



The influences of sense of integrity on acts of integrity and work behaviors among personnel of a public university

Chuchai Smithikrai*, Veerawan Wongpinpech†, Chatwiboon Peijisel, Tassanee Homkin, Polapat Charoenviangvetchakit

Department of Psychology, Faculty of Humanities, Chiang Mai University, Chiang Mai 50200, Thailand

Article Info

Article history:

Received 28 April 2023

Revised 20 July 2023

Accepted 7 August 2023

Available online 30 August 2024

Keywords:

acts of integrity,
sense of integrity,
university personnel,
work behaviors

Abstract

The purpose of this study was to investigate the influences of university personnel's sense of integrity on their acts of integrity, as well as positive and negative work behaviors. In this study, the sample was selected using stratified random sampling with types of employment as the criterion for stratification. The sample comprised two groups: university personnel and their supervisors. To ensure comparability, questionnaires from both groups were coded with identical numbers, yielding a total of 738 questionnaires from each group for data analysis. Research instruments included scales for measuring sense of integrity, acts of integrity, positive work behaviors, and negative work behaviors. The research hypotheses were tested through path analysis using AMOS version 29. The results revealed that sense of integrity directly and significantly impacted acts of integrity ($\beta = .24, p < .01$). Although sense of integrity did not directly affect positive and negative work behaviors, it had significant indirect effects on positive work behaviors ($\beta = .21, p < .01, R^2 = .77$) and negative work behaviors ($\beta = -.10, p < .01, R^2 = .19$) through acts of integrity. Additionally, acts of integrity directly and significantly influenced positive work behaviors ($\beta = .88, p < .01$) and negatively impacted negative work behaviors ($\beta = -.45, p < .01$). These findings suggest that promoting integrity in organizations involves enhancing employees' sense of integrity and encouraging acts of integrity among them.

© 2024 Kasetsart University.

* Corresponding author.

E-mail address: chuchai.s@cmu.ac.th (C. Smithikrai).

† Co-first authors.

E-mail address: veerawan.w@cmu.ac.th (V. Wongpinpech).

Introduction

In recent years, there has been a growing concern about the prevalence of unethical behavior in organizations worldwide. A global study conducted by the Ethics & Compliance Initiative (2021) found that the number of countries reporting misconduct increased from 2015 to 2020. Employees from different countries reported various types of misconduct, including favoritism, lying by management, illegal recruitment procedures, abusive behavior, and conflicts of interest. Furthermore, financial statement fraud, asset misappropriation, and corruption were identified as the most common forms of occupational fraud in the workplace, according to another survey conducted by the Association of Certified Fraud Examiners (2020). Alarming rates of unethical behavior have also been reported in academic settings. A recent survey of early-career physicists and graduate students revealed high rates of unethical research practices and harassment within the physics community, such as data manipulation and physical abuse (Naddaf, 2023). In light of this phenomenon, scholars have emphasized the importance of promoting ethical behavior among employees to mitigate the negative impact of unethical behavior on organizational outcomes (Ferrell et al., 2019).

In the literature on organizational behavior, scholars have identified integrity as a central aspect of ethical work behavior (Becker, 1998). Two perspectives on integrity have been proposed: the subjective and objective perspectives. According to the subjective viewpoint, integrity is something that helps individuals exhibiting good behavior, and society benefits from these behaviors. It is, however, not something that should be required ethically or legally (Goodin, 2010; Palanski & Yammarino, 2007). In other words, integrity is a value that individuals freely choose, which helps elevate their personal qualities and the outcomes that result. As a result, while integrity has social value, it is not fundamentally necessary. The objectivist viewpoint, on the other hand, contends that integrity is a universal moral value rather than a personal standard (Palanski & Yammarino, 2007). Regardless of viewpoints, academics agree that integrity is important for society because it is a characteristic of the individual that denotes the quality of acting in accordance with moral values, standards, and rules accepted by the members of the organization and society (Kolthoff, 2007). Examples of integrity include honesty, accountability, reliability, fairness, and transparency.

Integrity is crucial for employees as it affects their credibility, trustworthiness, and reputation within the

organization and with clients or customers (Aquino et al., 2011). Likewise, organizations benefit from having employees with high levels of integrity as they are more likely to act ethically, demonstrate professionalism, and uphold the organization's values and reputation. Organizations that promote integrity and ethical behavior create a positive work environment, foster trust and respect among employees, and enhance their reputation in the marketplace. Employees who demonstrate integrity are more likely to act ethically, inspire the trust of their peers, and uphold the organization's values and reputation (Treviño & Nelson, 2013).

Given the growing demand for studies on integrity and the limited research available on the motivating factors behind unethical behaviors (Garshick & Kimball, 2014), this study aims to investigate the influences of individuals' sense of integrity on their acts of integrity and work behaviors in academic settings. The research question is whether and how sense of integrity has an impact on acts of integrity, as well as positive and negative work behaviors among university personnel. The present research adopts an objectivist perspective, which holds that integrity is a universal moral value that motivates individuals to behave in accordance with ethical principles, such as honesty, keeping promises, refraining from wrongdoing, and others. This study's advantages encompass a deeper comprehension of the pivotal role that sense of integrity plays in promoting acts of integrity. This knowledge could prove useful in devising interventions intended to foster individuals' sense of integrity and encourage acts of integrity in the workplace.

