

Dignity of female pilgrims during tawaf: Revisiting proxemics in the Mataf to prevent any harassment

Usman Maravia

National Director BIMA Ethics team; Member of the Patient and Public Panel for the Northwest Ambulance Service; ESRC Centre for Corpus Approaches to Social Science (CASS), Lancaster University

Correspondence: u.maravia@lancaster.ac.uk

Keywords: *crowd management, mental health, harassment, sexual harassment, women's health*

Abstract

Sexual harassment has a long-term mental and physical impact on its victims, who are overrepresented as females. Increasing reports via social media have highlighted the occurrence of sexual harassment in the Mataf. A major factor that contributes to this problem and allows opportunities for perpetrators is high crowd density. This chapter provides an analysis of traditional approaches to performing tawaf, and jurisprudential matters related to the termination and resuming of tawaf. In light of the comparison between approaches to tawaf, classical and contemporary, limiting the crowd to 3 persons per m² would be safer for pilgrims. Allowing a crowd density of and over 5 persons/ m² is dangerous and makes female pilgrims vulnerable to sexual harassment. More importantly, the Mataf area with its history tracing back to Hajar, has always been a sacred space not only for males but equally for females.

Introduction

Sexual harassment, irrespective of age, race, and income, is a reality that women and girls face on daily basis in cities all around the world [1]. Women are also overrepresented among victims of sexual harassment whether they are alone in transit or among crowds [2]. As such, sexual harassment can be expected not only when women are by themselves but even in public spaces [3] where victims and perpetrators converge [4]. Given this common phenomenon, non-verbal, verbal, and physical sexual harassment [5] can be expected to occur in socially disorganised contexts that are characterised by poor social control [6]. Such unwanted sexual behaviours can severely impact women's ability to participate in public life [7]. Muslim women, on the other hand, could experience harassment on three levels: gender, race, and faith. A haven for Muslim women could be to break

away from the troubles of life and find time to undertake a spiritual journey to Mecca, especially for the Hajj.

Despite the millions of pilgrims who reminisce about their Hajj experience positively, not all women are as fortunate to have enjoyed a fulfilling spiritual experience. A rise in complaints by female pilgrims via social media [8] has revealed female experiences of sexual harassment during Hajj and Umrah. Such complaints could easily be dismissed socially as fake news and media propaganda, and might even be considered by some Muslims to be impossible. Irrespective of whether the incidents can be verified or the perpetrators can be brought to justice, the rise in concerns does warrant attention regarding the Hajj zone having safety procedures. Historically, female pilgrims have been known to be vulnerable; one historical account from the British colonial period reports

female pilgrims from India being onboarded an overcrowded ship only then to be physically examined for ‘medical and sanitation’ purposes by male staff [9]. The Prophet Muhammad (peace be upon him forthrightly) warned the Muslims against various forms of assaults against women. In his Farewell Hajj sermon, he insisted that people treat women with dignity [10]. Echoing this message, Dar al-Ifta Al-Azhar states that ‘sexual harassment is an unjustifiable crime’ [11].

Hidden effects of sexual harassment

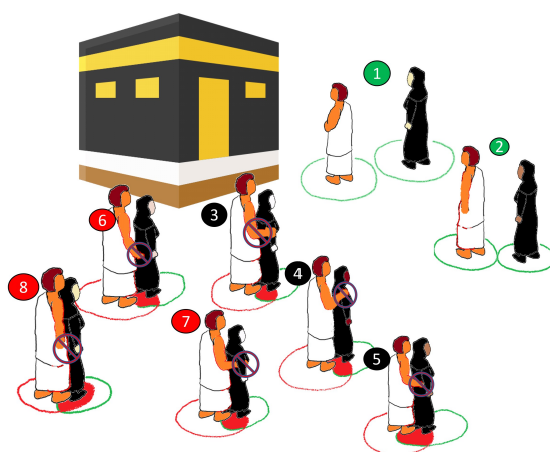
Victims of sexual harassment are likely to experience emotional and physical symptoms long-term possibly extending beyond a decade. The overwhelming experience, or the denial of it, can manifest as physical symptoms such as muscle aches, headaches, and chronic physical health problems with high blood pressure and blood sugar levels. The most common diagnoses for victims of sexual harassment are depression, anxiety, acute stress, and PTSD. For victims who experience sexual abuse earlier in life, symptoms are likely of long-term depression. Previous conditions that might have been controlled or resolved could be exacerbated with yet another experience of sexual abuse. The feelings of shame or guilt that a person might feel when sexually harassed during tawaf^a could devastate their self-esteem and spirituality. Moreover, the victim’s poor mental health can impact their family, friends, and colleagues.

