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# MACBETH EFFECT: THE PRELIMINARY STUDY OF MIND AND BODILY CLEANSING AMONG DIFFERENT RELIGIONS IN THAILAND

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## ABSTRACT

***Prior research has cast doubt on the correlation between physical cleanliness and moral self-perception, with cultural and religious factors influencing outcomes. This study investigates the Macbeth effect in Thai people across diverse religious backgrounds. Six hundred and eight participants engaged in an online experiment, randomly assigned to recall either unethical (n=303) or ethical (n=305) behaviors. Subsequently, participants assessed their feelings of guilt and completed a checklist evaluating moral cleansing behaviours, encompassing restitutional, behavioural, and symbolic cleansing behaviours. Results revealed that symbolic cleansing behaviours, such as handwashing, were perceived as effective in reducing guilt in the unethical condition, indicative of the Macbeth effect. Conversely, restitutional and behavioural cleansing behaviours showed consistent responses across conditions. Furthermore, religious orientation did not influence the sensitivity to symbolic cleansing. These findings underscore a metaphorical link between morality and cleanliness within Thai cultural contexts.***

**KEYWORDS:** Macbeth Effect, Moral Cleansing, Culture, Symbolic Cleansing, Thailand.

## 1. INTRODUCTION

Physical cleansing (e.g., hand or face washing) has been a part of daily hygiene in various cultures for centuries. It is regarded as a suitable style of humanity in many civilizations and plays a vital role in preventing illness transmission and improving health (Blaak, 2023; Speltini & Passini, 2014). Beyond hygiene, physical cleansing also has an unexpected influence on moral cognition as a symbolic cleansing effect or "the Macbeth effect" (West & Zhong, 2015; Zhong & Liljenquist, 2006). It helps lessen cognitive interference by softening the negative emotions from a previous moral transgression (Lee et al., 2015; Xu et al., 2014). However, this field of study has mainly been conducted on Western and Islamic cultures, where Christianity and Islam are prevalent, and almost largely ignored other population, especially Asian culture, which has an entirely different way of life and faith (Clobert, 2021). To address a gap in the research, this study will investigate the symbolic cleansing effect in Thai society, where the majority of the population is Buddhist (93%), yet religious freedom is guaranteed.

### *1.1. Theoretical Justification*

#### *1.1.1. Physical Cleansing as a Symbolic Cleansing*

Several studies indicate that compensatory behaviour can take on a symbolic or metaphorical form (Lee et al., 2015; Lobel et al., 2015; Xu et al., 2014; Zhong & Liljenquist, 2006). The moral cleansing theory suggests that there are three main types of compensatory behaviour aiming at restoring one's sense of moral self-worth (West & Zhong, 2015). The first type is known as Restitution Cleansing Behaviours (RCB), which involves directly addressing the moral transgression by eliminating its source. Behavioural Cleansing Behaviors (BCB) comprise the second category of moral cleansing actions. These actions indirectly correct wrongdoing by focusing on bolstering moral self-worth, such as adjusting attitudes, engaging in religious practices, or partaking in leisure activities. The third type, Symbolic Cleansing Behaviours (SCB), explores metaphorical methods to alleviate negative emotions, constituting the main focus of this study.

Historically, the concept of Symbolic Cleansing Behaviours has long been associated with morality and purification (Zhong & Liljenquist, 2006). The conceptual metaphor theory provides an explanation for this symbolic cleansing effect, proposing embodied metaphors. It suggests that people are more likely to understand unknown or abstract concepts through metaphors based on tangible bodily sensations or concrete concepts (Lakoff et al., 1999). In the context of the symbolic cleansing metaphor, purity emerges as a dominant concept in morality (Haidt & Joseph, 2007), and religion plays an indispensable role in the pursuit of purity (Kitamura, 2021). Meanwhile, immoral behaviours have been examined and linked to the emotion of disgust (Moll et al., 2008), and this feeling often prompts a desire for cleansing (Eskine et al., 2011). Therefore, the acts of bodily purification when one's moral self is jeopardized or damaged by engaging in immoral behaviours would metaphorically get rid of prior misdeeds (i.e. abstract thought) are grounded in concrete bodily experience (i.e. ritual purification) (Jordan et al., 2011; West & Zhong, 2015; Zhong & Liljenquist, 2006).

