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Consequences of Knowledge Hiding:

The Differential Compensatory Effects of Guilt and Shame

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Abstract

The nature of the consequences of knowledge hiding, defined as an intentional attempt to withhold knowledge that has been requested, and the mechanisms through which knowledge hiding affects outcomes are under-theorized. In this research, we propose that knowledge hiding can evoke guilt and shame in the knowledge hiding perpetrator. We zoom into the three types of knowledge hiding—evasive hiding, playing dumb, and rationalized hiding—and predict that the more deceptive knowledge hiding types, namely evasive hiding and playing dumb, evoke stronger feelings of guilt and shame than rationalized hiding. We further argue that guilt and shame trigger differential emotion-based reparatory mechanisms, such that guilt induces the motivation to correct one's transgressions through organizational citizenship behavior (OCB), whereas shame induces the tendency to withdraw after hiding knowledge, as reflected in lower levels of OCB. We test the proposed positive indirect relation between knowledge hiding and OCB via guilt, and the proposed negative indirect relation via shame in a scenario-based experiment and a two-wave field study. The studies provided support for most of our hypotheses. We discuss how the proposed emotion pathway can facilitate nuanced theorizing about consequences of knowledge hiding for different types of negative emotions and subsequent compensatory work behaviors.

Keywords: knowledge hiding, guilt, shame, emotion-based reparatory mechanism, organizational citizenship behavior

Practitioner Points

(1) Hiding knowledge from colleagues can lead to experiences of guilt and shame. Playing dumb (in contrast to evasive hiding and rationalized hiding) in particular elicits these negative emotional experiences. Practitioners should therefore aim to prevent knowledge hiding, and especially playing dumb, in organizations.

(2) Guilt and shame elicit differential action tendencies in knowledge hiding perpetrators, which entails that negative emotions as a result of playing dumb can sometimes lead to positive behavioral consequences.

(3) To effectively manage the consequences of knowledge hiding, practitioners should try to elicit constructive negative emotions (guilt) rather than destructive emotions (shame) as a reaction to employees' knowledge hiding. This can facilitate employees' compensation for their transgressions through organizational citizenship behavior, rather than withdrawal from the situation.

Consequences of Knowledge Hiding:

The Differential Compensatory Effects of Guilt and Shame

Hiding knowledge that has been requested by a colleague can have severe negative organizational consequences (Connelly & Zweig, 2015). Employees who hide their knowledge (i.e., the information, ideas, and expertise that are relevant for their task fulfillment at work; Bartol & Srivastava, 2002) by engaging in evasive hiding, playing dumb, and rationalized hiding, deprive other organizational members of the opportunity to learn and co-create new knowledge. As a consequence, the organizational capability to develop company-specific expertise might be diminished because organizations can only generate benefits from individually-held knowledge when employees make their knowledge available to others within the organization (Burmeister, Fasbender, & Deller, 2018; Serenko & Bontis, 2016; Webster et al., 2008).

Researchers have begun to document the negative consequences of knowledge hiding. On the one hand, knowledge hiding perpetrators (i.e., employees who hide their knowledge) can harm their own effectiveness. For example, the creativity of knowledge hiding perpetrators can suffer because they get excluded from other employees' knowledge flows and cannot benefit from the divergent perspectives of coworkers for their own idea generation and refinement (Bogilović, Černe, & Škerlavaj, 2017; Černe, Nerstad, Dysvik, & Škerlavaj, 2014; Rhee & Choi, 2017). On the other hand, knowledge hiding targets (i.e., employees from whom knowledge is withheld) can experience reduced relationship quality and negative emotions because they feel rejected by knowledge hiding perpetrators (Connelly & Zweig, 2015). These negative emotional experiences seem to be most severe when knowledge hiding perpetrators engage in evasive hiding (e.g., offering incorrect, misleading, or incomplete information) as the most deceptive form of knowledge hiding, while the negative emotions are reduced for playing dumb (e.g.,

pretending to be unaware of the requested information), and might even be absent for rationalized hiding (e.g., providing a justification for why the knowledge is not made accessible) because the rejection can be attributed to situational factors (Connelly & Zweig, 2015).

Despite the important insights gained by previous research into consequences of knowledge hiding, the current literature is limited in three ways. First, whereas initial evidence has pointed to the negative emotional experiences of knowledge hiding targets (Connelly & Zweig, 2015), we have yet to understand the emotional consequences of knowledge hiding for knowledge hiding perpetrators. This perspective is important because knowledge hiding can be conceptualized as a possible transgression of accepted social norms within organizations where knowledge sharing is expected from employees (Bock, Zmud, Kim, & Lee, 2005). Second, while potential differences between evasive hiding, playing dumb, and rationalized hiding have been emphasized from the very beginning of research on knowledge hiding (Connelly, Zweig, Webster, & Trougakos, 2012), to date, only one study has provided evidence that meaningful differences between the three types of knowledge hiding exist (Connelly & Zweig, 2015). Following up on these initial findings seems a worthwhile endeavor to advance and differentiate our understanding of the knowledge hiding construct. Third, knowledge hiding and negative emotional experiences have been addressed in an over-simplified way, thereby overlooking the differential action tendencies triggered by negative emotions such as guilt and shame (Haidt, 2003). For example, experienced guilt may facilitate compensation through organizational citizenship behavior (Ilies, Peng, Savani, & Dimotakis, 2013), while experienced shame may have detrimental effects on interactions with others through withdrawal from the shame-inducing situation (Bagozzi, Verbeke, & Gavino, 2003). This perspective is highly relevant because it suggests that knowledge hiding may not always be detrimental due to the differential action tendencies resulting from different negative emotions.

Consequently, to advance the literature on knowledge hiding, we propose a theoretical model in which knowledge hiding elicits guilt and shame in knowledge hiding perpetrators because they are likely to perceive their withholding of knowledge as a transgression of accepted social norms within organizations (Cialdini, Kallgren, & Reno, 1991). Importantly, our model reflects possible differences between evasive hiding, playing dumb, and rationalized hiding because we consider their varying degree of deceptiveness. We further argue that the negative emotions of guilt and shame subsequently influence the extent to which knowledge hiding perpetrators engage in organizational citizenship behavior (OCB-I; extra-role behavior that benefits other employees but is not directly rewarded by the organization; Williams & Anderson, 1991) to compensate for their perceived transgressions of social norms. Taken together, and in line with the idea of an emotion-based reparatory mechanism (Ilies et al., 2013), we propose that knowledge hiding (particularly evasive hiding and playing dumb) has a positive indirect effect on OCB-I through guilt, but a negative indirect effect on OCB-I through shame.

In proposing this model, we aim to make three contributions to the literature on knowledge hiding. First, we add an emotion pathway to the existing research on consequences of knowledge hiding for the knowledge hiding perpetrator, to understand the link between knowledge hiding and positive work behavior (i.e., OCB-I). More specifically, we integrate research on knowledge hiding (Černe et al., 2014; Connelly et al., 2012; Connelly & Zweig, 2015) with the literature on self-conscious moral emotions (Haidt, 2003; Tangney, Stuewig, & Mashek, 2007) to theorize and test how knowledge hiding, negative moral emotions, and OCB-I are related through an emotion-based reparatory mechanism (Ilies et al., 2013). Second, we add to a fine-grained understanding of the knowledge hiding construct by considering the varying degree of deceptiveness of the three knowledge hiding types evasive hiding, playing dumb, and rationalized hiding to conceptualize their differential relations with guilt and shame and

subsequent positive work behavior. Third, we contribute to a more nuanced perspective on the proposed emotion-based reparatory mechanism (Ilies et al., 2013) by taking into account the different action tendencies of two central self-conscious moral emotions, namely guilt and shame.

