show that the current 6-construct model is most suitable.

Table 2 shows the six-factor CFA model test results. All standardized factor loading (except for item JS4) were above 0.50 and significant at 0.01 level, and all average variance explained (AVE) values are above 0.50 except for the AVE of justice sensitivity. Although the AVE of justice sensitivity is below 0.50, its composite reliability is still well above 0.70. Therefore, we deem all constructs had sufficient convergent validity.

Table 3 shows the mean values, standard deviations, and zero-order correlations among the variables. Square root values of AVE are located on the diagonal in parentheses. As shown in Table 3, except for square root value of AVE for justice sensitivity, all the other constructs’ square root values of AVE are larger than the pair-wise inter-construct correlations, showing that the discriminant validity of the measurement is generally supported [44].

### 4.2. Tests of hypotheses

We ran a simple mediation model using SPSS PROCESS to examine the indirect effect of informational justice on knowledge hiding (evasive hiding, playing dumb, rationalized hiding) through organizational identification (Hypothesis 2a, 2b, 2c). Subsequently, we tested the mediation hypotheses and the interaction between informational justice and justice sensitivity with PROCESS Macro [45]. We test the effect of the interaction between informational justice and justice sensitivity on organizational identification (Hypothesis 3) and the moderation effect of justice sensitivity on the indirect impact of informational justice on knowledge hiding (Hypothesis 4a, 4b, 4c) via organizational identification with Model 7 in SPSS PROCESS.

**Table 1**  
Confirmatory factor analysis (CFA) of discrimination validity.

Models	Factors	$\chi^2$	df	$\chi^2/df$	RMSEA	TLI	CFI	$\Delta\chi^2$ (df)
Model 1	6 factors : IJ; JS; OI; LEH; PD; RH	757.710	449	1.688	.053	.90	.91	–
Model 2	4 factors : IJ; JS; OI; EH + PD + RH	1165.343	458	2.544	.079	.77	.79	407.633 (9)***
Model 3	3 factors : IJ + OI; JS; EH + PD + RH	1276.149	461	2.768	.084	.74	.75	518.439 (12)***
Model 4	3 factors : IJ + JS; OI; EH + PD + RH	1689.527	461	3.665	.103	.60	.63	931.817 (12)***
Model 5	2 factors : IJ + OI + JS; EH + PD + RH	1886.012	463	4.073	.111	.54	.57	1128.302 (14)***
Model 6	1 factor : IJ + OI + JS + EH + PD + RH	2352.118	464	5.069	.128	.39	.43	1594.408 (15)***

Note. + represents two factors merge into one. N = 250. IJ: informational justice; JS: justice sensitivity; OI: organizational identification; EH: evasive hiding; PD: playing dumb; RH: rationalized hiding. \*p < .05; \*\*p < .01; \*\*\*p < .001; models are compared to Model 1 as the benchmark.

**Table 2**  
Six-factor model CFA results.

Constructs	Items	Mean	SD	SFL	AVE	CR
Informational justice	IJ1 My leaders will explain the decision-making process to me in full detail	4.01	0.850	0.727	0.502	0.834
	IJ2 My leaders will explain the decision-making process to me reasonably	4.10	0.850	0.769		
	IJ3 My leaders will communicate with me the details of decisions	3.99	0.855	0.732		
	IJ4 My leader was very honest when communicating with me	4.16	0.761	0.681		
	IJ5 My leaders will change the content of the communication according to my specific needs	3.95	0.849	0.625		
Organizational identification	OI1 I am connected with our department	4.23	0.797	0.597	0.521	0.843
	OI2 I have a strong sense of belonging to our department	4.28	0.778	0.670		
	OI3 I am very proud to work in the department	4.44	0.669	0.734		
	OI4 I fully recognize my department	4.41	0.672	0.756		
	OI5 I am honored to be a member of the department	4.46	0.628	0.829		
Justice sensitivity	JS1 It bothers me when others receive something that ought to be mine	3.82	.968	0.660	0.358	0.846
	JS2 I feel very angry when others get paid what I deserve	3.79	1.096	0.598		
	JS3 I can't stand someone else to unilaterally profit from me	3.61	1.136	0.581		
	JS4 If I have to take corrections because of their carelessness, I will take a long time to forget it	3.35	1.103	0.422		
	JS5 I am disappointed when I have fewer opportunities to develop my abilities than others	3.61	1.021	0.652		
	JS6 I would be angry if others are better than me	2.74	1.213	0.607		
	JS7 I get upset when I have to work hard for something easy to get	3.42	1.132	0.646		
	JS8 When others are treated better than me, I will reflect for a long time	3.85	.947	0.506		
	JS9 The criticism of me is my burden	3.70	.974	0.586		
	JS10 I was very angry when I was treated worse than others	3.35	1.117	0.679		
Evasive hiding	EH1 Agreed to help him/her, but had no real intention	1.72	0.846	0.660	0.524	0.814
	EH2 Agree to help him/her, but give him/her different information from what he wants	1.60	0.771	0.658		
	EH3 Tell him/her that I will help him/her get out later, but stop as much as possible	1.57	0.785	0.807		
	EH4 Provide him/her with some other information rather than what he/she really wants	1.54	0.694	0.760		
Playing dumb	PD1 Pretend that I don't know this information	1.53	0.782	0.788	0.637	0.875
	PD2 Say that I don't know, even though I know	1.54	0.792	0.860		
	PD3 Pretend that I don't know what he/she is talking about	1.56	0.711	0.758		
	PD4 Tell him/her that I don't know much about this topic	1.70	0.880	0.783		
Rationalized hiding	RH1 Explain that I want to tell him/her, but this is something he/she should not know	3.62	1.132	0.603	0.544	0.824
	RH2 This information is confidential, and I will tell him/her that only specific people can know it	3.95	1.116	0.815		
	RH3 Tell him/her that my boss will not let anyone share it	4.18	1.033	0.817		
	RH4 Tell him/her that my boss will not let anyone share it	4.15	0.928	0.694		