Research on the psychological link between physical cleansing and morality has been conducted for decades (Trakulpipat et al., 2021). Literature reveals that the act of cleansing oneself (e.g., handwashing, face washing or even showering) can reduce the feeling of moral threat and other negative feelings after immoral acts (Lobel et al., 2015; Xu et al., 2014). Zhong and Liljenquist (2006) were pioneers in investigating the link between physical cleansing and morality by using an implicit priming methodology. In the experiment, participants were informed about copying either an ethical or an unethical story. They were then asked to rate the desirability of cleansing-related products (e.g., soap, detergent) and non-cleansing-related products (e.g., batteries, snicker bars). The results revealed that individuals who were replicating an unethical story rated cleansing products substantially higher than the control group, but there was no difference between non-cleansing products. This study demonstrated cognitive bias by associating moral integrity with cleansing after exposure to impure morality. Moreover, later studies have also found that vicarious physical cleansing can attenuate feelings of guilt, as individuals who witness others cleansing or imagine themselves cleansing after an immoral act experience a similar effect (Xu et al., 2014). These results demonstrate that physical cleansing can reduce guilt. Participants who experienced vicarious physical cleansing subsequently felt less need to reinstate their moral consciousness. Consequently, participants in this group were less helpful to others compared to the control group. Thus, empirical evidence suggests that engaging in bodily cleansing after unethical behaviour can influence the perception of moral thought as a symbolic cleansing of moral impurity (Preston, 2012; Schaefer, 2019; Zhong & Liljenquist,

2006)

### *1.1.2. The Non-Universal Effect*

On the issue of universality, the symbolic cleansing effect is almost entirely mute because moral identity is culturally biased. Culture is a pattern of characteristics and knowledge comprising various elements (e.g., attitudes, values, beliefs, religions etc.) shared by a group of people (Matsumoto, 1996). Cultural differences can influence how people perceive themselves, their cognitions, and their emotions differently (Jia, 2017). This concept also applies to the symbolic cleansing effect in different cultures. Siev (2018) conducted a meta-analysis of 15 studies on the Macbeth effect. They found that the experiments had mixed results, with some being successful and others unsuccessful. For instance, Gámez et al. (2011) attempted to reproduce the experiments conducted by Zhong and Liljenquist (2006) using a Spanish sample but found no success, suggesting that cultural influences may play a significant role. Lee et al. (2015) further illustrated how varying cultural contexts can yield different outcomes. They investigated the cultural differences in the symbolic cleansing effect with Chinese populations by priming them with either Chinese or Canadian cultures. The study found that Chinese individuals who were exposed to Chinese culture believed that wiping their faces soothed bad emotions more successfully than washing their hands after indulging in unethical activity. In contrast, Chinese participants who were familiar with Canadian culture indicated the opposite. This is because the face is shown as a public self-image of Chinese culture rather than Western culture (Ho, 1976). Chinese people who engage in immoral activity will lose face and wish to reclaim it.

### *1.2. The Present Study*

Purification ceremonies involving washing or immersion in water to eliminate "uncleanness" or "pollution" are common in Western societies where Judaism, Christianity, and Islam are the predominant religions. These religious doctrines firmly prescribe that cleansing practices promote physical hygiene and portray religious devotion as a source of spiritual purity (Lobel et al., 2015; Thomas et al., 2018). The connection between religion and purity is so well-established that it is often taken for granted, and purity rites in religion are often used to support the embodiment of morality (Preston, 2012; Thomas et al., 2018; Zhong & Liljenquist, 2006). Lobel et al. (2015) conducted a quasi-experiment using the Jewish ritual of Mikvah to investigate this relationship. They placed donation boxes at the entrance and exit of the ritual site. The findings showed that participants donated more money before the ceremony than after it. It showed that people would obtain moral credentials while participating in or observing the rituals, releasing them from moral restraints from past immoral behaviour and causing them to act less morally (Merritt, 2010; Xu et al., 2014). This study was the first to provide evidence of the connection between cleanliness and morality in real-life situations. However, this Western symbol cannot fully represent non-Western civilizations and multiculturalism, such as Thailand.