Knowledge Hiding and Self-Conscious Moral Emotions

Knowledge hiding, defined as "an intentional attempt by an individual to withhold or conceal knowledge that has been requested by another person" (Connelly et al., 2012, p. 65), represents a predominantly negative work behavior that can involve elements of lying and deception (Connelly & Zweig, 2015). Importantly, knowledge hiding does not simply represent the absence of knowledge sharing because knowledge hiding perpetrators intentionally withhold knowledge. On the contrary, employees who fail to share knowledge might be unaware that their colleagues are seeking knowledge or they might simply not know the requested information (Connelly et al., 2012). Furthermore, knowledge hiding constitutes a reactive behavior (i.e., it is a reaction to a knowledge request), whereas knowledge sharing can also occur proactively (i.e., it does not necessarily involve a knowledge request). This entails that in some situations (but not in all) knowledge sharing may have some overlap with not hiding knowledge. For example, if someone is asked for knowledge, the only behavioral options are (1) providing (i.e., sharing) or (2) not providing (i.e., hiding) it. In contrast, in other situations, employees may realize that their knowledge can be useful for a colleague and share it without an active request from the other; in such a situation, there is no potential for knowledge hiding.

Knowledge hiding bears conceptual similarities with other negative work behaviors, such as counterproductive work behavior (CWB), but represents a distinct and unique construct (Connelly et al., 2012; Serenko & Bontis, 2016). Specifically, knowledge hiding is different from CWB because it can only be directed at individuals not organizations and because knowledge hiding, in contrast to CWB, is not necessarily intended to do harm others, as individuals may hide

knowledge to protect themselves, others, or classified information (Connelly et al., 2012). Moreover, knowledge hiding is also different from employee silence (i.e., the intentional withholding of work-related information by employees from their workgroup; Tangirala & Ramanujam, 2008) because knowledge hiding refers to an employee's decision to not provide knowledge when s/he is approached by someone else with a knowledge request. In contrast, employee silence lacks this component of being asked by someone and refers to a more general decision to not speak up proactively when one has a suggestion, concern, or a divergent point of view that could be useful to share (Morrison, 2014; van Dyne, Ang, & Botero, 2003).

Guilt and shame are conceptualized as self-conscious moral emotions (Haidt, 2003). The attribute *self-conscious* refers to self-evaluative and self-reflective processes and distinguishes shame and guilt from non-self-conscious or basic emotions, such as anger and fear (Tracy & Robins, 2006). To experience self-conscious emotions, individuals need to reflect on the emotion-eliciting event, and attribute their transgressions internally (Spector & Fox, 2010). Furthermore, guilt and shame are defined as *moral* because they represent emotional responses to events that are linked to the welfare of others (Haidt, 2003), and because they are triggered by behavior that is inconsistent with social norms or moral standards (Tangney et al., 2007).

Although guilt and shame both represent self-conscious moral emotions, they differ from each other in important ways. Guilt can be defined as "an agitation-based emotion or painful feeling of regret that is aroused when the actor actually causes, anticipates causing, or is associated with an aversive event", while shame refers to "a dejection-based, passive, or helpless emotion aroused by self-related aversive events" (Ferguson & Stegge, 1998, p. 20). The central difference between the two constructs is that individuals tend to experience guilt when they attribute transgression to their negative actions. In contrast, individuals tend to experience shame when they blame themselves rather than their actions (Lewis, 1993, 2000; Spector & Fox, 2010;

Tangney et al., 2007; Tracy & Robins, 2006). Thus, guilt is caused by the perception that one's behavior is defective, while shame is caused by the experience that something is wrong with oneself.

In this study, we argue that when employees hide their knowledge, they likely perceive their behavior as being in conflict with social norms (i.e., what most people do and what most people approve of and find acceptable in a given context; Cialdini et al., 1991). Normative beliefs on knowledge sharing are based on the perception that relevant others within the organization (e.g., supervisors or colleagues) expect one to openly share knowledge with other organizational members (Bock et al., 2005). This knowledge sharing norm has gained importance in the contemporary workplace where knowledge has become one of the most valuable resources (Goldman & Scardamalia, 2013), and work is increasingly characterized by high interdependence (Frazier & Tupper, 2016; Mathieu, Hollenbeck, Van Knippenberg, & Ilgen, 2017). Therefore, employees are required to share information and knowledge openly to achieve collective goals and contribute to organizational success (Kim & Ployhart, 2014; Parke, Campbell, & Bartol, 2014; Wang, Noe, & Wang, 2011), which makes knowledge hiding appear as a violation of social norms.

We propose that knowledge hiding can induce feelings of guilt and shame in the knowledge hiding perpetrators. In general, individuals may perceive guilt and shame as a consequence of different types of social norm transgressions. For example, feelings of guilt and shame can be elicited when dressing inappropriately in a given context (Syed, 2008) or drinking too much alcohol at a social gathering (Giguère, Lalonde, & Taylor, 2014). In the work context, researchers have argued that norm violations lead to increased feelings of guilt and shame when employees perceive their own behavior as not in line with organizational expectations (O'Boyle, Forsyth, & O'Boyle, 2011). In a qualitative study on adherence to workplace policies (Harding, Carpenter, Finelli, & Passow, 2004), feelings of guilt and shame were the most frequent

responses to anticipated violations of commonly accepted norms within the profession. Furthermore, Ilies et al. (2013) demonstrated that employees who engaged in counterproductive work behavior experienced increased guilt because they engaged in actions that were disapproved in the organization. As knowledge hiding is often studied as an overarching construct (Webster et al., 2008), we first seek to clarify its overall association with self-conscious moral emotions by hypothesizing:

Hypothesis 1. *Knowledge hiding is positively associated with (a) guilt and (b) shame.*

Furthermore, the three types of knowledge hiding differ in their degree of deception (i.e., the degree to which employees knowingly provide misleading information that leads to false conclusions by others; Connelly et al., 2012) and thus may have differential effects on negative moral emotions. Evasive hiding is considered to be the most deceptive way to hide knowledge, followed by playing dumb, and rationalized hiding, whose deceptive nature has been questioned because employees may engage in rationalized hiding to protect others or proprietary information (Connelly et al., 2012; Connelly & Zweig, 2015). Hence, we also propose differential hypotheses depending on the degree of deception associated with the three knowledge hiding types to further advance our understanding about possible differences among evasive hiding, playing dumb, and rationalized hiding in their relationship with negative emotional experiences (Connelly & Zweig, 2015).

In support of the idea that the different types of knowledge hiding might have unique effects, Connelly et al. (2012) identified different contextual and interpersonal predictors of the three knowledge hiding types. Furthermore, Connelly and Zweig (2015) found that evasive hiding and playing dumb, but not rationalized hiding hurt the relationships with knowledge hiding targets. The authors argued that evasive hiding and playing dumb, as deceptive forms of knowledge hiding, make it more difficult for knowledge hiding perpetrators to justify their

actions, while rationalized hiding might even lead to recognition from others as dutiful employees who aim to fulfill their responsibilities (Connelly & Zweig, 2015).