Notes: SD = Standard Deviation; SFL = Standardized Factor Loading; AVE = Average Variance Explained; CR = Composite Reliability.

**Table 3**  
Means, standard deviations, and inter-variable correlations.

Variables	M	SD	1	2	3	4	5	6	7	8	9	10
1.Gender	1.54	.50										
2.Age	30.76	7.24	-.04									
3.Job Tenure	5.58	6.00	-.08	.70**								
4.Education	2.87	.59	-.06	-.13**	-.04							
5.IJ	4.04	.64	-.01	.00	.13 <sup>a</sup>	-.03	(.71)					
6.JS	3.52	.69	-.04	-.08	-.10	.07	-.11	(.60)				
7.OI	4.36	.55	-.07	.07	.16 <sup>a</sup>	-.01	.63**	-.13 <sup>a</sup>	(.72)			
8.EH	1.60	.62	-.04	-.14 <sup>a</sup>	-.13 <sup>a</sup>	.04	-.39**	.15 <sup>a</sup>	-.39**	(.72)		
9.PD	1.58	.67	-.07	-.13 <sup>a</sup>	-.14 <sup>a</sup>	.03	-.35**	.12	-.36**	.63**	(.79)	
10.RH	3.97	.84	.04	.09	.11	-.08	-.19**	-.03	.23**	-.26**	-.29**	(.74)

Note. N = 250; IJ: informational justice; JS: justice sensitivity; OI: organizational identification; EH: evasive hiding; PD: playing dumb; RH: rationalized hiding. Diagonal values in brackets are square root of AVE.

<sup>a</sup> p < .05; \*\*p < .01. All statistical tests are two-tailed.

As seen in Table 4, informational justice is negatively related to evasive hiding (Model 1:  $\beta = -0.38, p < .001$ ) and playing dumb (Model 3:  $\beta = -0.35, p < .001$ ), and is positively related to rationalized hiding (Model 5:  $\beta = 0.17, p < .01$ ). Hence, Hypotheses 1a, 1b and 1c are supported.

We also used PROCESS test Hypotheses 2a, 2b, and 2c. As shown in Table 4, in Model 7, informational justice is positively related to organizational identification (Model 7:  $\beta = 0.62, p < .001$ ). Results also show informational justice is significantly related to evasive hiding (Model 1:  $\beta = -0.38, p < .001$ ), playing dumb (Model 3:  $\beta = -0.35, p < .001$ ), and rationalized hiding (Model 5:  $\beta = 0.17, p < .01$ ).

**Table 4**  
Results of hierarchical regression analysis predicting knowledge hiding and organizational identification.

	DV = evasive hiding		DV = playing dumb		DV = rationalized hiding		DV = organizational identification		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Gender	-.05	-.07	-.08	-.10	.06	.07	-.06	-.07	-.06
Age	-.16	-.15	-.12	-.11	.04	.03	.02	.02	.02
Job Tenure	.02	.04	-.03	-.01	.06	.05	.06	.05	.05
Education	.02	.02	.00	.01	-.07	-.07	.02	.02	.02
IJ	-.38***	-.25**	-.35***	-.21**	.17**	.06	.62***	.62***	.60***
OI		-.23**		-.23**		.19 <sup>a</sup>			
JS								-.06	-.11 <sup>a</sup>
IJ × JS									.14**
R <sup>2</sup>	.17	.20	.15	.15	.05	.07	.41	.41	.43
f <sup>2</sup>	N.A.	.0375	N.A.	.000	N.A.	.0215	N.A.	.000	.0351

Note. N = 250. IJ: informational justice; JS: justice sensitivity; OI: organizational identification; EH: evasive hiding; PD: playing dumb; RH: rationalized hiding.

