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A study of the psychological effect: The lady macbeth effect

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Abstract---The lady Mac-Beth effect is a condition in which an individual urge to risen their hands or body when they have a feeling that they have done something wrong i.e., which is inappropriate in order to clean their conscience. So, this study is to find how much people clean themselves or wash their hands indeed because of their guilty conscience. People are always not having a tendency of washing hands or bathing in can be a cause and effect of their remorseful morality. It not always having a physical cleanliness there can be an alternative for purifying their mortified morality. Studies have exhibited that people keep themselves clean indeed for cleaning their sins. Famous study of Zhong and Liljenquist (2006) was replicated but didn't found the evidence of Macbeth effect. In further findings, observed about physical purity as an attainment of moral purity could show a sign of Macbeth effect. In addition, few studied have also showed the brain areas which are involved in the guiltiness due to immoral deed.

Keywords---Macbeth effect, moral purity and physical purity.

Introduction

The Macbeth effect is inspired from the William Shakespeare's play where there is lady named Macbeth who had strategized to assassinate the king and would repeatedly wash her imaginary blood-stained hand (which she saw on her hand after killing the king), hoping it will wash away all her sins. Inspired from lady Macbeth from William Shakespeare's play, a psychological condition is named as lady Macbeth effect or Macbeth effect. In this psychological condition, people who

have ended up doing something iniquitous, feel an urge to rinse their hands otherwise body in order to clean their integrity. They have a tendency to contemplate like physical cleanliness can be an alternate for moral purity.

Story of Macbeth

There were three witches who tell Macbeth, Thane of Glamis and he will be a king moreover Banquo, Macbeth's friend is told that he will sire kings but won't be king. King of Scotland, King Duncan hears about the bravery of Macbeth's rebellion against the Thane of Cawdor and King Duncan makes him the Thane of Cawdor. Duncan pronounced his son Malcolm as the prince of Cumberland. On hearing this, Macbeth, remembered the words of those three witches and thinks about fulfilling the prophecy by taking the matters in his own hands.

King Duncan was welcomed by Macbeth and his wife as a guest to the castle at Inverness. As on Macbeth arrival to the home his wife, lady Macbeth got to know about the prophecy of the witches which her husband has sent to her via letter and lady Macbeth tries to influence the murder of the king and then seize his throne. And that night the King was slain and Macbeth took a vow as a new king as he was the one close to king. Moreover, King Duncan's sons were called murderers as they were not being found in castle, they flew away with fear of being killed by the person who killed their father.

Macbeth also recollected the prophecy of the witches about Banquo's descendants will be the king so he decided to assassinate Banquo and his son Fleance. Banquo was killed, Fleance absconded. Macbeth saw the ghost of Banquo alleging of killing him and Macbeth got petrified. As Fleance was not found on the crime scene, it was concluded by the couple of lords that the assassinator is Banquo's own son, Fleance; as he absconded. Macbeth, at last, was defeated and killed with his family by the Great Birnam wood to high Dunsinane Hill. When Macduff was planned to get murdered by Macbeth, he flees to England for asking for help where Malcolm and Macduff join the army against Macbeth.

Lady Macbeth had a sign of guilty conscience which led to sleep walking and also obsessing over washing her hands as if they are stained of blood. Lady Macbeth is one of the most famed as well as intense character in Shakespeare's play. He doesn't choose to create a character is evil, he just choses average person and place them in situation and challenge and test them.

Charaterstics of Lady Macbeth

1. She **controls** her husband by influencing him to kill the king and planes the murder night and takes control when Macbeth loses his mind.
2. She is **two-faced** when she welcomes the king and then plans his murder.
3. She is craving for the power i.e., she is **power-hungry**.
4. She is **cunning and ambitious**.

Psychological Analysis

According to Mathur (2014) he stated that the play was a transfer of psychic Forces from an individual to other that is Lady Macbeth to Macbeth. As Macbeth

has no children, she was frustrated which was the reason for seeking power and influencing the husband. Initially observed all the thoughts of having power was the law of id (pleasure seeking principle). Lady Macbeth didn't consider her superego and her thoughts were repressed and substituted with a feeling of morality. While Macbeth has an ethical objection, which shows the presence of ego. When Macbeth and Lady Macbeth talked there could be dynamics observed which was more sort of an internal than the external as both were conflicting while talking which emphasised on a mental struggle. Id influenced both the characters as they will get power on killing the King Duncan. Mathur lastly says that this sense of childlessness suffuses the play which seemed to motivate on psychological level which showed the characters has the clear power id.