Building on these differences among knowledge hiding types, we expect that evasive hiding and playing dumb, but not rationalized hiding elicit feelings of guilt and shame in knowledge hiding perpetrators because their deceptive nature makes the rationalization as a pro-social rather than self-interested act more difficult (Webster et al., 2008). In line with our argument, research has shown that the act of deception, which has been associated with evasive hiding and playing dumb, can elicit feelings of guilt and shame (Seiter & Bruschke, 2007). Thus, we hypothesize:

Hypothesis 2. *Evasive hiding is positively associated with (a) guilt and (b) shame.*

Hypothesis 3. *Playing dumb is positively associated with (a) guilt and (b) shame.*

Hypothesis 4*. Rationalized hiding is not associated with (a) guilt and (b) shame.*

The Differential Effects of Guilt and Shame on OCB-I

Drawing from theorizing in the moral emotions literature (Haidt, 2003; Tangney, 1991; Tangney et al., 2007), we assume that the behavioral consequences of guilt and shame are different. Specifically, we suggest that the different action tendencies evoked by feelings of guilt and shame determine whether or not employees compensate for their violation of social norms by engaging in OCBs. OCBs describe altruistic, voluntary activities that organizational members undertake without compensation (Organ, 1988; Podsakoff, MacKenzie, & Podsakoff, 2016). When these activities are directed at other organizational members, they are referred to as OCB-individual (OCB-I). Employees who engage in OCB-I will, for example, assist their colleagues when they need help, make time to listen to them, and take a personal interest in their wellbeing. Since OCB-I can be considered morally appropriate workplace behavior and often constitutes a behavioral expression of employees' current emotional states (Lee & Allen, 2002), it may be

closely linked to employees' emotion-based experiences following morally inappropriate behavior, such as certain types of knowledge hiding.

Guilt motivates perpetrators to help their victim, compensate for their transgressions, and engage in reparative actions (Haidt, 2003; Ilies et al., 2013; Lewis, 1993; Tangney et al., 2007). This behavior is motivated by the need to restore or improve one's interpersonal relationships (Haidt, 2003). Empirical research has provided some evidence for the assumption that guilt can elicit positive compensatory behavior. For example, guilt has been positively associated with other-oriented empathic responsiveness (Tangney, 1991). Furthermore, uncooperative behavior (e.g., refusing to fulfill a request) can result in increased feelings of guilt, which in turn increases the likelihood to compensate by displaying higher levels of cooperative behavior in subsequent social interactions (Ketelaar & Tung Au, 2003; O'Keefe & Figge, 1997). Lastly, Ilies et al. (2013) found that employees who experience guilt because they engaged in counterproductive work behavior indicated higher OCB intentions and subsequently showed more OCB. Thus, we hypothesize:

Hypothesis 5. *Guilt is positively associated with OCB-I.*

Shame corresponds with the tendency to hide, deny, and withdraw from the shame-inducing situation, rather than making up for one's transgressions (Haidt, 2003; Lewis, 1993; Tangney et al., 2007). While such withdrawing behavior signals that perpetrators are well aware of the violation of social norms, it also reflects their aim to reduce the probability of being attacked or punished by others for their wrongdoing (Haidt, 2003). Rather than engaging in other-oriented reparative actions, shamed individuals typically respond with self-oriented actions, such as avoiding others (Orth, Berking, & Burkhardt, 2006). For example, shame has been shown to decrease other-oriented empathic responsiveness and increase self-directed personal distress (Tangney, 1991). In addition, Dutch salespeople who experienced shame were less likely to

engage in positive relational behavior, such as relationship building (Bagozzi et al., 2003). Further illustrating the passive behavioral component of shame, Ghorbani, Liao, Çayköylü, and Chand (2013) demonstrated that shame (in contrast to guilt) did not lead to compensatory behavior toward in-group members in an ethical decision-making scenario. Thus, we assume that shame is negatively related to the knowledge hiding perpetrator's tendency to perform OCB-I:

Hypothesis 6. *Shame is negatively associated with OCB-I.*

The Differential Effects of the Knowledge Hiding Types on OCB-I through Guilt and Shame

Bringing together our arguments, we propose that evasive hiding and playing dumb as the two more deceptive types of knowledge hiding, show positive relations with OCB-I through guilt but negative relations with OCB-I through shame. In contrast, we predict that the same indirect relations cannot be observed for rationalized hiding.

With regard to the relations between knowledge hiding types and guilt and shame, the two deceptive types of knowledge hiding (i.e., evasive hiding and playing dumb) should make it more difficult for knowledge hiding perpetrators to rationalize and justify their actions as not violating accepted social norms (Connelly et al., 2012; Connelly & Zweig, 2015; Webster et al., 2008). In particular, evasive hiding and playing dumb are deceptive as perpetrators know better but still engage in knowledge hiding because they put their own interests first (e.g., saving time and effort, keeping requested knowledge to themselves to retain competitive advantage). Given that deceptive acts can elicit guilt and shame (Seiter & Bruschke, 2007), evasive hiding and playing dumb are likely to elicit guilt and shame, too. In contrast, rationalized hiding must not be deceptive as perpetrators may hide knowledge to, for example, protect classified information or the welfare of others within the organization. As such, employees who engage in rationalized hiding might not experience guilt and shame (Connelly & Zweig, 2015), because they perceive their actions as being in alignment with social norms.

With regard to the relations between guilt and shame and OCB-I, we argue that guilt triggers an emotion-based reparatory mechanism resulting in higher amounts of OCB-I (Ilies et al., 2013), whereas shame triggers a self-reinforcing cycle of withdrawal resulting in lower levels of OCB-I. These differential action tendencies, i.e., compensatory actions vs. withdrawal, originate from the different nature of these two self-conscious moral emotions (Lewis, 1993, 2000; Spector & Fox, 2010; Tangney et al., 2007; Tracy & Robins, 2006). As guilt is caused by the perception that one's behavior is defective, which is likely to be perceived as changeable, employees might be more likely to be motivated to remedy the potential harm caused by their behavior by engaging in OCB-I. In contrast, shame is caused by the perception that something is wrong with one's self, which is more likely to increase one's helplessness, resulting in passive withdrawal rather than active compensation. Consequently, guilt and shame have differential effects on OBC-I based on the opposing action tendencies that these emotions evoke. Hence, we posit that evasive hiding and playing dumb are positively related to OCB-I through guilt and negatively related to OCB-I through shame, while the same effects cannot be observed for rationalized hiding.

Hypothesis 7. *Evasive hiding is (a) positively and indirectly associated with OCB-I through guilt, but (b) negatively and indirectly associated with OCB-I through shame.*

Hypothesis 8. *Playing dumb is (a) positively and indirectly associated with OCB-I through guilt, but (b) negatively and indirectly associated with OCB-I through shame.*

Hypothesis 9. *Rationalized hiding is not indirectly associated with OCB-I through (a) guilt and (b) shame.*

Figure 1 presents our conceptual model.