Sexual harassment in a dense Mataf

Zina is a term used in Sharia law to describe a broad spectrum of sexual acts and behaviours that are unacceptable.

The intent behind sexual harassment could either be lustful or to express domination and power. The Prophet foretold that the greatest test for men will be the way they treat women [12]; this test could be interpreted as curbing sexual urges as well as practising restraint from urges of domination and power over females in unlawful ways. The occurrence of sexual harassment is not limited to occurring only in colleges, bars, or the military but can occur anywhere, including in sacred areas like the *Mataf*^b. The Prophet highlighted that Satan is very easily able to influence men’s attitudes and behaviours toward women [13]. On that note, the Quran lists women as the most lusted creation by men [14]. The majority of people committing acts of sexual violence are reported to be men and the majority of people experiencing it are reported to be women [15].

On a spectrum of sexual offences, a perpetrator in the Mataf might find opportunities to carry out a range of acts (see Figure 1 above) that would constitute sexual harassment. The *zina* of the eyes includes leering at female pilgrims; of the heart includes fantasising or blocking their movement; of the tongue includes cat-calling and making unwanted conversation to elicit personal details; of the legs includes stalking; of the hands includes stretching out an arm to prevent passage, non-consensual taking and sharing of photos. More serious forms of sexual offences include the perpetrator grabbing a female pilgrim’s scarf or dress, or her wrist [16] or arm, resting hands on her shoulders, or even touching her hip and waist area [17]. More serious offences could involve touching the thighs, pinching the buttocks [16], groping breasts [16][18] and even pressing one’s genitalia against a female [19] [20] [21]. Moving



Safe tawaf

1. Males and females horizontally distant
2. Males are ahead of males by a safe distance

Inappropriate behaviour

3. Holding a female’s arm
4. Resting hand on a female’s shoulder
5. Touching a female on the hip or waist area

Sexual assault

6. Touching a female’s buttocks
7. Groping a female’s breast
8. Pressing male genitalia against a female

Figure 1. Forms of sexual harassment in the Mataf

away from such graphic descriptions of what constitutes sexual harassment, senior Saudi Arabia Interior Ministry official and spokesman, Maj. Gen. Mansour Al-Turki stated, “The law is clear ... Everyone understands what sexual harassment is. We are all Muslims and have been raised with Islamic values” [22].

Whilst the perpetrator desires such sexual pleasures, to treat an individual in this way, especially without their consent [23] and even more so despite their disapproval, is sexual objectification and antithetical to human dignity. Unwanted sexual experiences involving physical and non-physical contact are all forms of sexual harassment [24]. Such sexual victimisation, ranging from *zina khafi* (minor offences) to *zina haqeeqi* (which includes sexual assault and rape), is prohibited by Shariah law. Moreover, perpetrating these forms of sexual harassment is a direct violation of not only the dignity of females but also a violation against Almighty Allah for misconduct during a sacred time at a sacred place wherein the expectation is that His guests are to be treated with *aman*, meaning safety.