Thailand, located in Southeast Asia, has a predominantly Buddhist population, with 93.5% practicing Theravada Buddhism ("Religion in Thailand," 2024). Despite this, religious freedom is protected in the country. Although Buddhism originated in India, where Hinduism holds the belief that washing away sins helps break free from the cycle of death and rebirth (Agoramoorthy, 2015), Thai Buddhist teachings assert that washing or immersing in water does not purify the soul of impurities, as sins cannot be washed away (Dhammakij, 2019; King, 1989).

In Buddhism, particularly Theravada Buddhism, the concept of sin is fundamentally different from many other religions. Sins or unwholesome actions (akusala kamma) are seen as actions that generate negative karma, which affects one's cycle of rebirth (samsara). Unlike in Hinduism or Christianity, where rituals and sacraments may absolve sins, Buddhism teaches that only through ethical conduct, meditation, and wisdom can one purify the mind and attain enlightenment (nirvana). The idea is that one's actions (karma) and their intentions determine their future experiences and rebirths, and purification comes from within through right understanding and right action (Gethin, 1998).

From a religious perspective, Thai people may not perceive a symbolic cleansing effect. However, from a cultural perspective, Thai people perceive Hinduism as emphasizing the power of water to cleanse impurities. This is evident in the Songkran festival. Songkran festival is a festival celebrating the Thai new year that lasts for three days and closely connects with religious beliefs and moral codes (Agarwal, 2013). This most significant water festival's purpose involves dousing people with water as a symbolic cleansing and renewal, even though the practice may not be viewed as a means of purifying the soul from sins. Such practices are deeply rooted in Thai culture and are often considered a way of

purifying the mind to attract good luck and ward off bad luck or to create a clean slate effect (Hariyatmi, 2019). As a result, Thai people may unintentionally perceive the symbolic cleansing effect as a bottom-up processing from a blend of cultures.

Therefore, the present research aims to examine the perception of symbolic cleansing behavior in reducing guilt, guided by three research questions: first, does the relationship between guilt and desire for cleansing exist in Thailand? Second, if so, is symbolic cleansing effective in alleviating guilt in Thai culture? And third, does religious belief influence the effectiveness of cleansing on guilt reduction?

In the sections that follow, we aim to extend the exploration of the symbolic cleansing effect or the Macbeth effect among the specific culture of religion liked Thai people. By conducting this study, we intend to bridge the existing gap in research on the symbolic cleansing effect or the Macbeth effect in non-Western cultures and shed light on how Thai individuals manage their negative emotions.

## 2. METHODS

### *2.1. Participants*

A total of 720 participants were recruited through web-based advertisements and invited to participate in a short online experiment. Of these, 112 participants were excluded due to inconsistent responses or failure to meet the inclusion criteria. The final sample consisted of 608 participants (305 females, 49.92%; M = 33.88 years, SD = 10.62). G*Power (Faul et al., 2007) was used to determine the required sample size. An F-test with repeated measures and within-between interaction was employed, with a statistical power of 0.80 and a significance level of .05. The analysis indicated that a minimum sample size of n = 24 per group was sufficient. Inclusion criteria required participants to have experienced feelings of guilt within the past year, specifically in relation to someone they loved. Individuals who had not experienced such guilt during the past year were excluded from the study.

### *2.2. Materials*

**Guilt Recall Task** To access moral threat, priming method was used. Participants had a minute to recall the past misdeed to someone important to them. This task has been widely accepted and used in the past related research to induce guilt in participants (Rebega et al., 2013; Zhong & Liljenquist, 2006) and recalling a negative act that did to a beloved person would threat morality more efficiency (Baumeister et al., 1994; Xu et al., 2014). This paradigm gave to participants only in unethical condition and participants in ethical condition were informed to recall the past good deed with a beloved one as well.

**Guilt Scale** The State Shame and Guilt Scale (SSGS)(Marschall, 1994) was used for self-assessment of guilty in both experimental conditions after a guilt recall task. With the aim of detecting guilt, questions in the original version addressing both guilt and shame were scrutinized, and those not directly related to measure guilt were excluded. Thus, seven out of the original ten questions that ostensibly measure the feeling of guilt were used (e.g., “I feel bad about something I have done”, “I feel like apologizing, confessing”, “I feel remorse, regret”: Cronbach  = .96). Response scales ranged from 1 = not at all to 5 = very strongly.