Literature Review

Integrity: A Theoretical Framework of This Study

The current study proposes a theoretical framework for understanding the concept of integrity, which posits that integrity can be divided into two levels: A deep level or sense of integrity, and a superficial level or acts of integrity. This framework is similar to an iceberg, where the sense of integrity represents the submerged portion that is not easily observed, while acts of integrity are the visible portion above the waterline.

Sense of integrity is defined as an individual's beliefs, feelings, and intentions that encourage and support behaviors such as honesty, transparency, following rules, refraining from wrongdoing, and opposing corruption. Sense of integrity is deeply ingrained and may not be immediately apparent to others. Thus, sense of integrity is

considered a covert behavior, which is not directly observable and can only be inferred by the observer or reported by the subject.

On the other hand, acts of integrity refer to observable behaviors that are consistent with an individual's core beliefs and values, such as honesty, fairness, and accountability. It is assumed here that individuals' sense of integrity encourages individuals to demonstrate honesty, transparency, and accountability for their actions, to respect organizational rules and regulations, and to protect the collective benefits.

A sense of integrity model

Sense of integrity reflects an individual's belief in and commitment to moral principles, and serves as a guide for his/her moral decision-making and behaviors. The present study proposes that sense of integrity comprises three essential components based on the "trilogy of mind" concept: cognition, affection, and conation (Hilgard, 1980). Cognition refers to an individual's knowledge, beliefs, and thoughts about something, while affection refers to an individual's feelings towards something, such as likes or dislikes, satisfaction or dissatisfaction. Finally, conation refers to an individual's intention to act on something. Hilgard (1980) suggested that this perspective is particularly beneficial in assessing individuals' psychological characteristics, as evident from research in consumer behavior (Quoquab & Mohammad, 2020) and student learning (Kwahr et al., 2018).

The model assumes that sense of integrity is inherently evaluative and not classified as either a trait or a state. Furthermore, the cognitive aspect of sense of integrity contributes to a person's understanding of right and wrong, while the affective aspect contributes to a person's commitment to ethical behavior. The conative aspect of integrity contributes to a person's ability to translate their cognitive and emotional commitment to integrity into action. Similar to the proposed model, Ingerson (2014) conceptualized integrity as being more akin to an attitude rather than a trait or state. This conceptualization entails the manifestation of positive ethical consistency spanning thoughts, feelings, and behavioral intentions. Significantly, Ingerson's study revealed that the attitude-like construct of ethical concern emerged as the most robust predictor of (un) ethical behavior.

Additionally, the proposed model posits a favorable interplay among the three elements of the sense of integrity. Individuals who demonstrate coherence amongst all three components are recognized as exhibiting "integrity consistency." Consequently, those who harbor a conviction that honesty is commendable and ought to be

exercised are contented when they witness themselves or others being truthful, and they are predisposed to behave honestly in diverse future scenarios. Nonetheless, there is a likelihood that certain individuals may exhibit integrity inconsistency. For example, they might acknowledge the negative nature of lying but experience no remorse or discomfort when deceiving others, and may even have intentions of lying in the future.

Finally, the model posits that sense of integrity is an internal characteristic that arises from learned behavior through the process of socialization. This learning can come from direct or indirect experiences until it becomes ingrained in the person's psyche to a certain level of stability, but it can still be subject to change due to learning from new experiences.

While the trilogy of mind has found broad application in business studies, there is a notable scarcity of research that utilizes this framework to explore ethical integrity. This study, therefore, seeks to investigate integrity by adopting the trilogy of mind conception.

Relationships between sense of integrity and acts of integrity

The link between sense of integrity and acts of integrity can be explained through the lens of moral identity theory, as posited by Aquino and Reed (2002); Blasi (1984). According to this theory, moral identity is the degree to which moral concerns (e.g., justice, accountability, generosity) are a central part of one's identity. The centrality of moral notions in an individual's identity motivates them to take moral actions through a sense of responsibility, whereby they feel compelled to act in accordance with what is good or right, and self-consistency, where they align their actions with their self-perception as a moral being (Blasi, 1984). The theory suggests that moral identity is composed of two primary components: internalization and symbolization. Internalization refers to the process by which moral values and beliefs become integrated into an individual's self-concept, so that moral considerations become central to their identity. Symbolization refers to the use of symbols and language to represent moral values and beliefs, which can help to reinforce and communicate moral identity (Aquino & Reed, 2002).

It is posited herein that a plausible relationship may exist between an individual's sense of integrity and moral identity, as both concepts encompass an individual's internalized moral values, beliefs, and principles. Hence, individuals' sense of integrity is posited to serve as a motivator that drives them to exhibit ethical behaviors. Studies on moral identity indicate that individuals with

a strong sense of moral identity are more likely to behave consistently with their moral values (Rest et al., 2000). Furthermore, moral identity has been found to predict proactive behavior to prevent unethical conduct in organizations (Aquino & Freeman, 2009), as well as resistance to pressure to engage in unethical behavior (Gino & Pierce, 2010). Hence, we propose the following hypothesis:

Hypothesis 1: University personnel's sense of integrity will positively predict their acts of integrity.