<sup>a</sup> p < .05; \*\*p < .01; \*\*\*p < .001.

.01). As shown in Table 3, organizational identification is negatively related to evasive hiding ( $r = -0.39$ ,  $p < .01$ ), playing dumb ( $r = -0.36$ ,  $p < .01$ ), and positively related to rationalized hiding ( $r = 0.23$ ,  $p < .01$ ). When both informational justice and organizational identification are added in the regression models to predict knowledge hiding behaviours, it was found that the coefficients of informational justice on evasive hiding (Model 2:  $\beta = -0.25$ ,  $p < .01$ ) and playing dumb (Model 4:  $\beta = -0.21$ ,  $p < .01$ ) become smaller in their absolute value but still significant, indicating that organizational identification plays a partial mediating role in the relationships, thus supporting Hypothesis 2a and 2b. On the other hand, the relationship between informational justice and rationalized hiding became insignificant (Model 6:  $\beta = 0.06$ , *ns*), showing a full mediation effect of organizational identification, supporting Hypothesis 2c.

Finally, Table 5 shows that the indirect impact between informational justice and evasive hiding via organizational identification was significant and not zero in the 95% confidence interval ( $-0.14$ ; 95%CI:  $[-0.25, -0.04]$ ). Thus, Hypothesis 2a was supported. Similarly, the confidence interval around the indirect effects of informational justice on playing dumb ( $0.15$ ; 95%CI:  $[-0.28, -0.02]$ ) and on rationalized hiding (effect =  $0.15$ ; 95%CI:  $[0.02, 0.29]$ ) via organizational identification also excluded zero; thus Hypotheses 2b and 2c were supported.

To test Hypothesis 3, we first standardized all variables. With PROCESS Macro modelling [45], results (Model 9 in Table 4) revealed that the interaction between informational justice and justice sensitivity had a significant effect ( $\beta = 0.14$ ,  $p < .01$ ) on organizational identification. Following Aiken and West [46], we plotted the interactions at one standard deviation above and below the mean of the moderator (Fig. 2). Fig. 2 shows that justice sensitivity significantly moderated the relationship between informational justice and organizational identification, in such a way that the effect of informational justice on organizational identification is stronger with higher justice sensitivity. Thus, Hypothesis 3 was supported.

We further tested the conditional indirect effect (Hypotheses 4a, 4b, 4c) in SPSS PROCESS. However, there was no significant difference in the conditional indirect effect of informational justice on evasive hiding (Diff. =  $-0.03$ , *ns*), playing dumb (Diff. =  $-0.03$ , *ns*) and on rationalized hiding (Diff. =  $0.02$ , *ns*) through organizational identification across high or low levels of justice sensitivity. Accordingly, Hypotheses 4a, 4b and 4c were not supported.

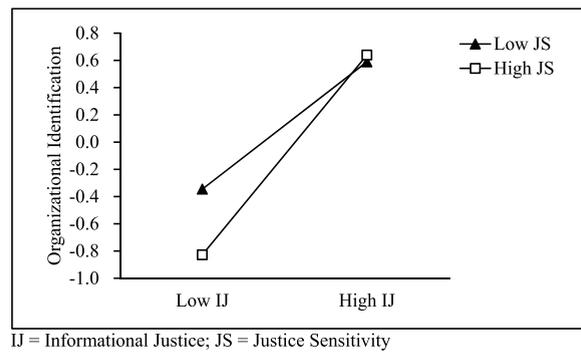
## 5. Discussion

Previous studies on knowledge hiding paid close attention to colleague relationship and colleague reactions to hiding behaviours [29,43], while alluding to the negative social consequences of knowledge hiding. In this study, we confirmed a new antecedent variable that leads to the continuous production of knowledge hiding behaviour, i.e., informational justice. We also identified that the effects of perceived informational justice from leaders on different forms of knowledge hiding behaviours are either partially or fully