**The Guilt-Reducing Behavioural Scale** for Thai people was originally developed by the authors. It consists of 21 items on 5 Likert scale (1 = not effective at all, 5 = extremely effective), designed to identify compensatory behaviours commonly exhibited by Thai individuals when experiencing guilt. The items were gathered by open-ended questionnaire from 17 adults in Thailand (10 females; M = 29.94 years, SD = 7.80). Participants were initially tasked with listing ten activities or events they typically engaged in when they have done something harmful to someone they love. Among 95 items obtained, another group of 30 participants (11 females; M = 31.13, SD = 8.61) was asked to rate each item for its effectiveness in alleviating guilt on 5 Likert scale (1 = not effective at all, 5 = extremely effective). The top 21 items that received the highest ratings were selected and grouped into three categories, aligning with the framework established by West and Zhong (2015).

Consequently, the questionnaire items for the Restitution Cleansing Behaviours (RCB) category comprised 6 behaviors (e.g., "volunteering to participate in community service activities; Cronbach’s  = .77), the Behavioral Cleansing Behaviours (BCB) category included 8 questions (e.g. " travelling and exploring different places "; Cronbach’s  = .78). The Symbolic Cleansing Behaviours (SCB) category included 7 behaviors (e.g., washing hands; Cronbach’s α = .78). The overall reliability of Cronbach’s α = .88.

Due to the COVID-19 pandemic, we employed an indirect, questionnaire-based approach to assess symbolic cleansing, reducing the risk of confounding hygiene concerns with emotional responses to moral transgressions. This design was informed by prior research showing that both direct and indirect cleansing can alleviate negative emotions following moral recall (Xu et al., 2014).

### 2.3. Procedure

The Ethical Committee permitted the study for Human Research at (Chulalongkorn University) University (COA No. 066/2021). All participants were native Thai volunteers and consented to action by completing the questionnaire items. Both the experiment and questionnaire were conducted in Thai. Participants were invited to participate in an online questionnaire for 15 minutes. A web-based experiment was used via the online program 'Psytoolkit' (Stoet, 2010; 2017). Participants were randomly assigned to one of the two experimental conditions (unethical group and ethical group).

Before starting the experiment, participants were asked about whether they had engaged in any wrongdoing towards a loved one (i.e., parents, friends, girlfriend, boyfriend etc.) in the past year. Those responding with a "no" were excluded from further participation, while participants responding with a "yes" proceeded to the next step.

Next, the "guilt recall task," participants were given one minute to recall a past action. The unethical group was instructed to remember a previous misdeed committed against someone significant to them, while the ethical group was asked to recall a benevolent act from the past. This task solely involved recalling past actions; no additional performance was required. Participants could advance to the next step by clicking the "next" button when the allotted time was up. Following the recall task, participants were instructed to complete a self-rating guilt scale and then provide rating on the guilt-reducing behaviour scale.

All participants were allowed to withdraw from the experiment anytime if they felt uncomfortable. Stress Relief Hotline, Department of Mental Health, Thailand (1667) and mobile contact of the researcher were provided in the information sheet in case participants feel stress or need help.

## 3. RESULTS

### 3.1. Descriptive Information of the Participants

This study aimed to investigate the effectiveness of guilt-reducing behaviour patterns by comparing those who recall past ethical behaviours (control group) with those who recall unethical behaviours (experimental group), as well as those with different religious beliefs. The data initially showed that participants in unethical group (M = 2.72, SD = 0.58) rated overall guilt-reducing behaviors as significantly more effective than participants in ethical group (M = 2.39, SD = 0.71), (t (606) = 6.19, p < .01). Descriptive statistics, providing a detailed profile of the participants by condition, are shown in Table 1.

### 3.2. Manipulation Check of Guilt

As the first step, we confirmed that the guilt induction was successfully activated in unethical condition rather than ethical group. Independent t-test revealed a significant difference for a level of guilt across condition (t (606) = 16.99, p < .001). Participants in unethical group (M = 3.47, SD = 0.85) felt more guilty than the ethical group (M = 2.01, SD = 1.22) after a guilt recall task.