Please insert Figure 1 about here

Study 1: Scenario-Based Experiment

In Study 1, we used an experimental vignette methodology (Aguinis & Bradley, 2014) in which participants responded to a hypothetical scenario to probe whether priming of overall knowledge hiding behavior could elicit the two self-conscious moral emotions guilt and shame.

Sample

We obtained a sample of $N = 156$ U.S. American employees using the platform Amazon Mechanical Turk. Samples generated via Mechanical Turk have been shown to yield similar results when compared to other convenience samples generated for organizational research (Landers & Behrend, 2015). Participants received $1.25 for their participation. Only individuals who were full-time employed (>35 hours/week) were eligible to participate in the study. To ensure the quality of the data, two quality screen-outs were implemented. Of the initial sample, 19 participants who failed to respond correctly to the quality screen-outs were removed. This resulted in a final sample of 137 participants. On average, participants were 36.97 years old ($SD = 10.02$), and 51.8 percent were female. The majority of the participants had a bachelor or master degree (66.4%), and worked in white-collar jobs (80.3%). Participants were employed in a wide range of industries: information technology (21.2%), public sector (15.3%), health care (13.1%), finance (8.0%), food (6.6%), construction (2.9%), automotive (1.5%), energy (1.5%), chemical (1.5%), textiles (0.7%), or other industries (27.7%).

Procedure

We used an experimental vignette methodology (Aguinis & Bradley, 2014) in which participants responded to hypothetical scenarios to manipulate knowledge hiding. We employed this methodology for three reasons: First, vignettes have been shown to effectively manipulate norm violations (Belschak & Den Hartog, 2009; Ghorbani et al., 2013; Raghunathan & Pham, 1999), and induce emotions in a work context (Belschak & Den Hartog, 2009; Ghorbani et al.,

2013; Raghunathan & Pham, 1999). Second, research has shown that direct manipulations and scenario-based methods produce comparable results (Van Knippenberg & Van Knippenberg, 2005). Third, we used hypothetical vignettes in which participants were asked to envision being the employee described in the scenario rather than a situation-recall writing-induced task where participants reported on their actual knowledge hiding behavior in the past because hypothetical scenarios tend to be more effective in eliciting emotional responses than situation-recall inductions (Steiner, 2009).

Participants were randomly assigned to either the knowledge hiding or the no knowledge hiding condition. In both conditions, participants read the following scenario:

> *"Please imagine being a member of a large company and working a very important project that will affect the future success of the company and is also important for your career. You and your colleague are working together towards meeting the final project deadline. Each of you holds different information relevant for the successful completion of the task. You are sitting at your desk and preparing your part of the project report. In that moment, your colleague approaches your desk and asks whether you could share your specialized knowledge on business reporting with him, as your colleague has trouble generating the correct numbers for the project report."*

The participants in the knowledge hiding condition then read the following manipulation: "You realize that you possess the requested knowledge, but you decide to withhold that knowledge form your colleague. How would hiding knowledge from your colleague make you feel in that situation?" In contrast, the participants in the no knowledge hiding condition read: "You realize that you possess the requested knowledge, and you decide to openly provide your knowledge to your colleague. How would providing your knowledge to your colleague make you

feel in that situation?" After reading the vignettes, participants provided data on experienced guilt and shame, and knowledge hiding for the manipulation check.

Measures

Guilt. Guilt was measured with four items derived from the Harder Personal Feelings Questionnaire (PFQ2; Harder & Lewis, 1987). Participants indicated the extent to which they felt "mild guilt", "worry about hurting or injuring someone", "intense guilt", and "regret" (Cronbach's $\alpha = .93$). Participants assessed the four items on a seven-point Likert scale ranging from 1 (*very little*) to 7 (*very much*).

Shame. Shame was measured with four items derived from the Harder Personal Feelings Questionnaire (PFQ2; Harder & Lewis, 1987). Participants indicated the extent to which they experienced "being embarrassed", "feeling ridiculous", "self-consciousness", and "feelings of blushing" (Cronbach's $\alpha = .88$). Participants assessed the four items on a seven-point scale ranging from 1 (*very little*) to 7 (*very much*).

Results

Manipulation check. Prior to testing Hypotheses 1a and 1b, we performed a manipulation check for knowledge hiding as a between-subject factor. Participants were asked: "To which extent did you hide knowledge from your coworker in the described situation?" using a seven-point scale ranging from 1 (*not at all*) to 7 (*a very great extent*). The results of an independent t-test revealed a significant difference between the control ($M = 1.56$, $SD = 1.20$) and the knowledge hiding ($M = 6.32$, $SD = 1.07$) conditions ($t(137) = -24.37$, $p < .01$); thus, supporting the successful manipulation of knowledge hiding.

Hypotheses testing. Table 1 shows means, standard deviations, and correlations of the variables in Study 1.

Please insert Table 1 about here

Hypotheses 1a and 1b addressed the positive effects of knowledge hiding on guilt and shame. The multivariate analysis of variance (MANOVA) revealed significant differences between the two knowledge hiding conditions with guilt and shame as the dependent measures ($F(2,134) = 83.33$, $p < .01$, partial $\eta^2 = .55$). Furthermore, Bonferroni adjusted univariate tests showed a significant difference between the two knowledge hiding conditions with regards to guilt ($F(1, 135)= 167.62$, $p < .01$, partial $\eta^2 = .55$) and shame ($F(1, 135)= 59.29$, $p < .01$, partial $\eta^2 = .31$), suggesting that participants in the knowledge hiding group reported significantly higher levels of guilt ($M = 4.39$, $SD = 1.59$) and shame ($M = 3.23$, $SD = 1.62$) than those in the no knowledge hiding group ($M_{guilt} = 1.52$, $SD_{guilt} = 0.95$; $M_{shame} = 1.50$, $SD_{shame} = 0.93$). Taken together, these results support Hypotheses 1a and 1b and indicate that hiding knowledge can elicit the self-conscious moral emotions guilt and shame.

Study 2: Field Study

In Study 2, we aimed to extend the findings from Study 1 by testing the differential associations of the three knowledge hiding types with guilt and shame (Hypotheses 2 to 4). Moreover, we aimed to test the proposed relations of guilt and shame and OCB-I (Hypotheses 5 and 6), and the indirect relations among evasive hiding, playing dumb, and rationalized hiding and OCB-I through guilt and shame (Hypotheses 7 to 9).

Sample and Procedure

We collected time-lagged data from a sample of employees working in Germany. An established data collection company (i.e., KeyFacts) invited 3,487 of their panelists to take part in our study. Participants were included if they were at least 18 years old and currently employed for at least 20 hours per week. We used online questionnaires across two waves with a time lag of two weeks in between. We choose two weeks as the optimal time lag because research has recently recommended the use of "*shortitudinal"* research designs (Dormann & Griffin, 2015), in

particular, when considering the potentially limited duration of emotions (Izard, 1989, 2009). To ensure the quality of the data, quality-screen-outs were implemented to remove speeders (i.e., participants who answered questions significantly faster than median completion time), and careless responders (i.e., participants, who failed to answer attention checks correctly). At Time 1, 434 participants passed the implemented quality checks (response rate 12.5 %). Of these, 63.4% completed the questionnaire at Time 2, resulting in a final sample size of 275. Participants worked on average 36.30 hours per week (*SD* = 6.66) in a broad array of industries ranging from private insurance to public health. Of the participants, 136 (49.5%) were female and 96 (34.9%) held a university degree. Participants' age ranged from 19 to 65 years (*M* = 44.74, *SD* = 11.99).