The Qur’an prohibits leering at women [25] whereas the Prophet sternly warned against touching women without their consent. In one Hadith, the Prophet explains that touching a woman without her consent is more severe than one’s head being pierced with an iron nail [26]. The words of the Prophet are stern yet they reiterate the hyperbolic message of Christ (upon whom be peace, forthrightly) who said that better it is for an individual to deliberately lose an eye than to sin with it and resultantly, the entire body is liable for punishment [27]. Christ on another occasion explained that to look at a woman lustfully is adultery of the heart [28]. In the Torah, such lustful coveting constitutes one of the ten commandments [29][30]. As such, unsolicited sexual contact with a female is strictly prohibited in Shariah law, and in the Abrahamic faiths. Moreover, the Quran categorically states that sexual misconduct is intolerable during Hajj [31]; whereby when sexual activity with one’s spouse is prohibited in the state of ihram, sexual victimisation of other pilgrims is much more severe. The merit of ‘returning from Hajj free of sins like the day one was born’ was promised by the Prophet on the condition that pilgrims refrain from sexual misconduct [32].

Radical increase in pilgrim numbers

Mecca is also known as Becca, the etymology of the latter geographical name is given a list of origins: a) They are simply dialects, as the Arabs would phonetically interchange *b* and *m* sounds; b) Bacca is the

area of the Ka’aba whilst Mecca is the city, and c) Becca is from the verb *bacca* to mean people bumping into one another in a crowd [33]. The last explanation might lead to the acceptance of overcrowding and close contact between genders. Additionally, the Qur’an promised and assured Abraham that Allah would inspire multitudes of people from distant places of the world to arrive for the sacred pilgrimage [34]. Naive females who perform tawaf might accept or be led to believe that close contact and ‘accidental’ touching is ‘normal’.

The journey to Mecca and the stay therein, however, is also described as being ‘safe’ [35]. However, safety is perhaps best understood from two dimensions: a) Those on their way to Hajj and who are in the Hajj zone are safe in the sense that they are under the merciful watch of Allah and their sins would be erased; but also b) in terms of practical safety measures, authorities need to take responsibility to safeguard pilgrims.

A comparison of the Prophetic tawaf model compared to tawaf approaches in the 21st century, however, reveals concerning differences to the detriment of female pilgrims.

The reported number of pilgrims in the Prophet’s Farewell Hajj is estimated between 90,000 to 114,000 [36]. According to Al-Mosleh, the pilgrim count for the 1315 AH Hajj (circa 1894) was estimated at 200,000 [37]; suggesting an increase of 75% over 13 centuries.

This calculation also implies that the number of pilgrims increases only slightly with 60-70 pilgrims more than the year before. After 1315 AH, in just 75 years, the pilgrim count exceeded exponentially with a 400% increase with over a million pilgrims by Hajj 1970 CE [37]. The reason for allowing such an incredible influx of pilgrims is mainly due to the overall increase in the human population, and accordingly, the Muslim population; as well as 21st-century breakthroughs in aviation. With the Hajj being an obligation for Muslims once in a lifetime, the desire of millions of Muslims to arrive at Mecca places incredible pressure on the Saudi Ministry of Hajj (henceforth MOH). Muslims’ desire for the Hajj is heightened with many believers viewing the ritual as a convenient means of forgiveness for a lifetime of sins.

Additional pressure from Muslim nations to demand access to Hajj adds pressure on the MOHj; with refusal to allow entry possibly viewed as neglecting the rights of Muslims [38]. Consequently, Saudi Vision 2030 aims to accommodate five million people. A Hajj on that scale

would be 43 times greater than the scale of the Prophet's Hajj.

Ensuring the peace and safety of Muslims

With regards to denying entry for the Hajj, a central theme in the life of the Prophet is his being compelled to leave Mecca and settle in Medina. The Prophet yearned to return to Mecca and even when the Muslims were so close to finally performing the Umrah in 6 AH, the Meccans denied them entry and the Prophet amicably returned to Medina. Resultantly, the Prophet eventually performed his Hajj in 10 AH. Since the conquest of Mecca in 8 AH, Muslims have always valued the freedom to access the Haram as the right of Muslims.