***Table 1: Participant Personal Information and Descriptive Statistics of the Effectiveness of Overall Guilt-Reducing Behaviours by Condition.***

| | | Effectiveness of Overall Guilt-Reducing Behaviours | | | | | |
|---|---|---|---|---|---|---|---|
| | | Unethical group (*n* = 303) | | | Ethical group (*n* = 305) | | |
| | | ***n*** | ***M*** | ***SD*** | ***n*** | ***M*** | ***SD*** |
| **Gender** | | | | | | | |
| | Male | 152 | 2.64 | 0.53 | 153 | 2.21 | 0.69 |
| | Female | 151 | 2.80 | 0.62 | 152 | 2.58 | 0.68 |
| **Religion** | Buddhism | 129 | 2.77 | 0.67 | 137 | 2.59 | 0.64 |
| | Christianity | 96 | 2.69 | 0.47 | 100 | 2.23 | 0.69 |
| | Islam | 78 | 2.69 | 0.53 | 68 | 2.23 | 0.76 |
| | | | | | | | |

### 3.3. The Relationship between the Feelings of Guilt and Effectiveness of Guilt-Reducing Behaviour

A Pearson correlation coefficient analysis was conducted to assess the relationship between feelings of guilt and guilt-reducing behaviors, both overall and within each specific category (Table 2). Firstly, there was a significant positive relationship between feelings of guilt and guilt-reducing behaviors overall (r (606) =.398, p =.000) which can nearly imply moderate level (Akoglu, 2018). Additionally, significant positive relationships were found between feelings of guilt and Restitution Cleansing Behaviors (r (606) = .347, p = .000), Behavioral Cleansing Behaviors (r (606) =.336, p = .000) and

Symbolic Cleansing Behaviors (r (606) = .247, p = .000), all of which represent weak relationships.

***Table 2: Correlations Matrix among the Level of Guilt and Perceived Effectiveness of Guilt Reducing Behaviours.***

| Effectiveness of Behaviours | *M* | *SD* | The feeling of guilt | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
| 1. Restitution Cleansing | 2.85 | 0.83 | .35** | - | | |
| 2. Behavioural Cleansing | 2.73 | 0.76 | .34** | .71** | - | |
| 3. Symbolic Cleansing | 2.10 | 1.02 | .25** | .23** | .26** | - |
| 4. Total score of cleansing | 2.56 | 0.67 | .40* | .80** | .81** | .71** |
| * p <.05 ** p < .001. | | | | | | |

### *3.4. Effect of Condition and Religion on the Effectiveness of Guilt Reducing Behaviours*

Three-way analyses of variance were performed using a mixed ANOVA of types of cleansing behaviour (Restitutional, Behavioural, and Symbolic cleansing: within-subject variable) x conditions (ethical and unethical: between-subject variable) x religions (Buddhism, Christianity, Islam: between-subject variable) with repeated measures on the first factor. Mauchly's test of sphericity was significant for guilt reducing behaviour (Mauchly's W = .62, p < .001) indicating a need for Greenhouse – Geisser adjustment. The results are also displayed graphically in Figure 1.

The results found a main effect of types of cleansing behaviour (F (1.5, 876.36) = 182.18, p < .001, $np^2$ = .23), condition (F(1,602) = 46.96, p < .001, $np^2$ = 0.72), and religions (F(2,602) = 8.78, p < .001, $np^2$ = 0.28), indicating that the effectiveness of reducing guilt differed across types of cleansing behaviour, conditions and religious.

Two-way interaction effects between types of cleansing behaviours and condition (F (1.5, 876.36) = 23.51, p < .001, $np^2$ = .04), and interaction effects between conditions and religious (F (2,602) = 3.74, p < .05, $np^2$ = .012) were significant. Three-way interaction effects among Types of cleaning behaviours, condition and religious were not significant (F (1.5, 876.36) = .39, p = .75, $np^2$ = .001).

Follow-up analyses comparing pairs of condition across types of cleansing behaviours showed that the perceived effectiveness of guilt reduction behaviour in the unethical group was significantly higher than in the ethical group across all three types of cleansing behaviours (ps < .05; see figure 2).

After that, follow-up one-way ANOVAs of religions on types of cleansing behaviours found that the perceived effectiveness of restitutional cleansing behaviours (F (2, 607) = 12.55, p < .01) and behavioural cleansing behaviours (F (2, 607) = 24.16, p < .01) differed significantly across religions. In contrast, symbolic cleansing behaviours were not perceived differently across religions (F (2, 607) = 1.04, p = .35) (See figure 1).