Measures

Evasive hiding, playing dumb, and rationalized hiding. At Time 1, the three knowledge hiding types were measured with the three 4-item scales by Connelly et al. (2012). Participants indicated the extent to which they withheld relevant knowledge from their colleagues on a seven-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). The items were introduced with: "In answering the following questions, please refer to a specific episode in the past two weeks as work in which a particular colleague requested knowledge from you and you declined. . .", which was followed by the items. A sample item for *evasive hiding* is "Offered him/her some other information instead of what he/she really wanted" (Cronbach's α = .88), a sample item for *playing dumb* is "Pretended that I did not know the information" (Cronbach's α = .88), and a sample item for *rationalized hiding* is "Explained that the information is confidential and only available to people on a particular project" (Cronbach's α = .81).

Guilt. At Time 1, guilt was measured with the same items as in Study 1. We framed the items in the context of the reported knowledge hiding situation by using the following instructions: "Please think of the reported situation in which a specific colleague asked for your

knowledge and you did not comply with this inquiry. To which extent do the following emotions describe your feelings if you think back to this situation?". Again, the scale yielded a high internal consistency (Cronbach's α = .88).

Shame. At Time 1, shame was measured with the same items as in Study 1 and framed in the context of the knowledge hiding situation. The scale had a high internal consistency (Cronbach's α = .92).

Organizational citizenship behavior – individuals (OCB-I). At Time 2, OCB-I was measured with the seven-item scale from Williams and Anderson (1991). Participants indicated the extent to which they engaged in extra-role behaviors at work targeted at other employees on a seven-point scale ranging from 1 (*totally disagree*) to 7 (*totally agree*). An example item is: "I go out of my way to help employees". The scale showed a high internal consistency (Cronbach's α = .92).

Control variables. We controlled for participants' age, gender and time pressure at Time 1. Specifically, we included age because older workers tend to have higher generativity motives and are therefore more likely to engage in prosocial behaviors, such as mentoring and sense giving at work (Fasbender, Wang, Voltmer, & Deller, 2016; Gyekye & Haybatollahi, 2015). Furthermore, we controlled for gender (i.e., binary coded with 0 = *male* and 1 = *female*) because gender role stereotypes suggest that women possess more expressive behaviors, such as empathy and interpersonal orientation, which in turn leads to higher levels of organizational citizenship behavior (Chiaburu, Sawyer, Smith, Brown, & Harris, 2014; Fasbender, Wang, & Zhan, 2016). Finally, we included time pressure (3-item scale, Cronbach's α = .78; Wu, Parker, & Jong, 2014) as control variable because we assumed that employees may use external time pressure as an excuse to rationalize their knowledge hiding, which could influence the extent to which they experience guilt and shame. In addition, the more time pressure people experience at work, the

less time they may be able to invest in helping and supporting others above their normal work duties (Eatough, Chang, Miloslavic, & Johnson, 2011).

Construct Validity

To ensure the construct validity of the six multi-item measures (i.e., evasive hiding, playing dumb, rationalized hiding, guilt, shame, and OCB-I) used in this study, we conducted a series of confirmatory factor analyses. Table 2 presents the fit indices for the measurement model and the alternative models. Results showed that the intended six-factor structure yielded a good model fit, and was superior to alternative models, such as the five-factor solution with guilt and shame loading on one common factor, the four-factor solution with evasive hiding, playing dumb, and rationalized hiding loading on one common factor, or the one-factor solution with all items loading on the same factor. Therefore, the construct validity of the measures was supported.

Please insert Table 2 about here

Data Analysis

We used structural equation modeling (SEM) to investigate the direct and indirect relations between the three knowledge hiding types, guilt, shame, and OCB-I, using Mplus 7.31 (Muthén & Muthén, 2015). Within the structural part of SEM, we used maximum likelihood (ML) estimation with bootstrapping (10,000 draws) to account for deviations from normality (Preacher & Hayes, 2008).

Results

Structural Equation Modeling

The fit of the partial mediation model was acceptable (χ^2 (309) = 643.95, $p < .01$, *CFI* = .94, *RMSEA* = .06, *SRMR* = .05), and significantly better ($\Delta\chi^2 = 17.03$, $p < .01$, $\Delta df = 3$) than the fit of the full mediation model (χ^2 (312) = 660.98, $p < .01$, *CFI* = .93, *RMSEA* = .06, *SRMR* = .08).

To investigate whether the estimated relationships are robust, we calculated our final partial mediation models with and without control variables. Results revealed that the estimated direct and indirect effects remained fairly stable and significant in the hypothesized direction even if we included control variables. Following the recommendations of Spector and Brannick (2011), we thus report our results without control variables.

Hypotheses Tests

Table 3 summarizes means, standard deviations, and correlations of the variables in Study 2.

Please insert Table 3 about here

Hypotheses 2 to 6 addressed the direct relations among knowledge hiding, guilt, shame, and OCB-I. As can be seen in Figure 2 (showing the direct effects), evasive hiding was not significantly linked to guilt and shame, thus not supporting Hypotheses 2a and 2b. For playing dumb, we found positive relations with guilt and shame, supporting Hypotheses 3a and 3b. In line with our assumption that rationalized hiding is not associated with guilt and shame, the structural coefficients suggested that rationalized hiding was not significantly related to guilt and shame. These findings provide support for Hypotheses 4a and 4b.

Please insert Figure 2 about here

Furthermore, and in support of Hypotheses 5 and 6, we found a positive association between guilt and OCB-I, and a negative association between shame and OCB-I.

Please insert Table 4 about here*

Hypotheses 7 to 9 addressed the indirect relationship between the three types of knowledge hiding and OCB-I. Table 4 presents the indirect associations of evasive hiding, playing dumb, and rationalized hiding with OCB-I through guilt and shame with bootstrapped confidence intervals. We found no significant indirect relations for evasive hiding with OCB-I via guilt and shame, thus

not supporting Hypotheses 7a and 7b. For playing dumb, we found a positive indirect link with OCB-I via guilt, and a negative indirect link with OCB-I via shame, thus supporting Hypotheses 8a and 8b. Finally, no significant indirect association was found for rationalized hiding with OCB-I via guilt and shame, which is in line with Hypotheses 9a and 9b.

Discussion

In this study, we examined the negative emotional consequences of knowledge hiding for knowledge hiding perpetrators and their subsequent relationship with positive organizational behavior. Specifically, we argued that knowledge hiding, in particular evasive hiding and playing dumb as the more deceptive knowledge hiding types (Connelly et al., 2012; Connelly & Zweig, 2015), can elicit feelings of guilt and shame. Furthermore, based on theorizing in the moral emotion literature (Haidt, 2003; Tangney, 1991), we suggested that these self-conscious moral emotions trigger different emotion-based reparatory mechanisms (Ilies et al., 2013), namely an active compensation strategy for guilt (i.e., resulting in more OCB-I) and a passive withdrawal strategy for shame (i.e., resulting in less OCB-I). The findings from two studies provided support for most hypotheses. In Study 1, we used an experimental vignette methodology (Aguinis & Bradley, 2014) to establish that overall knowledge hiding was positively linked to feelings of guilt and shame. In Study 2, we conducted a two-wave field study of German employees and found that playing dumb but not evasive hiding elicited the proposed active compensation strategy via guilt and the passive withdrawal strategy via shame. As anticipated, rationalized hiding was unrelated to negative emotional consequences.

