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RESEARCH ARTICLE

HALAL MEAT: A REVIEW IN THE CONTEXT OF VARIATION IN ISLAMIC JURISPRUDENCE

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ABSTRACT

The Holy Quran is the sole source of inspiration for the definitions of halal and haram foods. Halal refers to what is acceptable and permitted in Islam, whereas haram refers to what is unacceptable and prohibited. Furthermore, Muslims worldwide adopt eight different Schools of Thought(SOT) as reference materials recognized by the International Islamic Fiqh Academy (IIFA) of the Organization of Islamic Cooperation(OIC).The halal food industry is one of the consumer industries with the fastest development in the world, reflecting its increased acceptance by Muslims and non-Muslims. One of the main factors preventing the development of a single, universally accepted halal standard is the various interpretations of Muslim jurists regarding halal animal stunning, slaughtering methods, and other Islamic requirements. This review sought to examine how differences across schools of thought (SOT) prevent the creation of a halal meat standard that is widely accepted.

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INTRODUCTION

Due to the economic advantages associated with trading in halal meats as a result of the growth in the global Muslim population, as well as the spiritual significance of halal meat to Muslim consumers, mainstream food business operators in the industrialized world have been competing for a share of the Halal market (Abdallah *et al*., 2021a). The halal food industry is one of the consumer industries with the fastest development in the world, reflecting its increased acceptance by both Muslims and non-Muslims. The idea of halal meat encompasses a wholesomeness that includes animal welfare, environmental sustainability, safety, social justice, hygiene, sanitation, and Sharia (Sherly and Lestari, 2019; Gregory, 2008). The two primary texts that constitute Islamic law (Sharia), which is explicated and interpreted by Islamic scholars, are the Quran and the Hadith (the sayings of the prophet Mohammed) (Riaz and Chaudry, 2004). The Holy Quran is the sole source of inspiration for the definitions of halal and haram foods. Halal refers to what is acceptable and permitted in Islam, whereas haram refers to what is unacceptable and prohibited (Imran *et al*., 2019). According to a verse from the Quran, prohibited meat is mentioned in Ayah 3 Surah al-Ma'idah (2:173) (Bonne and Verbeke, 2008). In addition, the invocation is also mentioned in the Holy Quran "And why should you not eat of that (meat) on which Allâh's Name has been pronounced" Ayah 119 Surah Al-Anʿām.

Halal meat: Understanding Islamic (Shariah) law from the perspective of different schools of thought (SOT): One of the main factors preventing the development of a single, universally accepted halal standard is the various interpretations of Muslim jurists regarding halal animal slaughter and halal animals (Azam and Abdullah. 2021; Jaswir, 2019; Mahidin *et al*., 2016). Muslims worldwide adopt eight different SOT as reference materials recognized by the International Islamic Fiqh Academy (IIFA) of the OIC (Azam and Abdullah, 2021). The Standards and Metrology Institute for Islamic Countries (SMIIC) halal requirements consider all eight SOT (SMIIC, 20 1 8). However, the Malaysian Standard by the Department of Islamic Development Malaysia (JAKIM) and the Islamic Religious Council of Singapore (MUIS) are completely based on Shafie SOT. On the other hand, the Indonesian Ulema Council (MUI) standard adopts Shafie, Hanbali, Malaki, and Hanafi SOT (Man & Pauzi, 2017).

Invocation: An example of the different interpretations of Muslim jurists regarding halal animal slaughter is invoking Allah's name when slaughtering animals which is fundamental among the obligations recognized by SOT. According to the Hanafi, Hanbali, Maliki, and Shia SOT, this is a requirement for meat to be considered halal; however, for the Shafi SOT, this is not (Imran *et al*., 2019). Similarly, the intention of the person who is slaughtering the animal is required according to three SOT (Hanbali, Maliki, and Shafi). They hold that if an animal is properly slaughtered in accordance with Sharia but the

person's only goal is to kill the animal rather than render its meat halal, the meat will remain haram. However, the remaining schools view it as a privilege rather than a necessity (Imran *et al*., 2019).