However, the Hajj has been interrupted on many occasions and pilgrims, sometimes even those in Mecca were restricted access to Hajj for different reasons ranging from a) outbreak of epidemics diseases (968 CE, 1831 CE, cholera outbreaks between 1837-1858 CE, and the 2020 coronavirus pandemic); b) economic turmoil (1028 CE), c) conflicts (865 CE and 1256 CE); d) and instability of security (629 CE, 930 CE, 1099 CE, and 1799 CE). A question that arises is - should the MOH prioritise the safety of all pilgrims or allow as many Muslims to fulfil their obligation of Hajj? The Prophet's example demonstrates that he chose the welfare of the pilgrims; rather, he stipulated it as a condition. This being the case, if one does not have safe passage to the Hajj zone or fears their safety in the Hajj zone then such individuals have no obligation to perform the Hajj in that year. In the event of Hudebiya in 6 AH, the Prophet sensibly cancels his plans for Umrah due to favouring a peace treaty and calls for the Muslims to safely return to Medina. Consequently, some Muslims who died shortly after never found the opportunity to perform Hajj or Umrah. Nevertheless, peace and safety were the Prophet's choice rather than compelling Muslims to perform pilgrimage in danger. Such decisions are also in agreeance with Quranic guidelines of performing pilgrimage only when doing so would be safe [35].

Spatial considerations

The Prophet eventually performed the Hajj in 10 AH. Despite there not being a crowd limit, Muslims who were physically or mentally unwell to attend the Hajj themselves were excused. These individuals were given the option to either make Hajj arrangements for another time or delegate the Hajj to be performed by someone else on their behalf [39].

Furthermore, the Prophet allowed pilgrims flexibility to perform the rituals of Hajj in different order especially to avoid crowding. For a compendium of rulings and dispensations in Hajj due to crowding, see Al-Mosleh's work 'Al-Zahaam wa atharuhu fi'n nusuk' (Crowding and its impact on the provisions of Hajj and Umrah) [37].

A key location in Hajj and one which has the smallest surface area is the Mataf. Traditionally, the Mataf was considered to be the area between the walls of the Kabah (inclusive of the Hatim) up to the Maqam Ibrahim. The area beyond the Maqam was reserved for those engaged in salah. As such, upon completion of the tawaf, pilgrims would exit the Mataf and perform prayers beyond the Maqam. In the Farewell Hajj, between the 10th and the 13th of Dhul Hijjah, an estimated 114,000 pilgrims completed their tawaf; on average, an estimated 29,000 pilgrims would have been able to do the tawaf per day; with tawafs performed every 20-30 mins, the Mataf would have accommodated, at one moment, an estimated 600 pilgrims. The crowd density in the mataf could be estimated at two persons/ m² (see also Figure 3, image 2); this density would also have allowed pilgrims to perform *raml* (quick-paced walking) safely. To separate those performing the tawaf from other visitors, the Mataf was fenced. Pilgrims intending to perform the tawaf were allowed access through the Bani Shayba gate. Accordingly, the amount of people that performed the Hajj with the Prophet appears to be in proportion to the Mataf capacity.

In Shia hadith literature, Imam Ja'far al-Sadiq is reported to have said that performing the tawaf beyond the Maqam is unacceptable [40]. In another narration, the Imam qualifies this statement for those who do so without a valid reason [41]. As such, both Sunni and Shia Muslims agree that performing the tawaf beyond the Maqam is permitted due to necessity. However, today the Mataf area itself has been expanded beyond the Maqam by approximately 50 metres. Consequently, what was once tolerated as a necessity has today become the norm. Because of such expansions - and by comparison to the small scale of pilgrims in the Prophet's Hajj - more questions arise today:

1. Should the aim of those authorised with supervising the Hajj aim to limit the number of pilgrims according to the original Mataf capacity?

2. Should the Mataf be expanded according to the increasing demand of a greater number of pilgrims?

Evidently, for 13 centuries, this question did not demand such attention as much as in the 21st century.