Work Behaviors: Positive versus Negative Work Behaviors

The current study divides work behaviors into two categories: positive work behaviors and negative work behaviors. Positive work behaviors refer to actions and activities that contribute to organizational effectiveness and productivity, as well as the well-being of co-workers and customers. Examples of positive work behaviors include punctuality, cooperation, teamwork, communication, initiative, creativity, and dedication (Spector, 2019). The definition of positive work behaviors encompasses two distinct categories: (1) in-role behaviors that encompass actions that are obligatory or mandated for fulfilling formal tasks, duties, and responsibilities as delineated in an employee's job description (Williams and Anderson, 1991); and (2) extra-role behaviors, which are discretionary actions undertaken by employees beyond their prescribed duties that benefit the organization, such as contextual performance behaviors and organizational citizenship behaviors (Stoner et al., 2011). Positive work behaviors contribute to the overall well-being of the organization by increasing employee satisfaction, motivation, and productivity. Previous studies indicate that positive work behaviors, such as proactive behavior and organizational citizenship behavior lead to positive individual and organizational outcomes, such as job performance, team effectiveness, and organizational success (Bindl & Parker, 2011), workgroup efficiency (Koopman et al., 2016), and innovation performance (Segarra-Ciprés et al., 2019).

Another type of work behaviors is negative work behaviors, which are characterized by individuals' actions that exhibit a lack of responsibility towards their duties and cause harm to the organization, coworkers, customers, external organizations, and society. Examples of negative work behavior include disregarding company policies, working carelessly, neglecting responsibilities, and using organizational property for personal benefit. In contrast to positive work behavior, which supports the organization's goals and strengthens its reputation, negative work behavior can have severe consequences

and undermine the organization's well-being. This study examines two primary types of negative work behavior: (1) negative deviant workplace behavior (Robinson & Bennett, 1995); and (2) counterproductive work behavior (Gruys & Sackett, 2003). Both types of behavior involve intentional violations of an organization's norms, rules, and policies, and can threaten the organization's reputation and the well-being of its members. Negative work behaviors can have detrimental effects on the organization. Research found that negative work behaviors, such as counterproductive work behavior has a negative effect on organizational performance (Abdullah et al., 2021).

Work behaviors and their relationships with integrity

The relationship between work behaviors and individuals' integrity can be explained by moral identity theory (Aquino & Reed, 2002; Blazi, 1984). As described earlier, this theory proposes that an individual's sense of moral identity is a crucial determinant of their moral behavior. In the context of work behavior, moral identity theory suggests that individuals who have a strong moral identity are more likely to engage in positive work behaviors, such as honesty, fairness, and responsibility, and to avoid negative work behaviors, such as lying, cheating, and stealing. They may also be more likely to resist pressure to engage in unethical behavior, and to speak up when they witness unethical behavior by others (Aquino & Reed, 2002; Treviño et al., 2006).

There is a growing body of research that supports the finding that individuals' integrity is positively correlated with positive work behaviors, and negatively correlated with negative work behaviors (Detert et al., 2008; Hertz & Krettenauer, 2016; Reynolds & Ceranic, 2007). In terms of sense of integrity, Mihelic et al. (2010) found that personal values were positively related to ethical behavior in the workplace across a sample of 22 European countries. In another study by Gino et al. (2013), participants who were primed to think about their moral identity (i.e., their sense of self as a moral person) were more likely to engage in ethical behavior and less likely to engage in unethical behavior. Research has also shown that sense of integrity is associated with a range of positive outcomes, such as higher job satisfaction, increased commitment to the organization, and reduced intentions to engage in unethical behaviors (Treviño et al., 2006). In terms of acts of integrity, studies have found that employees who reported higher levels of ethical behavior were more likely to engage in organizational citizenship behavior and less likely to engage in counterproductive work behavior (Turnipseed, 2002; Van Iddekinge et al., 2012).

Taken together, these studies provide evidence that both sense of integrity and acts of integrity are positively correlated with positive work behaviors and negatively correlated with negative work behaviors. Thus, the following hypotheses were posited:

Hypothesis 2: University personnel's sense of integrity will positively predict their positive work behaviors.

Hypothesis 3: University personnel's sense of integrity will negatively predict their negative work behaviors.

Hypothesis 4: University personnel's acts of integrity will positively predict their positive work behaviors.

Hypothesis 5: University personnel's acts of integrity will negatively predict negative work behaviors.

Methodology

Data Collection and Sampling

This study collected data from employees at a large public university in Chiang Mai. In order to determine the suitable sample size for path analysis and structural equation modeling, scholars have suggested using the N:q ratio as a reference (Jackson, 2003). This ratio represents the number of observations to estimated parameters. Kline (2015) specifically recommended a ratio of 20:1, meaning that for each estimated parameter in the model, there should be 20 observations or participants. In this particular research, with 9 estimated parameters, following the 20:1 ratio would necessitate a sample size of 180 participants. Nonetheless, this research employed stratified random sampling to select a sample of 5,000 individuals, using types of employment as the criterion for stratification. The population was divided into strata based on their affiliations with different faculties/work units, and then random sampling was carried out within each stratum to ensure a representative sample that adequately reflects the characteristics of each subgroup.

Since this research has been endorsed by the university administration, a letter requesting collaboration from the vice president was enclosed with questionnaires assessing sense of integrity and sent via university mail to the university personnel sample group. Participants then sent completed questionnaires back to the researchers in pre-addressed, sealed envelopes. The response rate was 40.84 percent, with 2,042 fully completed and analyzable questionnaires. The direct supervisors of the university personnel sample group were identified after receiving questionnaires from the university personnel sample group. The researchers contacted the supervisors and requested that they complete measures assessing their subordinates'

acts of integrity, positive work behaviors, and negative work behaviors. Out of the contacted supervisors, 738 returned fully completed and analyzable questionnaires. Consequently, 738 questionnaires from the university personnel sample group and 738 questionnaires from the supervisors were used for data analysis.