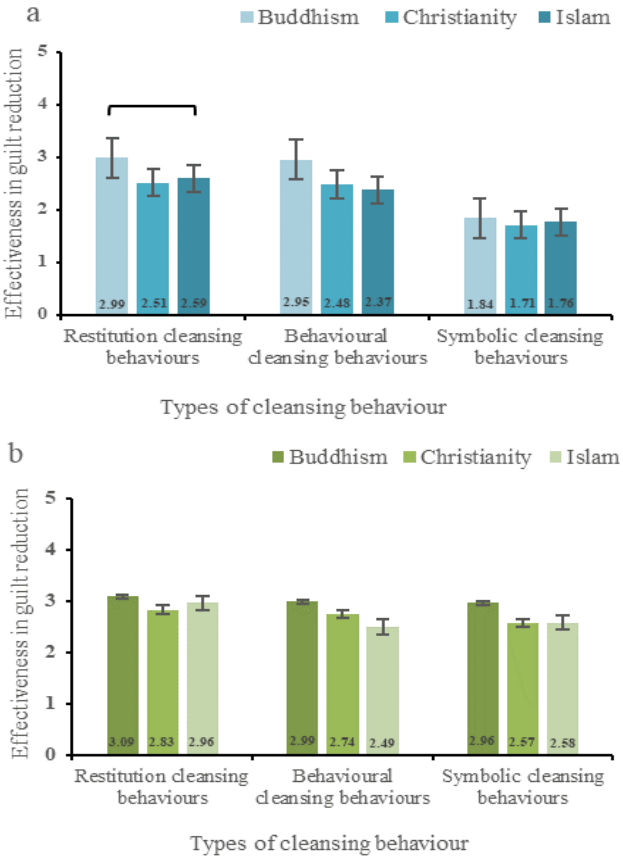


***Figure 1: The Perceived Effectiveness of Each Type of Guilt Reduction between the Two Conditions: a Presented in the Ethical Group and b Presented in the Unethical Group.***

Post hoc comparisons using Bonferroni correction revealed that restitutional cleansing behaviours were perceived as significantly more effective among Buddhist participants (M = 3.04, SD = .84) than among Muslim participants (M = 2.79, SD = .79), p < .01. Christian participants (M = 2.67, SD = .78) did not differ significantly from the other two groups. For behavioural cleansing behaviours, Buddhist participants (M = 2.96, SD = .72) rated them as

significantly more effective than both Muslim (M = 2.48, SD = .77) and Christian participants (M = 2.61, SD = .73), ps < .01. In contrast, no significant differences were found across religions for symbolic cleansing behaviours (ps > .05).

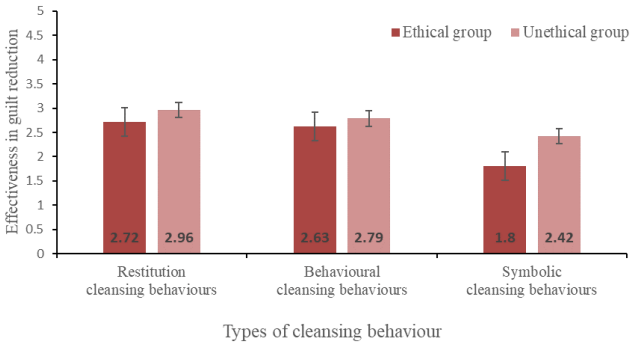


***Figure 2: Effectiveness of Each Type of Guilt Reduction between Two Conditions.***

## 4. DISCUSSION

Empirical studies showed that physical cleansing reduces moral contamination as a symbolic cleansing effect, known as the Macbeth effect (Lobel et al., 2015; Xu et al., 2014; Zhong & Liljenquist, 2006). However, the universality of this effect remains to be determined. In the current study, we aim to address three main issues regarding the symbolic cleansing effect on Thai people.

First, we aimed to preliminarily examine the existence of guilt and the desire for cleansing in Thailand. The results revealed that participants in the unethical group, who were asked to recall a past misdeed, rated symbolic cleansing behaviours as more effective in reducing feelings of guilt compared to those in the ethical group. This suggests that the perceived effectiveness of symbolic cleansing becomes more salient when individuals are experiencing guilt. This finding aligns with previous research showing that moral transgressions often elicit a desire to "wash away" negative emotions and have shown the influence of physical cleansing can activate the concept of moral cleansing and reduce moral threat (Lee et al., 2015; Thomas et al., 2018; Zhong & Liljenquist, 2006)