Theoretical Implications

Our findings have at least three theoretical implications. First, the exploration of an integrated behavior-emotion-behavior sequence contributes to the field's understanding of the consequences of knowledge hiding for knowledge hiding perpetrators by adding an emotion

pathway. To date, the existing literature has mainly drawn from social exchange theory (Blau, 1964) to argue that knowledge hiding leads to negative relational consequences because knowledge hiding perpetrators are perceived as less trustworthy and get subsequently excluded from information flows within organizations (Černe et al., 2014; Connelly et al., 2012). Thus, the existing literature has relied on a relational mechanisms to explain consequences of knowledge hiding. However, this perspective has overlooked the relevant emotional consequences of knowledge hiding as a negative work behavior that deviates from established social norms (Ilies et al., 2013). Our findings point to the importance of capturing employees' concrete emotional responses after a knowledge hiding incident to correctly infer whether negative or positive effects on subsequent work behavior are likely to occur. We thus take our findings as a starting point to suggest that moral emotions should be included in a comprehensive framework explaining the consequences of knowledge hiding.

By focusing on the emotional consequences of knowledge hiding, our study also demonstrates that theoretical value can be added by shedding light on the double-edged nature of knowledge hiding. Whereas previous research has largely focused on the negative and performance-related consequences for the knowledge hiding perpetrator (Bogilović et al., 2017; Černe et al., 2014; Rhee & Choi, 2017), the proposed emotion pathway suggests that knowledge hiding can also elicit positive behaviors to compensate for one's possible transgression of social norms within the organization. This counterintuitive perspective adds to initial findings in the knowledge hiding literature stating that knowledge hiding must not always possess detrimental organizational consequences (Connelly & Zweig, 2015). Our results can also be interpreted in the context of research on compensatory ethics (e.g., Gino & Margolis, 2011; Zhong, Ku, Lount, & Murnighan, 2010). The compensatory ethics perspective complements the well-established moral licensing effect (i.e., early ethical decisions trigger less ethical choices afterwards; Monin &

Miller, 2001; Sachdeva, Iliev, & Medin, 2009) by showing that individuals' initial unethical decisions lead to more ethical choices afterwards. Participants' compensatory activities are explained with their balancing efforts between fulfilling self-interests and upholding a positive moral image (Zhong et al., 2009). Likewise, our findings indicate that immoral, self-oriented behavior (i.e., knowledge hiding) can evoke moral, other-oriented behavior (i.e., OCB) through an emotion-based reparatory mechanism.

Second, we contribute to a more fine-grained understanding of the knowledge hiding construct by examining the differential effects of its three types: evasive hiding, playing dumb, and rationalized hiding. Our findings indicated that playing dumb but not evasive hiding or rationalized hiding was driving the experience of guilt and shame, and the subsequent indirect associations with OCB-I. These findings support recent research that has suggested that the varying degree of deception inherent in evasive hiding, playing dumb, and rationalized hiding may be worthwhile to consider when examining knowledge hiding in organizations (Connelly & Zweig, 2015). However, in contrast to existing research that has positioned evasive hiding as the most deceptive form of knowledge hiding (Connelly & Zweig, 2015), in our sample, playing dumb was the type of knowledge hiding that elicited the strongest negative emotional reactions. We posit that not only the degree of deception associated with knowledge hiding types, but possibly also the fact that whether or not one provides knowledge at all to others upon request, might influence negative emotional experiences. Accordingly, evasive hiding means that employees provide at least some knowledge, even it is incorrect, misleading, or incomplete, while when playing dumb, employees pretend to be ignorant of the requested knowledge, thus not providing any knowledge upon request. Consequently, our findings may indicate that not only the degree of deception involved but also the extent to which one is providing knowledge at all might influence emotional consequences of knowledge hiding.

Third, zooming into the differential effects of guilt and shame, our results indicate that guilt motivates employees to repair their transgression through other-oriented behavior (i.e., OCB), whereas shame induces withdrawal from other-oriented behaviors. As such, this study establishes an emotional dual-process mechanism that is dependent on the type of self-conscious moral emotion. Our findings also contribute to the literature stating that other-oriented (i.e., guilt) and self-concerned (i.e., shame) emotions can co-occur and need to be captured simultaneously to be able to accurately predict subsequent behavioral strategies (Bohns & Flynn, 2013; Dreu & Nauta, 2009).

Limitations and Future Research Directions

As with any research, our study is not without limitations. First, although our study investigates the emotional consequences of knowledge hiding in two Western industrialized countries (i.e., Germany and the United States), it is possible that moral emotions such as guilt and shame play out differently in non-Western cultures (e.g., Wallbott & Scherer, 1995; Wong & Tsai, 2007). For instance, a comparison of Dutch and Turkish/Moroccan individuals revealed that experiences of shame resulted in unique behavioral reactions: While Dutch individuals withdrew from the situation, Moroccan and Turkish individuals reacted with active verbal disapproval (Rodriguez Mosquera, Fischer, Manstead, & Zaalberg, 2008). Thus, culture may serve as a boundary condition affecting individuals' choice of an emotion-based reparatory strategy (i.e., compensation or withdrawal) as a reaction to the occurrence of guilt and shame.

Second, we relied on self-report measures to test our hypotheses, which can potentially be affected by participants' tendency to present themselves in a favorable light, in particular when they are asked to report on negative work behavior such as knowledge hiding. However, for a number of reasons we still consider our measurement approach appropriate. Self-report measures need to be used to assess knowledge hiding, because knowledge hiding is a concealed behavior

that is difficult to capture by other-report (Černe et al., 2014; Connelly et al., 2012). In addition, emotions refer to private perceptions that only the individual experiencing these emotions can assess (Conway & Lance, 2010), thus making it difficult to capture shame and guilt through objective measures. Furthermore, meta-analytical evidence has shown that other-reports of negative work behaviors provide only limited incremental variance over self-reports (Carpenter, Berry, & Houston, 2014). Notably, we also manipulated knowledge hiding in Study 1 and our manipulation check indicated that participants reacted to our framing, thus, providing evidence that we were able to capture the construct of interest. Nevertheless, future research should try to use behavioral manipulations of the independent variable and measures of the dependent variable. For instance, researchers could design laboratory experiments in which participants interact with others and their knowledge hiding behavior is experimentally manipulated (e.g., Bogilović et al., 2017; Černe et al., 2014). Subsequently, participants' positive behavior as a reaction to the knowledge hiding manipulation could be coded.