Halal-compliant animal restraint and stunning methods: Stunning is the most controversial issue with regard to halal slaughter. The technique of stunning an animal before killing is widespread worldwide. Numerous Muslim nations now recognize the use of stunning as a halal-verified method, which has resulted in numerous animals being stunned for the halal meat market (FSA, 2015). Animals may be killed for religious purposes without being stunned in many countries and organizations. However, from the perspective of animal welfare, it is still highly debatable (Grandin, 2010). The stress of restraint, feeling pain while being slaughtered, or severe suffering while bleeding, such as blood aspiration into the lungs, are all animal welfare concerns during slaughter without stunning (Gregory, 2005; Aghwan, 2016; Velarde *et al*., 2014). Nakyinsige *et al*. (2013) defined stunning as a technical method aimed at making an animal unconscious, with or without killing them at the beginning of the slaughtering process that causes no fear or pain to the animal. Moreover, reducing fear, pain, and discomfort that an animal experience during slaughter is the exact perspective of animal welfare (Bergeaud-Blackler, 2007). Concerns regarding the non-stunned animals also include the suffering they feel as their rate of loss of consciousness increases after killing. Various studies have suggested that false aneurysms at the cardiac and cephalic ends of the carotid arteries were to blame for the prolonged (60 seconds) consciousness of the killed animal. However, when done properly, killed kosher and halal cattle will take an average of 33 seconds to become unconscious, and an animal that is not unconscious at 40 to 60 seconds should be stunned. False aneurysms can develop as soon as 7 to 21 seconds after halal animal slaughter, causing sustained consciousness and inappropriate bleeding out of the animal (Gregory *et al*., 2010; Gregory *et al*., 2012a). Penetrating captive bolt stunning, non-penetrating captive bolt stunning, and electrical stunning are among the main techniques used to stun adult cattle and calves.

Mechanical stunning and halal requirements: For a halal slaughter to take place, the animal must be alive. From a halal perspective, captive bolt (penetrative) stunning is unacceptable since an animal won't recover entirely if slaughter is delayed after such stunning (Gregory, 2007). It is worth noting that in the majority of Western and European countries, the non-penetrating captive bolt stunner is used almost exclusively (Anil *et al*., 2004). Many halal religious authorities recognize non-penetrating captive bolt stunning as the best method for preventing the spread of brain cells, which can lead to bovine spongiform encephalopathy (BSE) and other diseases being transmitted to the meat and equipment (Oliveira *et al*., 2018). But using it with adult cattle is discouraged, and it can only be used for certain types of animals (Collins *et al*., 2020). Electrical stunning, on the other hand, is considered one of the most used methods of stunning since it is affordable, practical for high yields, automated, and humane for the right animals (Gregory, 2007). Head-to-body electrical stunning, which includes head-to-back, head-to-forelegs, or split current electric stunning, and head-only electrical stunning, are the most often utilized techniques (Mian *et al*., 2021). Therefore, guidelines set for animal welfare identified different stunning techniques that suited different animal species and specifies a minimum standard to induce immediate unconsciousness (Bergeaud-Blackler, 2007).

Governments, researchers, animal welfare organizations, and major meat consumers should work to create and implement more compassionate ways of reducing animal pain that is in line with current religious and secular standards for animal killing. This could be accomplished by adopting better animal handling restrainer systems to guarantee better care for all types of animals that will be stunned or slaughtered. An example of this is reported by Velarde *et al*. 2003 who mentioned that no autonomous movements or responses can be seen as a result of any damaging stimulation shortly after a head-only electric stunning. On one hand, many Muslims regard head-only electric stunning as halal as it is morally righteous and secure for both workers and animals (Farouk, 2013; Vogel *et al*., 2011). However, the humanity of electrical stunning remains a concern for many scholars from the perspective of cruelty (Zivotofsky and Strous. 2012). Also, from the perspective of animal welfare, head-only electrical stunning would weaken the welfare implications (Zivotofsky and Strous. 2012). Additionally, electrical stunning, according to some academics, prevents the adequate blood loss that is necessary for halal meat because no blood should be present in halal meat that has been slaughtered. According to studies, total blood loss without stunning is comparable to blood loss caused by pre- or post-stunning techniques (Anil *et al*., 2004; Gomes *et al*., 2009). The study conducted by Khalid *et al*. (2015) compared the blood loss of lambs during halal slaughtering without stunning, electric head-only stunning, and post-cut electric head-only stunning discovered a slight difference in blood loss in the three treatments between 10 and 60 seconds, with slaughtering without stunning having the lowest blood loss compared to the other two types of slaughter. However, after that time, there was no significant difference between the three treatments after an interval of 90 s. New inventions and methods, including stunning, were first used a few centuries after the Quran was revealed. Therefore, in order to determine whether or not a certain invention is halal, Islamic legal authorities must carefully endorse a decision (Fuseini *et al*., 2016).