An explanation for this is that the desire for cleansing arises from guilt, which may temporarily lower one's moral self-concept and prompt a desire to restore a positive moral self-image as a form of compensatory behavior. According to Lakoff et al. (1999), the abstract concept of morality is closely associated with the concrete concept of cleanliness. This explains why symbolic cleansing behaviors, such as handwashing, may serve as a cue for coping mechanisms to reduce psychological discomfort (Xu et al., 2014) as "balance out" their moral shortcomings. However, the psychological processes linking guilt and symbolic cleansing remain unclear. No studies have systematically examined whether symbolic cleansing helps recover moral self-worth. Future research should investigate this potential mechanism in greater depth.

Second, we aimed to investigate whether Thai people perceive symbolic cleansing behaviours as effective in alleviating guilt. The results revealed a positive relationship between guilt and symbolic cleansing behaviour. This finding suggests that, despite the indirect nature of symbolic cleansing, Thai individuals may still view such behaviours as meaningful strategies to cope with feelings of guilt, consistent with prior studies showing that physical cleansing acts, like handwashing, can effectively reduce feelings of guilt and moral discomfort (Xu et al., 2014). Although the association was relatively weak, they still reflected the desire for cleansing that arise when one's moral self is threatened (West & Zhong, 2015).

This finding offers initial insight into how mind-body metaphors related to morality manifest in Thai culture. Although symbolic cleansing is one form of moral cleansing, it tends to be less effective than direct methods like apologies or restitution. Prior studies suggest that direct methods provide tangible moral repair and social validation (West & Zhong, 2015), while symbolic acts primarily offer internal psychological relief (Xu et al., 2014). However, there is a lack of empirical research comparing the effectiveness of different guilt-reduction strategies. Future research should examine and compare direct (e.g., apologizing) and indirect (e.g., symbolic gestures) methods, focusing on guilt levels before and after moral transgressions.

Third, our objective was examined the sensitivity of the symbolic cleansing effect across three different religious backgrounds. The findings suggested that an individual's religious belief may not play a significant role in shaping the perceived effectiveness of symbolic cleansing behaviours. Participants from different religious backgrounds rated the effectiveness of these behaviours similarly, indicating that the symbolic cleansing effect may operate independently of specific religious doctrines.

In the previous study, most research on the symbolic cleansing effect has been conducted in Western contexts, where participants are predominantly Christian and beliefs in purification are strong (Preston, 2012; Schaefer et al., 2015; Xu et

al., 2014; Zhong & Liljenquist, 2006). Only a few studies have included participants from specific religious backgrounds, such as Jewish individuals (Lobel et al., 2015) and Muslim women (Thomas et al., 2018). One study was conducted with Chinese participants, but it did not account for religious affiliation (Lee et al., 2015).

Our study provides the first evidence for the cognitive accessibility of cleansing concepts underlying the Macbeth effect in a Thai-speaking population, where the majority of people are Theravāda Buddhists, and traditional beliefs in purification are relatively weak compared to other religions. This makes the findings particularly noteworthy, as they suggest that the symbolic cleansing effect may extend beyond specific religious beliefs and contribute to a broader understanding of moral psychology.

The findings of this study contribute to a better cross-cultural understanding of the symbolic cleansing effect and provide insights for practical interventions, especially considering religious and cultural contexts. Understanding how individuals use symbolic cleansing to cope with guilt across different religious backgrounds can inform the development of culturally sensitive counseling programs and therapeutic interventions.

However, one limitation of the present study is that this study examined participants from Buddhism, Christianity, and Islam as broad categories. There are the diversity of beliefs and practices within each religion. For example, Buddhism in Thailand is primarily Theravāda, which emphasizes moral cleansing through personal purification, ethical conduct, and simple rituals, whereas Mahāyāna and Vajrayāna Buddhism approach cleansing through more collective or esoteric practices (Kim, 2003). Similarly, Christianity and Islam also vary across denominations and traditions, each offering distinct understandings of purity, repentance, and moral restoration. Future research could build on these findings by investigating how such intra-religious differences shape perceptions the construct of cleansing and moral self-concept.

## 5. CONCLUSION

Overall, this preliminary study explored effects of guilt on desire for each types of cleaning in Thailand. The findings imply that symbolic cleansing behaviours could contribute to reducing feelings of guilt in Thai people.

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