Third, in Study 1, we used an experimental vignette methodology (Aguinis & Bradley, 2014) and a crowdsourced sample to elicit emotional responses to a hypothetical knowledge hiding scenario. Although Mechanical Turk samples have been shown to deliver acceptable data quality for academic research (Buhrmester, Kwang, & Gosling, 2011; Casler, Bickel, & Hackett, 2013; Landers & Behrend, 2015), it must be acknowledged that there is an ongoing discussion about the validity of such samples. Even though some of the most common concerns (e.g., repeated participation, practice effects) might be less of a concern in an experimental design with random participant assignment, we still consider it useful to replicate our findings with a sample generated through other means. Furthermore, while the effectiveness of an experimental vignette methodology has been verified (Van Knippenberg & Van Knippenberg, 2005), especially in the context of norm violations and emotional responses (Belschak & Den Hartog, 2009; Ghorbani et

al., 2013; Raghunathan & Pham, 1999; Steiner, 2009), a valuable test of our model that could overcome concerns about participants' ability to imagine how they would react in a hypothetical scenario would be to manipulate actual knowledge hiding behavior. We thus suggest that future research could follow up on our findings with experimental designs in which participants are instructed to hide their knowledge (see Černe et al., 2014), potentially even through differential manipulations of the different types of knowledge hiding.

Fourth, while we were able to capture the proposed parallel mediation of guilt and shame in explaining the associations between the three types of knowledge hiding on OCB-I, we have to take note of the relatively high correlation between guilt and shame and the non-significant correlation of guilt and OCB-I displayed in Table 3. While the CFAs showed that guilt and shame can be separated empirically in line with our expectations, suppression effects might still have affected our results. Therefore, we also tested the effects of guilt and shame on OCB-I individually. Results showed that the estimated effects are slightly lower when tested individually (as compared to being tested simultaneously), but significant in the hypothesized direction. Thus, the effects of guilt and shame on OCB-I can be considered as fairly robust. Nonetheless, we encourage researchers to replicate our findings using different samples to further verify their robustness. In addition, another way to advance our findings would be to clarify whether the relationships between guilt and OCB-I are stronger when OCB-I is directed at the specific knowledge hiding target rather than non-specific others. Future research could test this assumption by collecting event-based data, in which knowledge hiding perpetrators report on the characteristics of specific knowledge hiding events.

Going beyond the focus of this study, researchers could probe deeper into the boundary conditions that affect the link between knowledge hiding, emotional experiences, and subsequent compensatory work behavior. To that end, individual differences, such as attribution styles, might

influence the extent to which employees experience guilt and shame after hiding knowledge from their colleagues. According to attribution theory (Kelley, 1973; Kelley & Michela, 1980), individuals are inclined to assign causes to their actions and behavior. When making attributions, individuals differ in the extent to which they attribute causes of behavior internally (i.e., assigning the cause of behavior to an individual's characteristics) or externally (i.e., assigning the cause of behavior to the situation the individual is in). The extent to which individuals attribute knowledge hiding internally or externally can affect subsequent experiences of guilt and shame (Sugathan, Ranjan, & Mulky, 2017; Tracy & Robins, 2006). To that end, individuals who attribute their knowledge hiding internally might experience guilt and shame more strongly compared to individuals who attribute the hiding of knowledge externally. As a consequence, their subsequent compensatory behavior should be more pronounced than the compensatory acts of employees who tend to attribute their knowledge hiding to external circumstances.

In addition, relational and contextual factors could also have an effect on the degree to which employees' knowledge hiding elicits feelings of guilt and shame. With regard to relational factors, psychological proximity to the targets of knowledge hiding (Ghorbani et al., 2013) may influence the strength of knowledge hiding perpetrators' emotional reactions in terms of guilt and shame. Accordingly, the closer knowledge hiding perpetrators feel to the knowledge hiding target, the stronger their negative emotional reactions may be. Contextual factors refer to a set of external cues from which organizational members deduce what their attitudes and behavior should be (Bohns & Flynn, 2013; Salancik & Pfeffer, 1978). For example, contextual factors that increase employees' awareness about their moral wrongdoing, such as ethical climates (Victor & Cullen, 1988), corporate ethical codes (Stevens, 2008), and ethical supervisors (Brown & Treviño, 2006; Treviño, Brown, & Hartman, 2016), may strengthen the link between knowledge hiding and self-conscious moral emotions. In contrast, when employees work in organizations where they

experience injustice or a climate of mistrust, they may feel more eligible to engage in negative work behaviors such as knowledge hiding to get even for their mistreatment (Ilies et al., 2013; Judge, Scott, & Ilies, 2006). Future research needs to test this assumption to clarify how relational and contextual factors shape the link between knowledge hiding and emotional experiences.

Lastly, future research may want to focus in more detail on evasive hiding that did not elicit significant effects in our study, although it is considered as a deceptive type of knowledge hiding (Connelly et al., 2012). We used the original measure (Connelly et al., 2012) that does not differentiate whether knowledge hiding perpetrators provide incorrect or misleading/incomplete information. However, individuals who share wrong information should experience much higher levels of guilt and shame than individuals who provide correct but misleading or incomplete information. In the latter case, individuals can still rationalize that shared at least some knowledge, thus reducing the likelihood of experiencing guilt and shame. Scholars may want to develop a measure that provides a more fine-grained differentiation between these aspects of evasive hiding.

Practical Implications

Our findings offer several relevant suggestions for practitioners. First and foremost, managers should educate employees about the negative emotional consequences of knowledge hiding. Employees need to be made aware that the potentially expected benefits of knowledge hiding, for example, in terms of being the exclusive owner of specific knowledge, might be outweighed by the emotional costs associated with knowledge hiding. Second, we suggest that managers should communicate the negative organizational consequences of knowledge hiding more clearly. Making the negative consequences more salient, could motivate employees who engaged in knowledge hiding to make up for their transgressions through compensatory behavior. Furthermore, managers may also want to clarify that withdrawal based on feelings of

shame can intensify the negative consequences of knowledge hiding. Third, managers should try to elicit constructive negative emotions (guilt) rather than destructive ones (shame) in their employees to facilitate positive compensatory work behavior as a reaction to hiding knowledge. Managers could emphasize that knowledge hiding might be unavoidable at times (e.g., due to time pressure, other-interest), but that employees could then compensate for their transgression of social norms through subsequent compensatory work behavior, such as OCB. Furthermore, to minimize shame and maximize guilt, managers should encourage employees to interpret their knowledge hiding as a behavioral ("My actions were bad") rather than a self-centered ("I am a bad person") transgression of social norms. Accordingly, managers need to emphasize employees' control over the consequences of their knowledge hiding behavior, and point out how employees can make up for their transgressions. In contrast, managers should refrain from making generalized assessments about the moral identity of employees who engaged in knowledge hiding. Lastly, on a more general level, managers are well advised to create an environment in which employees know that they are acknowledged for who they are. An organizational climate may contribute to employees' feelings of self-worth, and reduce their tendency to question their selves and attribute failures to their moral deficiency. Consequently, employees might be less likely to experience shame and more likely to experience guilt as a result of hiding their knowledge, which could increase the likelihood that they engage in positive compensatory work behavior in the future.

Table 1

Means, Standard Deviations, and Correlations of Study 1 Variables

Variable	*M*	*SD*	1	2	3	4
1 Guilt	2.90	1.94	-			
2 Shame	2.33	1.56	.72**	-		
3 Knowledge hiding condition[a]	1.48	0.50	.74**	.55**	-	
4 Manipulation check	3.85	2.64	.79**	.62**	.90**	-

Note. $N = 137$. a = knowledge hiding condition with 1 = no knowledge hiding and 2 = knowledge hiding.
**$p < .01$.