The location of the incision at halal slaughter according to the different SOT: The trachea, the esophagus, and the two carotid arteries and jugular veins are the four parts of the animal's neck anatomy that deserve the most consideration when it comes to the position of the incision during halal slaughter. Although all SOT agrees that cutting across all four anatomical structures is the best way to slaughter an animal, they have different minimum requirements (Latif *et al*., 2014; MUI, 2020; MUIS, 2017; JAKIM, 2015; Department of Standards Malaysia, 2019). From a scientific viewpoint, animals must be bled as quickly as possible after stunning, ideally while still in the tonic (stiff) phase, to reduce the likelihood of recovery. It is crucial to cut off all main blood vessels. Severing the carotid arteries and jugular veins, or an area near where they emerge (chest sticking), results in a massive flow of blood rapidly when done properly (Canadian Food Inspection Agency, 2019). Furthermore, slaughterers must be skilled in order to rapidly and successfully make a gash cut that severs all the veins and arteries on the first attempt. For the meat to be regarded as halal, the four structures of an animal must be severed before it dies, according to Hanbali and Shia SOT perspectives. On the other hand, the Hanafi school just requires three structures in each given combination. The two jugular veins and the trachea must be totally severed for the Maliki SOT. To perform the Shafi SOT, the two jugular veins and the esophagus must be severed (Imran *et al*., 2019).

In order for the meat to be halal, the Maliki SOT further stipulates that the animal's neck must be severed from the front. The Maliki SOT, in contrast to other schools, maintains that an animal's meat is only considered "haram" if all four of its veins have been severed from the nape (back of the neck) (Imran *et al*., 2019). The animal shouldn't be hoisted until total brain death from lack of blood supply has occurred (FAO. 1991a). This is because incomplete bleeding will negatively affect appearance, acceptability, cleanness, and meat shelf life (Gregory, 2008). In order to maintain blood flow to the brain through the vertebral arteries and delay the loss of consciousness, the incision during the halal slaughter process is made at the ventral part of the neck near the lower jaw and must continue until reaching the spine (Gregory *et al*., 2012a; Gregory *et al*., 2012b). If only one carotid artery is severed, the animal might not die for more than a minute. When the primary blood vessels are cut, animals may suffer fear, pain, and stress up until they become unconscious (Gregory, 2007). Whereas severing both the jugular veins and the carotid arteries in sheep without stunning, loss of consciousness occurs in 14 seconds, it takes 70 seconds when only one jugular vein and one carotid artery are severed. When the jugular vein is cut separately, it takes around 5 minutes for the evoked responsiveness to disappear (Gibson *et al*., 2015).

Newhook and Blackmore (1982) when sheep were killed by severing the carotid artery and jugular vein on one side of the neck, the onset of insensibility was delayed by 29 seconds. To prevent the goats from recovering consciousness before bleeding, the stun-to-neck cut duration should be less than 20 seconds in goats. It is recommended that the neck cut be performed right away upon stunning and that the permissible time restriction is within 12 s for calves and 23 s for cattle (Grandin, 2020).

Position of the animal toward the Qibla direction: In a contemporary abattoir, hanging large animals by their legs and tying them to shackles is a frequent means of restraint. While the animal is hanging or upright, bleeding is carried out. The practical restraint techniques for red-meat animals in a rotational pen and upright restraint system in slaughterhouses is to use V-shaped restraints or straddled conveyors with full or partial inversions (Gregory, 2005). The animals throughout the slaughtering procedure should be laid on their left side, preferably towards the Qibla (Makkah direction in Saudi Arabia), in accordance with traditional Islamic rituals. At the beginning of the incision, the slaughterer and the animal's neck, where the incision takes place, should both face the Qibla (Abdullah *et al*., 2019b).

CONCLUDING REMARKS

Halal refers to what is acceptable and permitted in Islam, whereas haram refers to what is unacceptable and prohibited. One of the main factors preventing the development of a single, universally accepted halal standard is the various interpretations of Muslim jurists regarding halal animals and halal slaughter. New inventions and methods, including stunning, were first used a few centuries after the Quran was revealed; and in order to determine whether or not a certain invention is halal, Islamic legal authorities must carefully endorse a decision. Governments, researchers, animal welfare organizations, and major meat consumers should work together to set up a single, universally recognized Islamic standard for halal meat. They also need to develop and implement more compassionate ways of reducing animal pain and defining a minimum criterion to cause instant unconsciousness that aligns with current religious and secular standards for animal killing.

CONFLICTS OF INTEREST

The author declares that he is not associated with or otherwise engaged in any organization or entity that might have a financial stake in the topics or materials covered in this review such as educational grants, consultation, or any other interests.

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