Impact of Macbeth Effect

According to Trakulpipat, Wiwattanapantuwong, Dhammapeera and Tuicomepee (2021) conducted a study “Macbeth Effect”: The link between physical cleanliness and moral judgement” which was a systematic review to find a linkage between physical cleaning and morality. The findings revealed that if individual does bodily cleanliness, then it reduces the immoral behaviour one did also additionally if prosocial behaviour is shown then it reduces the immoral feeling.

A study conducted by Huangfu, Li, Zhang and Sheng (2021) conducted a study named, “Moral metaphorical effect of cleanliness on immoral workplace behaviors: Environmental cleanliness or self-cleanliness?”. The investigation showed that environmental cleanliness and along with higher community norm have a moral metaphorical effect. Findings suggested the environmental cleanliness can have a vital implication for preventing immoral deeds in workplace.

A study by Choo, Sheng and Si (2019) conducted a study named “the effect of physical cleansing on moral judgment and moral behaviour among undergraduate students”. This study placed emphasis on the outcome of physical cleansing act of moral judgement in addition menaced behaviour among undergraduate students of Malaysia. 40 participants were taken who weren't knowing about the purpose of the experiment. Two tasks were implemented to measure moral judgement and cheating behaviour. Order of the task was to compensate to boost the control across sequential effects. T- test on two independent sample was observed there is no significance among physical cleansing and moral judgement. Moreover, no significance between physical cleaning and immoral behaviour as well as no gender difference in moral and immoral behaviour. The findings will be helpful in the moral psychology.

Nakagawa, Takeuchi, Taki and et.al. (2019) conducted a study titled mean diffusivity related to rule- breaking guilt: the Macbeth effect in the sensorimotor regions. In this study it was hypothesized that the VM formations are responsible in the feeling of guilt which are linked to social as well as moral cognition which are inferior parietal lobe (IPL), prefrontal cortex (PFC) and cingulate moreover to observe it diffuse MRI was used. It was observed the linking between regional WM structures and feeling of guilty was find out using MRI and Guilty Feeling scale in at least 1196 healthy young students. According to hypothesis, Deontological guilt scores were positively correlated with mean diffusivity in the same region.

The results states that it can predict Macbeth effect which is an obsession of dirty hand to the washing rituals arising from guilt.

The study on “wiping your conscience clean” done by Mahreen Khan and Jessica R. Grisham (2018) Macbeth effect in addition volunteerism among undergraduate students’ sample of 164 with eminent level of OCD Contamination concerns. Participants experienced a sin, anxiety otherwise neutral emotion-induction condition, they scoured their hands or they accomplished a control task. In Immorality condition, redoubled ratings of distress were association in intensified cleaning of hands. Individual in the immorality condition rinsed volunteered felt sin or anxiety were significant for less time than those compared to who did not cleanse.

A metanalysis of Macbeth effect done in relationship between immorality and cleansing conducted by Siev, Zuckerman, Shelby and Joseph (2018). In the study the participants who considered immoral events more choose to clean more than those with ethical actions. In the study 15 studies were taken in consideration and the weighted mean effect size was smaller transversely to the studies and non-significant amongst the studies conducted in labs.

According to Thomas, Grey and Al-Romaithi (2017) in their research paper “Macbeth Arabia: moral threat and cleansing- related construct accessibility in Arab women”. In their research they suggest that this idea has acknowledged empirical support as well as there may be implications for understanding of Obsessive – Compulsive disorder (OCD). The study was undertaken to observe the outcome in Muslim, Arabic- dialect, inhabitants from UAE. The experimental members were 112. The project was designed to impend moral honesty like recollecting past wrongs after that a word-fragment completion task was done in which cleansing and non-cleansing completions are possible. A control group of 95 people were able to complete the second task whereas recalling past misdeeds made individuals significantly more cleaning allied word- fragment than their control-groups. The study provides a basis of Macbeth effect in Arabic speaking population and also have implication of understanding of OCD.

In the study morality and soap in engineers and social scientists: the Macbeth effect interacts with profession studied by Schaefer (2017) studies observes about the moral purity associated with distinct occupation. Engineering and students from social science were requested to hand a copy of writing in which the leading role behaviour was shown in an immoral manner or in moral way (control group). Both the students had high level of cleaning but more stronger Macbeth effect was observed in engineering students. The findings showed the Macbeth effect intermingles with individual differences.

A study on “Metaphorical association between physical and moral purity in the context of one’s own transgressions and immoral behavior of others” by Martyna and Józef (2017). The Macbeth effect is a metaphorical association of physical as well as moral purity. The impact of Macbeth effect upon autonomic developments i.e., stimuli processing rate was observed by performing three papers. Studies 1 and 3 inspected whether judgement about an individual moral wrongdoing and study 2 other wicked behaviour subsidised to gradual response time to stimuli

linked to bodily purification. In the study, it was observed that autonomic processes can also be influenced by the metaphor: “morality is purity” i.e., manifested in unhurried reaction time to a stimulus linked to bodily cleaning when an individual recalled his wrongdoing and lesser when recalling the wrongdoing of other individuals.