It should be noted that during data collection, the researchers assigned distinct codes to respondents in both the university personnel and supervisory groups. This was done to enable seamless matching between personnel and their corresponding supervisors. Importantly, the participants were kept uninformed about the significance of these codes, ensuring that the research process remained free from suspicions or uncertainties.

Measures

The research instruments employed in this study were previously developed by Smithikrai et al. (2023) and have demonstrated satisfactory psychometric properties. The details of these measures are as follows:

1. *Sense of integrity scale.* The development of this scale was based on the “trilogy of mind” concept, comprising three fundamental components: (1) cognition, (2) affection, and (3) conation. The scale consists of 45 items, with each component of the sense of integrity incorporating 15 items. Participants responded to a 5-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree) for the cognitive and conative dimensions, and from 1 (not true at all) to 5 (very true) for the affective dimension. Sample items include “Doing things in the right way according to ethical principles is important” and “I intend to abide by the rules and regulations of the organization, even if it is difficult to work with.” The coefficient alphas for the cognitive, affective, and conative dimensions were .93, .90, and .91, respectively.

2. *Acts of integrity scale.* This scale was developed based on two approaches: a deductive approach and an inductive approach. The deductive approach involved conducting an extensive literature review to establish the theoretical definition of the construct being studied. The definition was then utilized as a reference for creating items. On the other hand, the inductive approach was employed by generating questions based on descriptions of behavior provided by a sample of qualified respondents (Hinkin, 1995). The scale consists of 15 items measuring behaviors reflecting integrity at work. Supervisors provided subjective ratings which ranged from 1 (never) to 5 (always). Sample items are: “Perform duties with honesty and integrity” and “Refuse to accept any valuable items as part of job duties”. The coefficient alpha of the scale was .92.

3. Positive work behaviors scale. The development of this scale was based on the domain sampling model (Nunnally & Bernstein, 1994), which states that a measure represents a random sample of items from a hypothetical concept domain containing all possible items. To develop such a measure, a theoretical definition is created for the concept domain, and its critical attributes are identified. Ultimately, items that are representative of and unique to the concept domain are operationalized into a measurement tool. The concept of positive work behaviors was delineated by reviewing the literature to identify behaviors associated with this concept. The scale comprises 18 items that represent work behaviors contributing to organizational effectiveness, productivity, and the well-being of co-workers and customers. Supervisors of the sample group provided ratings ranging from 1 (never) to 5 (always) for each item. Sample items include “Complete work within the set timeframe” and “Assist colleagues in various tasks.” The coefficient alpha of the scale was .95.

4. Negative work behaviors scale. This 16-item scale measuring negative work behaviors was developed in a similar vein as the positive work behavior scale. The supervisors of the sample group provided ratings ranging from 1 (never) to 5 (always) for each item. Sample items include “Using the organization’s property for personal gain” and “Exhibiting sexual harassment behavior.” The coefficient alpha of the scale was .89.

5. Personal information sheet. This questionnaire asked participants to reveal their gender, age, job function, job status, and job tenure.

Data Analysis

Data analysis of personal characteristics of the sample group was conducted using the SPSS statistical analysis software (IBM Corp., 2022) to calculate means, standard deviations, frequencies, and percentages. The relationships between variables used in the study were analyzed using the Pearson Product Moment Correlation Coefficient. Additionally, the research hypotheses were tested using path analysis with the AMOS version 29.0 (Arbuckle, 2022).

Results

Measurement Model Validation

The authors evaluated the reliabilities and validities of the measurement models using partial least squares

structural equation modeling (PLS-SEM) with SmartPLS 4.0.8.9 (Ringle et al., 2022). To establish convergent validity, researchers typically examine the outer loadings (λ) of the indicators and the average variance extracted (AVE). The loadings of each reflective measure on its corresponding construct should be greater than the threshold levels of .70. Nonetheless, indicators with loadings between .40 and .70 should be considered for removal from the scale only when deleting the indicator leads to an increase in the composite reliability above the suggested threshold value (Hair et al., 2017). Thus, all items of the measures used in this study were retained. For the AVE, acts of integrity and negative work behavior factors were below the recommended threshold of at least .50. Nonetheless, Fornell and Larcker (1981) suggest that if AVE is less than .50 but composite reliability (CR) is higher than .60, the convergent validity of the construct is still acceptable. The composite reliability estimates were .93, and .88 for acts of integrity, and negative work behavior factors. Additionally, these factors demonstrate good internal consistency, as the alpha coefficient (α) for the acts of integrity, and negative work behavior factors was .92, and .89, respectively. These results, therefore, indicate sufficient convergent validity.

To evaluate the discriminant validity of the constructs, two methods were employed. The first approach involved examining the cross-loadings of the indicators, and the results showed that no indicator had a higher loading on an opposing construct. The other method used for assessing discriminant validity was the Heterotrait-Monotrait (HTMT) ratio of correlation. The findings revealed that all HTMT values were below the recommended threshold of .85, indicating sufficient discriminant validity (Henseler et al., 2016). Thus, the measurement model assessment confirms that all the construct measures are reliable and valid. The next step is to test the proposed relationships among the constructs.