Table 2

Confirmatory Factor Analysis Fit Indices for Measurement Model for Study 2

Model	χ^2	*df*	$\Delta\chi^2$ (Δdf)	*CFI*	*RMSEA*	*SRMR*
Six-factor model	643.95	309	-	0.94	0.06	0.05
Five-factor model[a]	879.86	314	235.91 (5)**	0.81	0.08	0.06
Four-factor model[b]	1061.60	318	417.65 (9)**	0.92	0.09	0.06
One-factor model	3,635.75	324	2,991.80 (15)**	0.37	0.19	0.19

Note. N = 275. Difference of chi-square values ($\Delta\chi^2$) were estimated to compare to the six-factor model. a = guilt and shame loading on one factor, b = evasive hiding, playing dumb, and rationalized hiding loading on one factor. CFI = Confirmatory Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual.
* $p < .05$, ** $p < .01$.

Table 3

Means, Standard Deviations, and Correlations of Study 2 Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1 Age	44.74	11.99	-								
2 Gender[a]	0.50	0.50	-.12†	-							
3 Time pressure	3.86	1.39	-.07	-.03	-						
4 Evasive hiding	2.47	1.31	-.16**	-.21**	.18**	-					
5 Playing dumb	2.68	1.36	-.17**	-.11†	.05	.63**	-				
6 Rationalized hiding	2.81	1.35	-.08	.04	-.03	.50**	.52**	-			
7 Guilt	2.95	1.40	.03	.04	.13*	.22**	.26**	.16**	-		
8 Shame	2.37	1.22	-.12*	.10	.04	.27**	.37**	.22**	.66**	-	
9 OCB-I	5.22	1.05	.14*	.03	.04	-.20**	-.26*	-.17**	.05	-.12†	-

Note. $N = 275$. [a] = binary coded with 0 = male and 1 = female. OCB-I = organizational citizenship behavior – individuals.
† $p < .10$, *$p < .05$, **$p < .01$.

Table 4

Indirect Relationships of Evasive Hiding, Playing Dumb, and Rationalized Hiding with Organizational Citizenship Behavior – Individuals via Guilt and Shame with Bootstrapped Confidence Intervals in Study 2

	Organizational Citizenship Behavior – Individuals			
Indirect effects	*Estimate*	*SE*	*CI LL*	*CI UL*
Evasive hiding via				
Guilt	.03	0.04	-.02	.13
Shame	-.00	0.03	-.06	.05
Playing dumb via				
Guilt	.08	0.04	.02	.19
Shame	-.12	0.06	-.25	-.03
Rationalized hiding via				
Guilt	-.01	0.03	-.06	.06
Shame	.00	0.02	-.04	.06

Note. N = 275. SE = standard error, CI LL = lower level of 95% confidence interval, CI UL = upper level of 95% confidence interval.

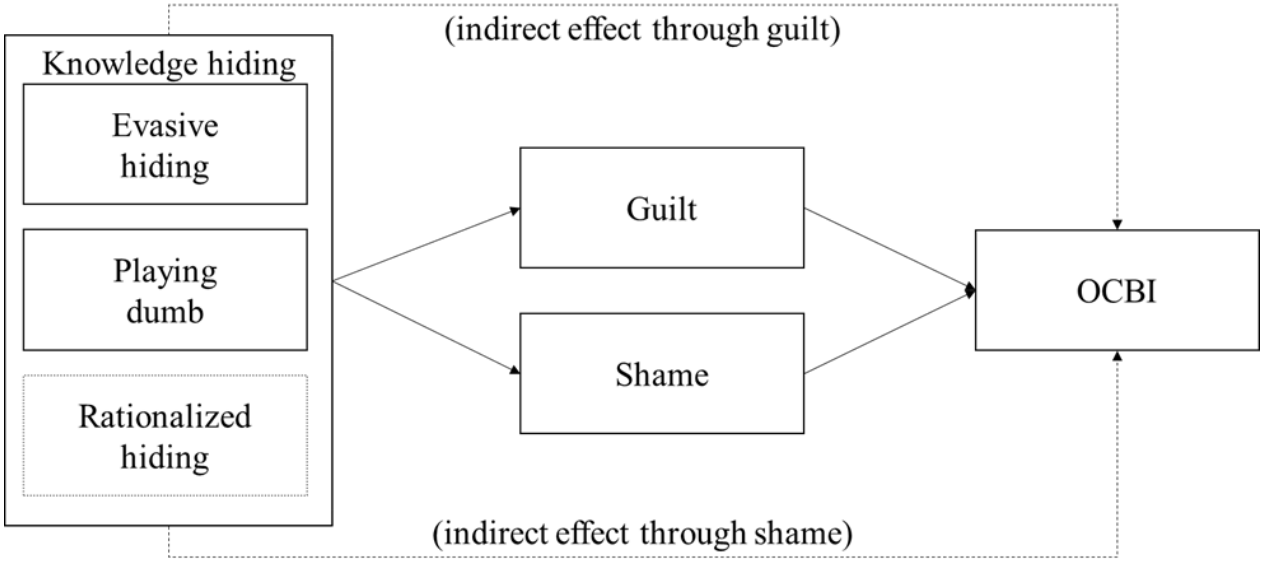

Figure 1

Conceptual Model

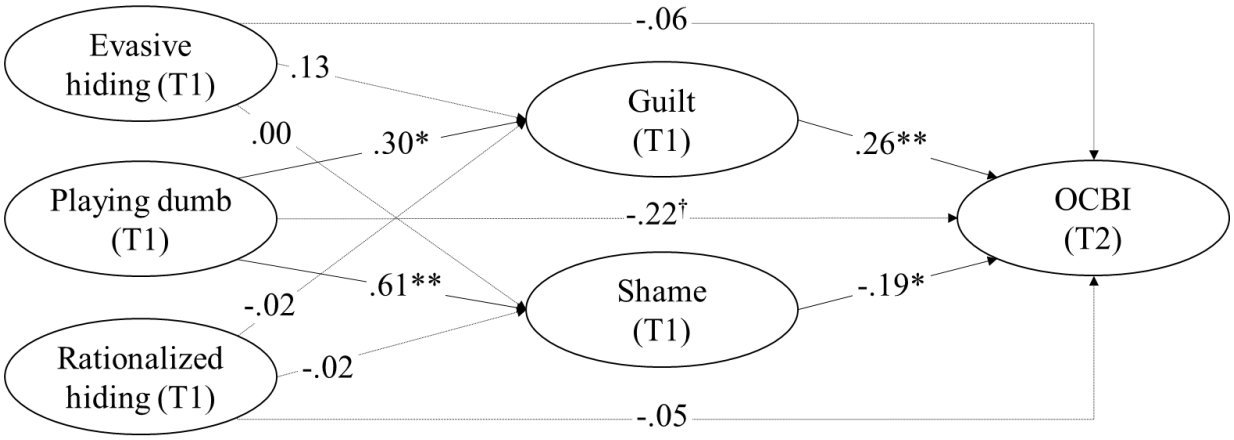

Figure 2. Results of Study 2: Structural Equation Modeling Showing the Associations of Evasive Hiding, Playing Dumb, and Rationalized Hiding and Organizational Citizenship Behavior – Individuals (OCB-I) through Guilt and Shame
† $p < .10$, *$p < .05$, **$p < .01$.

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