In a study “Washing away your sins in the brain: physical cleaning and priming of cleaning recruit different brain networks after moral threat” by Tang, Lu, Su, Liang, & et.al. (2017). Studies have shown that the moral threat instigates the essential of being physically clean nonetheless the concrete physical cleaning as well as priming of cleaning has varying effects on an individual’s attitudes as well as behaviours. In this study resting state fMRI was used for the exploration of neural mechanism for real physical cleaning in addition of priming of cleaning. After evoking moral contravention with fervent feeling of guilt as well as shame, participants wiped their faces or were observed primed with cleanliness. Results have exhibited that the actual corporeal cleaning abridged the impulsive brain activities in the right insula and MPFC, moral emotion processing was related to the right superior frontal gyrus and middle frontal gyrus was participated in the executive control processing. Finding exhibits that the actual physical cleaning and priming of cleaning led to changes in different regions of brain and their networks.

According to Schaefer, Rotte, Heinze and Denke conducted a study titled “Dirty deeds and dirty bodies: Embodiment of the Macbeth effect is mapped topographically onto the somatosensory cortex” (2015). Few studies have found an association between moral purity and physical cleansing. Neuropsychological approaches have a basis to support by showing a role of sensorimotor cortices for embodied metaphors. In this study it is being observed of an embodiment of sensorimotor cortex for moral purity in somatotopically organized. Here the participants were asked to execute immoral or moral acts using their hands or else mouth. The finding was that people using verbal immoral acts were using mouthwash and people lying in writing were having an urge to wash hands with hand wash. fMRI results, moreover showed an activation in the area of sensorimotor cortices during estimation phase that was somatotopically organised with the aspect of deceitful either verbally i.e., by mouth and non-verbal (hands). Thus, the results have an evidence of the central role of sensorimotor cortices for the personified descriptions.

According to Kalanthroff, Aslan and Dar in a study name “Washing away your sins will set your mind free: physical cleansing modulates the effect of threatened morality on executive control” (2015) says that threatened conscience can impair with the executive control system and the physical cleaning will be reasonable to the detrimental effect. 37 participants were there who were asked to write about an immoral act and few were allowed to wash their hands. The three control tasks were administered- Stroop, stop-signal, and object interference. The conclusion was menaced morality has a damaging effect on the executive control while physical cleaning frees this system from those detrimental effect. Moreover, this behaviour can lead to obsessive compulsive disorder.

A study by Earp, Everett, Madva and Hamlin (2014) conducted a study baptised as “Out, Damned Spot: Can the “Macbeth Effect” Be Replicated?”. Inspired from Zhong and Liljenquist (2006) evidence on the Macbeth effect they also tried to replicate the study. They investigate the population from different countries. However, after conducting the experiments they could not detect the Macbeth effect.

In 2011, a study by Gamez, Diaz and Marrero named “The Uncertain Universality of the Macbeth effect with a Spanish Sample”. This study was a replication of Zhong and Liljenquist’s experiments on Spanish population. The outcomes of the replication were unsuccessful. Results could not give evidence of escalated mental accessibility of cleaning- related notions or had an abundant wish for cleaning products and neither taking the wipes for unethical behaviour. They didn’t have an evidence of people showing cleaning-oriented attitude for satisfying their conscience. They showed sensible behaviour rather than showing cleanliness behaviour whenever their conscience is threatened.

According to Zhong and Liljenquist (2006) conducted a study titled “Washing away your sins: Threatened morality and physical Cleansing. Physical cleaning has been a main focus of a ceremonies from decades. Prevalence of this habit has given a psychological association between bodily purity and moral purity. In the study Macbeth effect was observed. The effect exhibits the increased habit of cleaning related concepts and a desire for cleaning products and a likelihood of taking antiseptic wipes. It was moreover shown cleaning helps an individual to reduce the menace of moral self-image. Diurnal hygienic practice can be a solution to the menaced morality.

Conclusion

By reviewing the literature about Macbeth effect, it was observed that people try to cleaning their sins with the effect of physical cleaning. Few studies also gave the evidence of Macbeth effect. It was, moreover, stated that effects of moral purity can be achieved by physical cleaning. Few studies reported that Macbeth effect may vary from culture to culture; this fact was observed when various researchers tried to replicate the famous study of Zhong and Liljenquist (2006), those researchers could not find the evidence of Macbeth effect. Though few studies which only observed about physical purity as an attainment of moral purity could show a sign of Macbeth effect. Few studies have also indicated about the neural mechanism of Macbeth effect; the immoral deed causing guiltiness to the regions of sensorimotor cortices and the right insula.

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