Correlations and Hypothesis Testing

As can be seen from Table 1, sense of integrity significantly correlated with acts of integrity ($r = .24$, $p < .01$), positive work behaviors ($r = .22$, $p < .01$), and negative work behaviors ($r = -.08$, $p < .05$). Acts of integrity showed a strong correlation with positive work behaviors ($r = .88$, $p < .01$), and moderately negative correlated with negative work behaviors ($r = -.44$, $p < .01$).

Table 1 Means, standard deviations, and correlations between study variables

Variables	1	2	3	4
1. Sense of integrity (self-assessment)	-			
2. Acts of Integrity (supervisory rating)	.24**	-		
3. Positive Work Behaviors (supervisory rating)	.22**	.88**	-	
4. Negative Work Behaviors (supervisory rating)	-.08*	-.44**	-.48**	-
<i>M</i>	4.45	4.53	4.45	1.10
<i>SD</i>	.35	.42	.48	.18

Note: * $p < .05$, ** $p < .01$.

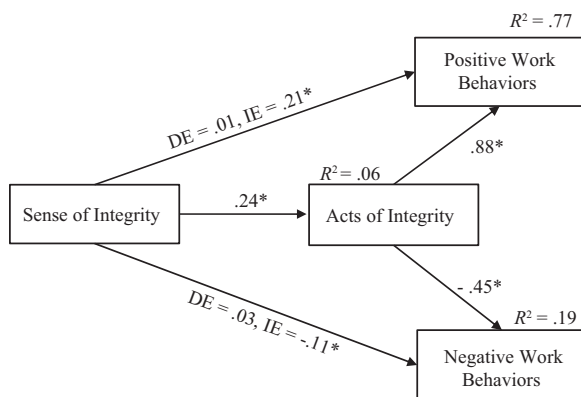
Table 2 and Figure 1 illustrate the results of the path analysis. The fit statistics indicate that the hypothesized model fits the data moderately well ($\chi^2 = 30.30$, $df = 1$, $p = .00$, CFI = .98, AGFI = .79, TLI = .86, IFI = .98, RMSEA = .20, and SRMR = .03). The findings show that sense of integrity has a significant and direct effect on acts of integrity ($\beta = .24$, $p < .01$, $R^2 = .06$), providing support for Hypothesis 1. On the other hand, the results suggest that sense of integrity has no direct effect on positive work behaviors ($\beta = .01$, $p > .05$) or negative work behaviors ($\beta = .03$, $p > .05$). Nonetheless, the study reveals that sense of integrity has a significant indirect effect on positive work behaviors ($\beta = .21$, $p < .01$, $R^2 = .77$) and negative work behaviors ($\beta = -.11$, $p < .01$, $R^2 = .19$) through acts of integrity. This implies that acts of integrity fully mediate the relationship between sense of integrity

and both positive and negative work behaviors, partially supporting Hypothesis 2 and Hypothesis 3. Additionally, acts of integrity have a positive direct effect on positive work behaviors ($\beta = .88$, $p < .01$) and a negative direct effect on negative work behaviors ($\beta = -.45$, $p < .01$), thus supporting Hypothesis 4 and Hypothesis 5.

Discussion

The current study found that sense of integrity is a positive predictor of acts of integrity, which, in turn, positively predict positive work behaviors and negatively predict negative work behaviors. Additionally, acts of integrity serve as a complete mediator in the relationship between sense of integrity and both positive and negative work behaviors. Overall, these findings suggest that sense of integrity has a direct influence on acts of integrity and indirect influences on positive and negative work behaviors.

It is unsurprising that a positive correlation exists between an individual's sense of integrity and acts of integrity. This is because one of the three components of sense of integrity is conation, or the intention to act. Intentions have been used to predict a wide range of behaviors, and a meta-analysis found that intentions' predictive power on behaviors is considered good (Sheeran, 2002). This relationship can also be explained by the moral identity theory (Aquino & Reed, 2002). As previously stated, an individual's sense of integrity and moral identity may be related, as they both refer to an individual's internalized moral values, beliefs, and principles.

**Figure 1** Parameter estimates for the final model**Table 2** Results of path analysis

Variables	Acts of Integrity			Positive Work Behaviors			Negative Work Behaviors		
	DE	IE	TE	DE	IE	TE	DE	IE	TE
Sense of integrity	.24*	-	.24*	.01	.21*	.22*	.03	-.11*	-.08
Acts of Integrity	-	-	-	.88*	-	.88*	-.45*	-	-.45*
<i>R</i> ²		.06			.77			.19	

Note: DE = Direct Effect, IE = Indirect Effect, TE = Total Effect, R^2 = squared multiple correlation,

* $p < .01$.

Research has shown that individuals who strongly identify with moral values are more likely to act in accordance with their moral principles (Aquino et al., 2009). In the workplace, individuals' moral identity can influence their ethical behaviors and decision-making, as they prioritize their moral principles over other considerations (Reed & Aquino, 2003). Previous studies have found that individuals with high moral identity tend to exhibit behaviors consistent with moral principles (Mayer et al., 2012; Rest et al., 2000), as well as those who value global virtues such as justice, fairness, and compassion, who also tend to exhibit moral behaviors (Mihelic et al., 2010). Additionally, other research has found that individuals with high moral identity tend to take responsibility for their actions, even if doing so may cause difficulties for themselves (Lapsley & Narvaez, 2006).