**Table 5**  
Indirect effects of organizational identification.

Mediated Paths		Indirect Effect	Direct Effect	Total Effect
Informational Justice to Evasive Hiding via Organizational Identification	Effect	-.14	-.24	-.37
	Boot SE	.06	.07	.06
	95% CI	$[-.25, -.04]$	$[-.38, -.10]$	$[-.49, -.26]$
Informational Justice to Playing Dumb via Organizational Identification	Effect	-.15	-.21	-.36
	Boot SE	.07	.08	.06
	95% CI	$[-.28, -.02]$	$[-.37, -.06]$	$[-.49, -.24]$
Informational Justice to Rationalized Hiding via Organizational Identification	Effect	.15	.08	.23
	Boot SE	.07	.11	.08
	95% CI	$[.02, .29]$	$[-.13, .28]$	$[.06, .39]$

N = 250.



**Fig. 2.** Moderation effect of Justice Sensitivity. IJ = Informational Justice; JS = Justice Sensitivity.

mediated by employees' organizational identification. This finding highlights the importance of organizational identification as a workplace-related psychological construct that can be effectively managed to foster desirable knowledge behaviours from employees. The literature has alluded that lack of recognition, lack of confidence, and psychological ownership are antecedents of knowledge hiding [8,46,47]. However, no studies have identified organizational identification as an antecedent to knowledge hiding. In this sense, our study enriches the literature by identifying both informational justice and organizational identification as effective antecedents of knowledge hiding. Furthermore, we tested the moderating role of justice sensitivity in influencing the relationship between informational justice and organizational identification.

Our proposed model demonstrated sufficient explanation power when compared with other models in the literature seeking to explain knowledge hiding. Our model explained 7% (rationalized hiding) to 20% (evasive hiding) of the variance of the respective dependent variables. Comparatively, in Arhsad and Ismail's [9] study positing workplace incivility as a predictor to knowledge hiding and neuroticism as a moderator, the model explained 40% of the variance of knowledge hiding as an undifferentiated construct; in Anser et al.'s [48] study, however, ethical leadership and meaningful work only explained 5% of the variance of knowledge hiding.

The results of our study show that informational justice from leaders weakens employees' evasive hiding and playing dumb behaviours, but increases rationalized hiding which is beneficial to the organization. Since leaders act as representatives of the organization, this mechanism is achieved by increasing employees' sense of identification with the organization. In addition, this study testified that higher justice sensitivity strengthens the relationship between informational justice and organizational identification. However, there is no significant difference in the mediating effect of organizational identification between informational justice and knowledge hiding behaviours at high level of justice sensitivity compared to low level of justice sensitivity. Our study revealed that the moderating role of justice sensitivity only applied in the direct relationship between informational justice and organization identification, rather than the whole causal chain from informational justice to knowledge hiding. Organizational identification represents an employee's personal affective attachment and belongingness to the organization. As such it represents a more internalised psychological construct, which may echo closely to justice sensitivity as a personal trait construct. However, knowledge hiding behaviour is more outward and action oriented. Although knowledge hiding may be directly affected by organizational identification as an affective construct, it may not be affected by a personal trait construct like justice sensibility.

### 5.1. Theoretical implications

This study contributes to the existing literature of knowledge hiding from three aspects. First, the past research on the antecedent variables of knowledge hiding has confirmed that interpersonal relationship predicts knowledge hiding behaviour [29]. However, most of the studies have focused on the quality relationship between colleagues and ignored the influence of the supervisor-subordinate relationship [43]. As suggested by the social exchange theory, supervisors provide support to their subordinates such as privileges, benefits, trust and fair treatment [49], and in return, the subordinates may reciprocate their supervisors' support by sharing knowledge with organization members [50]. As expected, our study results show that leaders engaging in justice behaviour can intervene with employees' evasive hiding, playing dumb and rationalized hiding behaviours. In line with this argument, employees feel that the unfair treatment of supervisors will expand to the whole organization, destroy identification with the organization, and hinder the sharing and transmission of information within the organization. The focus of our study, thus, shifted from the drivers of knowledge hiding to possible interfering factors to expand the knowledge hiding literature through looking for a new influence factor (informational justice).

Secondly, we identified the mediating role of organizational identification in the relationship between informational justice and knowledge hiding. Results show that the influence of informational justice on knowledge hiding is explained through the perception of organizational identity, which in turn reduces or avoids knowledge hiding behaviour accordingly. As Zhao and Xia [29] noted, negative emotions can be regarded as a link between interpersonal distrust and knowledge hiding. Gao and He [51] also argued that relational identification and psychological distress play a central role in the relationship between workplace exclusion and knowledge hiding. Different from previous studies where the reasons for knowledge hiding behaviours were often studied from the perspective of emotion, we identified and examined another mechanism of organizational identification based on the social exchange theory.