Individuals who exhibit high levels of acts of integrity tend to display positive work behaviors at high levels while exhibiting negative work behaviors at lower levels, which can be attributed to two reasons. First, individuals with high levels of acts of integrity have a strong sense of integrity and motivation to act in accordance with ethical principles. This motivation arises from their own ethical consciousness and their awareness of ethical responsibilities (Aquino & Reed, 2002), which encourages individuals to adhere to organizational rules and regulations, take responsibility for mistakes, and serve as a good role model in the workplace. Second, individuals with high levels of acts of integrity possess the ability to self-regulate when faced with situations that may provoke unethical behavior. This self-regulation is crucial in maintaining ethical behavior in high-pressure situations (Joosten et al., 2013), which can prevent negative work behaviors such as embezzlement, misuse of company resources for personal gain, or harming the well-being of others.

This study also revealed that although sense of integrity does not directly affect positive and negative work behaviors, it indirectly influences both through acts of integrity. Several factors may explain this finding. First, acts of integrity are a more immediate predictor of work behaviors, while sense of integrity is a more distant predictor. Prior research suggests that sense of integrity indirectly influences behaviors through other factors, such as moral courage and ethical climate (Mayer et al., 2012; Treviño et al., 2000). Second, although sense of integrity is relatively stable, its impact on behaviors may vary depending on the situation. According to the interactionism perspective, individuals' behaviors are a result of the interaction between personal characteristics and the situation at hand (Reynolds et al., 2010).

If individuals perceive a situation to be highly stressful, they may not exhibit behaviors that correspond to their personal characteristics, even if they have a strong sense of integrity. This suggests that the context of work plays a moderating role that can weaken the influence of sense of integrity. For instance, when individuals perceive that team members are engaging in rule-breaking behavior and encouraging others to do the same, they may hesitate to exhibit positive work behaviors or engage in rule-breaking behavior themselves.

Conclusion and Recommendation

This research provides empirical evidence regarding the influences of university personnel's sense of integrity on their acts of integrity, positive work behaviors, and negative work behaviors. Despite the existence of similar studies in the past, the present study can still provide valuable contributions and advantages. Firstly, conducting the study within a public university setting is essential as it allows for a more contextualized and specific investigation. Secondly, through replication and verification, the study strengthens the overall knowledge base by confirming prior findings and identifying any potential discrepancies. Lastly, the study's ability to capture updated findings, considering the evolving social norms, organizational dynamics, and technological advancements that impact integrity in academic settings, further enhances its significance. In addition, one of the strengths of this study is the use of data collected from both university personnel and their immediate supervisors. This approach reduces the potential for bias and strengthens the validity of the findings. Additionally, previous studies have suggested that supervisory ratings are highly predictive of employee performance (Goris, 2014).

The findings of this study have practical implications for organizations. First, organizations can enhance employees' sense of integrity, which has a direct and significantly positive impact on acts of integrity. This can be achieved through the implementation of ethical guidelines, policies, and practices to foster a culture of integrity (Schwepker, 2013). Organizations can also implement integrity training programs, ethical workshops, or values-based initiatives to enhance employees' sense of integrity. Second, the study reveals that a strong sense of integrity indirectly influences positive and negative work behaviors through acts of integrity. This underscores the importance of promoting acts of integrity to improve positive behaviors and reduce negative ones.

Managers can play a vital role by encouraging and recognizing ethical behavior, reinforcing integrity in day-to-day operations (Kolthoff, 2007). Additionally, organizations can incorporate integrity-based performance evaluations and reward exemplary ethical behavior to motivate employees further. In summary, by prioritizing employees' sense of integrity, promoting acts of integrity, and acknowledging ethical behavior, organizations can foster a culture of integrity that positively impacts work behaviors and overall organizational outcomes.

Regarding future research, there are some areas that researchers could explore. First, researchers could investigate the influence of leadership on the relationships between sense of integrity, acts of integrity, and workplace behaviors. As leaders significantly affect their subordinates' behaviors, it would be worthwhile to examine how leadership style and behavior might impact these relationships. Second, future research could focus on examining the role of individual factors (e.g., personality, values, etc.) in shaping the relationships between sense of integrity, acts of integrity, and workplace behaviors. Certain personality traits or values might make individuals more inclined to act with integrity or exhibit positive work behaviors. Thus, studying these individual factors could provide valuable insights for organizations looking to promote acts of integrity in the workplace.

Conflict of Interest

The authors declare that there is no conflict of interest.

Fundings and Acknowledgments

This research was part of a research project funded by Chiang Mai University. The authors would like to express their gratitude to the administration of Chiang Mai University for their valuable support.

References

- Abdullah, M. I., Huang, D., Sarfraz, M., Naseer, J. & Sadiq, M. W. (2021). Signifying the relationship between counterproductive work behavior and firm's performance: The mediating role of organizational culture. *Business Process Management Journal*, 27(6), 1892–1911. <https://doi.org/10.1108/BPMJ-12-2020-0546>
- Aquino, K., & Freeman, D. (2009). Workplace deviance: The role of voluntary work behaviors. In J. Greenberg, & J. A. Colquitt (Eds.), *Handbook of organizational justice* (pp. 555–578). Lawrence Erlbaum Associates.
- Aquino, K., McFerran, B., & Laven, M. (2011). Moral identity and the experience of moral elevation in response to acts of uncommon goodness. *Journal of Personality and Social Psychology*, 100(4), 703–718. <https://doi.org/10.1037/a0022540>
- Aquino, K., & Reed, A. II. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, 83(6), 1423–1440. <https://doi.org/10.1037/0022-3514.83.6.1423>
- Arbuckle, J. L. (2022). *Amos* (Version 29.0) [Computer Program]. IBM SPSS.
- Association of Certified Fraud Examiners. (2020). *Report to the nations: 2020 global study on occupational fraud and abuse*. <https://www.acfe.com/report-to-the-nations/2020/>
- Becker, T. E. (1998). Integrity in organizations: Beyond honesty and conscientiousness. *Academy of Management Review*, 23(1), 154–161. <https://doi.org/10.2307/259104>
- Bindl, U. K., & Parker, S. K. (2011). Proactive work behavior: Forward-thinking and change-oriented action in organizations. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology, Vol. 2. Selecting and developing members for the organization* (pp. 567–598). American Psychological Association.
- Blasi, A. (1984). Moral identity: Its role in moral functioning. In W. Kurtines & J. Gewirtz, (Eds.), *Morality, moral behavior and moral development* (pp. 128–139). Wiley.
- Detert, J. R., Trevino, L. K., & Sweitzer, V. L. (2008). Moral disengagement in ethical decision making: A study of antecedents and outcomes. *Journal of Applied Psychology*, 93, 374–391. <https://doi.org/10.1037/0021-9010.93.2.374>
- Ferrell, O. C., Fraedrich, J., & Ferrell, L. (2019). *Business ethics: Ethical decision making & cases*. Cengage Learning.
- Fornell, C. & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39–50. <https://doi.org/10.2307/3151312>
- Garshick, M. K. & Kimball, A. B. (2014). Research integrity in the modern era: Current gaps in our knowledge and thinking. *Clinical Investigation*, 4(3), 199–200. <https://www.openaccessjournals.com/articles/research-integrity-in-the-modern-era-current-gaps-in-our-knowledge-and-thinking.pdf>
- Gino, F., & Pierce, L. (2010). The abundance effect: Unethical behavior in the presence of wealth. *Organizational Behavior and Human Decision Processes*, 113(2), 97–105. <https://doi.org/10.1016/j.obhdp.2010.03.001>
- Gino, F., Ayal, S., & Ariely, D. (2013). Self-serving altruism? The lure of unethical actions that benefit others. *Journal of Economic Behavior & Organization*, 93, 285–292. <https://doi.org/10.1016/j.jebo.2013.06.005>
- Goodin, R. E. (2010). An epistemic case for legal moralism. *Oxford Journal of Legal Studies*, 30(4), 615–633. <https://doi.org/10.1093/ojls/gqq026>
- Goris, J. R. (2014). Self-appraisals in Mexico. *International Journal of Commerce and Management*, 24(2), 152–166. <https://doi.org/10.1108/ijcoma-07-2012-0044>
- Gruys, M. L., & Sackett, P. R. (2003). Investigating the dimensionality of counter-productive work behavior. *International Journal of Selection and Assessment*, 11(1), 30–42. <https://doi.org/10.1111/1468-2389.00224>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed). Sage.
- Henseler, J., Hubona, G. S. & Pauline, A. R. (2016). Using PLS path modeling in new technology research: Updated guidelines. *Industrial Management & Data Systems*, 116(1), 2–20. <https://doi.org/10.1108/imds-09-2015-0382>