## 5.2. Practical implications

Knowledge hiding impedes information and resources transfer, damages creativity and coworker relationship, and may lead to unethical behaviour [51]. These negative effects are often the result of specific workplace events, including coworker apathy, leader denial, and competitor exclusion. Therefore, this study provides a direction for managers to understand what can be done to avoid employees' knowledge hiding behaviour based on the leader's own behaviour.

First, our research helps to explain why the organization still cannot prevent employees' knowledge hiding behaviour only by making strict norms at work [52], and can help management to promote more constructive social communication strategies among colleagues. For example, managers should recognize and acknowledge the development potential of subordinates, treat subordinates fairly, and provide brief explanations when assigning tasks. This will enhance employees' understanding of work tasks or decisions in order to effectively avoid employees' knowledge hiding behaviour. Specifically, the supervisor should not only pursue the increase of benefits in the work, but also pay attention to the way and manner of dealing with subordinates. Making employees feel a sense of fairness, supervisors can promote employees' followership behaviours, improve their sense of identity with the organization, and eventually reduce the probability of knowledge hiding behaviour.

Secondly, in order to restrain the employees in the organization from deliberately hiding knowledge from colleagues, we recommend that solutions can be sought from the beginning of the cause-effect chain. In addition to the relationship between colleagues, the fair treatment of supervisors also plays an important role. Managers should be reminded to pay attention to or adjust their own behaviour when implementing differentiated management measures in reducing knowledge hiding in workplace. Increasing the identification of employees with organization can also be a measure to influence employees' knowledge hiding behaviour. As such, how to improve the organizational identification of followers is an issue that leaders need to work on. Leaders may set an example to create a high sense of identification and belonging to the organization themselves. They can also carry out a series of publicity and training activities to increase employees' sense of belonging.

Finally, managers should concentrate on the role of social comparison. In the workplace, employees, especially those with higher justice sensitivity employees, usually compare themselves with others. In this regard, through social comparison, perceived fair treatment can enhance their organizational identification. Similarly, if unfair treatment is felt, their response will be more intense and will cause possible negative effects. Therefore, leaders should pay special attention to those employees with higher justice sensitivity and owning the pivotal knowledge, and treat them with due respect and support to increase the sense of identification with the organization.

## 5.3. Limitations and future research

Our study has some limitations. First, cross-sectional data were obtained in the form of self-report, which may lead to common method bias. But studies have shown that measuring knowledge hiding following the self-report approach can capture the true intentions of employees' knowledge hiding better than using other reporting methods [6,53]. Second, our study's cultural setting may have functioned as a confounding factor in influencing the study results. The overall collectivistic culture in China may have played a role in determining individuals' justice sensitivity and organizational identification in the study and may have influenced the postulated relationships under examination. Third, a cross-sectional research design is limited in testing causal relationships. Future research could apply a two-wave survey design to collect data on the independent and dependent variable in different time points so as to more effectively test the proposed causal relationships in the model. It is also recommended to have a cross-cultural survey design to collect data from different national cultural settings. Fellow researchers are also suggested to explore other possible mediators beyond organizational identification, and other possible boundary effects on the relationship between informational justice and knowledge hiding.

## 6. Conclusion

The current study extends research on predictive factors of knowledge hiding and shows that the reason for knowledge hiding lies not only in the relationship between colleagues, but also in the supervisor-subordinator relationship in terms of informational justice. Our study revealed that informational justice is negatively related to evasive hiding and playing dumb as negative knowledge hiding behaviours in the workplace, but is positively related to rationalized knowledge hiding. Employees' organizational identification is found to be a mediator between informational justice and knowledge hiding behaviours. In terms of boundary effect, justice sensitivity moderates the relationship between informational justice and organizational identification in that higher justice sensitivity will enhance the impact of information justice on organizational identification. However, the moderation of justice sensitivity on the indirect effects of informational justice on knowledge hiding behaviours via organizational identification is not significant.

## Author contribution statement

Guang Xu: Conceived and designed the experiments; Performed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Ying Huang: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Songshan (Sam) Huang: Conceived and designed the experiments; Wrote the paper.

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## Data availability statement

Data will be made available on request.

## Additional information

Supplementary content related to this article has been published online at [URL].

## Declaration of competing interest

The authors declare that there is no financial or personal interest or belief that could affect our objectivity in the investigation as shown in this paper. We also declare there is no conflict of interest associated with submission and subsequent publication of this paper.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.heliyon.2023.e14697>.

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