- Hertz, S. G., & Krettenauer, T. (2016). Does moral identity effectively predict moral behavior?: A meta-analysis. *Review of General Psychology*, 20(2), 129–140. <https://doi.org/10.1037/gpr0000062>
- Hilgard, E. R. (1980). The trilogy of mind: Cognition, affection, and conation. *Journal of the History of the Behavioral Sciences*, 16(2), 107–117. [https://doi.org/10.1002/1520-6696\(198004\)16:2<107::aid-jhbs2300160202>3.0.co;2-y](https://doi.org/10.1002/1520-6696(198004)16:2<107::aid-jhbs2300160202>3.0.co;2-y)
- Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of Management*, 21(5), 967–988. <https://doi.org/10.1177/014920-639502100509>
- IBM Corp. (2022). *IBM SPSS statistics for windows* (Version 29.0) [Computer software]. IBM Corp.
- Ingerson, M. C. (2014). Integrity matters: Construction and validation of an instrument to assess ethical integrity as an attitude-like phenomenon. *Theses and Dissertations*. 5491. <https://scholarsarchive.byu.edu/etd/5491>
- Jackson, D. L. (2003). Revisiting sample size and number of parameter estimates: Some support for the N:q hypothesis. *Structural Equation Modeling*, 10, 128–141. https://doi.org/10.1207/S15328007SEM1001_6
- Joosten, A., & Van Hiel, A. (2013). Being in control may make you lose control: Role of self-regulation in unethical leadership behavior. *Academy of Management Proceedings*, 2013(1), 15217. <https://doi.org/10.5465/ambpp.2013.15217abstract>
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.
- Kolthoff, E. W. (2007). *Ethics and new public management: Empirical research into the effects of businesslike government on ethics and integrity*. BJU Legal Publishers.
- Koopman, J., Lanaj, K., and Scott, B. A. (2016). Integrating the bright and dark sides of OCB: a daily investigation of the benefits and costs of helping others. *Academy of Management Journal*, 59, 414–435. <https://doi.org/10.5465/amj.2014.0262>
- Kwahk, K.-Y., Ahn, H., & Ryu, Y. U. (2018). Understanding mandatory IS use behavior: How outcome expectations affect conative IS use. *International Journal of Information Management*, 38(1), 64–76. <https://doi.org/10.1016/j.ijinfomgt.2017.07.001>
- Lapsley, D. K., & Narvaez, D. (2006). Character education. In G. G. Bear & K. M. Minke (Eds.), *Children's needs III: Development, prevention, and intervention* (pp. 273–288). National Association of School Psychologists.
- Mayer, D. M., Aquino, K., Greenbaum, R. L., & Kuenzi, M. (2012). Who displays ethical leadership, and why does it matter? An examination of antecedents and consequences of ethical leadership. *Academy of Management Journal*, 55(1), 151–171. <https://doi.org/10.5465/amj.2008.0276>
- Mihelic, K. K., Lipicnik, B., & Tekavcic, M. (2010). Ethical leadership. *International Journal of Management & Information Systems*, 14(5). <https://doi.org/10.19030/ijmis.v14i5.11>
- Naddaf, M. (2023). Young physicists say ethics rules are being ignored. *Nature*. <https://doi.org/10.1038/d41586-023-00115-z>
- Nunnally, J. C., & Bernstein, I. F. (1994). *Psychometric theory*. McGraw-Hill.
- Palanski, M. E., & Yammarino, F. J. (2007). Integrity and leadership: Clearing the conceptual confusion. *European Management Journal*, 25(3), 171–184. <https://doi.org/10.1016/j.emj.2007.04.006>
- Reed, A., & Aquino, K. F. (2003). Moral identity and the expanding circle of moral regard toward out-groups. *Journal of Personality and Social Psychology*, 84(6), 1270–1286. <https://doi.org/10.1037/0022-3514.84.6.1270>
- Rest, J. R., Arvaez, D., Thoma, S. J., & Bebeau, M. J. (2000). A neo-Kohlbergian approach to morality research. *Journal of Moral Education*, 29(4), 381–395. <https://doi.org/10.1080/1713679390>
- Reynolds, K. J., Turner, J. C., Branscombe, N. R., Mavor, K. I., Bizumic, B., & Subašić, E. (2010). Interactionism in personality and social psychology: An integrated approach to understanding the mind and behaviour. *European Journal of Personality*, 24(5), 458–482. <https://doi.org/10.1002/per.782>
- Reynolds, S. J., & Ceranic, T. L. (2007). The effects of moral judgment and moral identity on moral behavior: An empirical examination of the moral individual. *Journal of Applied Psychology*, 92(6), 1610–1624. <https://doi.org/10.1037/0021-9010.92.6.1610>
- Ringle, C. M., Wende, S., & Becker, J. (2022). *SmartPLS 4*. SmartPLS.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, 38(2), 555–572. <https://doi.org/10.5465/256693>
- Segarra-Ciprés, M., Escrig-Tena, A., & García-Juan, B. (2019). Employees' proactive behavior and innovation performance. *European Journal of Innovation Management*, 22(5), 866–888. <https://doi.org/10.1108/ejim-02-2019-0041>
- Sheeran, P. (2002). Intention-behavior relations: A conceptual and empirical review. *European Review of Social Psychology*, 12, 1–36. <https://doi.org/10.1002/0470013478.ch1>
- Smithikrai, C., Wongpindech, V., Peijsel, C., Homklin, T., & Charoenviangvetchakit, P. (2023). *Development of scales for assessing sense and acts of integrity among Chiang Mai University personnel* (Research report). Chiang Mai University. [in Thai]
- Spector, P. E. (2019). *Industrial and organizational psychology: Research and practice* (7th ed.). John Wiley & Sons.
- Stoner, J., Perrewé, P. L., & Munyon, T. P. (2011). The role of identity in extra-role behaviors: Development of a conceptual model. *Journal of Managerial Psychology*, 26(2), 94–107. <https://doi.org/10.1108/02683941111102146>
- Schweper, C. H., Jr. (2013). Improving sales performance through commitment to superior customer value: The role of psychological ethical climate. *Journal of Personal Selling & Sales Management*, 33(4), 389–402. <https://doi.org/10.2753/PSS0885-3134330403>
- The Ethics & Compliance Initiative. (2021). *2021 Global business ethics survey report*. <https://www.ethics.org/wp-content/uploads/2021-ECI-GBES-State-Ethics-Compliance-in-Workplace.pdf>
- Treviño, L. K., Hartman, L. P., & Brown, M. (2000). Moral person and moral manager: How executives develop a reputation for ethical leadership. *California Management Review*, 42(4), 128–142. <https://doi.org/10.2307/41166050>
- Treviño, L. K., & Nelson, K. A. (2013). *Managing business ethics: Straight talk about how to do it right*. John Wiley & Sons.
- Treviño, L. K., Weaver, G. R., & Reynolds, S. J. (2006). Behavioral ethics in organizations: A review. *Journal of Management*, 32(6), 951–990. <https://doi.org/10.1177/0149206306294258>
- Turnipseed, D. L. (2002). Are good soldiers good? *Journal of Business Research*, 55(1), 1–15. [https://doi.org/10.1016/s0148-2963\(01\)00217-x](https://doi.org/10.1016/s0148-2963(01)00217-x)
- Van Iddekinge, C. H., Roth, P. L., Raymark, P. H., & Odle-Dusseau, H. N. (2012). The criterion-related validity of integrity tests: An updated meta-analysis. *Journal of Applied Psychology*, 97(3), 499–530. <https://doi.org/10.1037/a0021196>
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, 17(3), 601–617. <https://doi.org/10.1177/014920639101700305>