The argument in favour of expansion is rooted in the Quranic verse ‘Allah wishes ease for you and does not wish hardship’ [42][43][44][45]. On the one hand, Muslim scholars argue that God wishing ease implies that the Mataf area can be extended to allow for more pilgrims. However, the former Dean of the Shariah College at Najran University Abid Sufyani observed that many pilgrims who save money their whole lives to perform the Hajj are unable to perform the tawaf [46]. Sufyani criticises this phenomenon as an ‘injustice’ toward pilgrims. If on the other hand, the Mataf area is geographically restricted, then based on the fact that not all pilgrims would physically be able to perform the obligatory Hajj tawaf within a reasonable time, many Muslims would be excused from attending and performing the Hajj. Where individuals face difficulties to adhere to Sharia law, *rukhsa* (exclusive dispensation) is offered whereas where large populations are affected such as when the Hajj ceased in the past due to various crises then they are granted general *taysir*, meaning general exemption [37]. Whereas the former interpretation implies a greater degree of obligation to perform the Hajj, the latter emphasises a Hajj that is safe and dignified.

Another related matter that arises is how many people should be permitted in the Mataf. Is the aim of expanding the Mataf to allow more pilgrims to perform tawaf or to allow them to perform tawaf with ease? Continuous expansion of the Mataf with increasing crowd density means more and more pilgrims are performing tawaf with increasing difficulty; which is contrary to the idea of ‘ease’ and instead creates ‘hardship’. An inevitable hardship that arises in large dense crowds is losing personal safe space. Crowded in arms reach of one another from all sides allows for much inappropriate physical contact. Despite the short Mataf space in the Prophet’s time and a relatively much smaller number of pilgrims, the Prophet was very much aware and observant of unwelcome behaviour. Two types of unwelcome behaviours that are condemned in hadith literature include a) aggressive behaviours (such as pushing by hand or with the shoulder, nudging, and pushing between pilgrims to get ahead) and b) non-consensual sexual contact.

The Prophet is reported to have cautioned Umar ibn al-Khattab to not push against the crowd, especially near the black stone [47]; thereby physically and mentally affecting weaker pilgrims. The Prophet advised that the black stone should be kissed only if it is safe for the individual without harming anyone in the process. The alternative to kissing, and the option which the Prophet

himself preferred in his Hajj was *istilam*, meaning to simply gesture a kiss [48]. The reason for the Prophet avoiding kissing the stone is believed to be that he did not want to encourage the masses to compete against one another [35]. With regard to aggressive behaviour, to overlook, monitor and control the behaviour of pilgrims at the stoning ritual, the Prophet did so by mounting a camel. On one occasion, when he noticed pilgrims carrying larger stones, he immediately called out, ‘People! Beware of murder, use tiny stones!’ [49]

With regards to women in crowds, the Prophet’s wife Sauda was weary of proceeding from Muzdalifa to Mecca due to the large crowd. Likewise, his wife Umm Salama also raised concerns about the Mataf being crowded by men. The former was advised to leave Muzdalifa ahead of the male pilgrims whereas the latter was instructed to perform the tawaf on a camel away from the male pilgrims. Furthermore, although men and women did perform tawaf at the same time in the Mataf, each gender had its own designated space [50].

Men are described as being closer to the Kabah performing shorter tawafs whilst the women performed longer tawafs closer to the Maqam.

Whilst such organisation might initially appear unfair, a few reasons need to be considered:

1. During congregational prayers also, the women had their designated prayer area behind the males to allow them convenient exit after prayer before the males [51].
2. With females closer to the Bani Shayba gate, they could easily exit the Mataf area.
3. If the women are closer to the Kabah and then move toward the outer circle, they would have to rely on the men to allow them passage [52].
4. With more female pilgrims, they would require greater surface area allocated to them, hence the further away from the Kabah, the greater the space [50].
5. Weaker pilgrims relied on being carried by people or by mounting camels; such provisions require more space and so these services were accommodated on the outer circles closer to the Maqam [52].
6. The segregation of males and females in the Mataf would also have prevented crowding and pushing into one another [53].

The Umayyad ruler Ibn Hisham (d. 743) declared that men and women were no longer permitted to perform tawaf at the same time; this policy led to a discussion as to the way tawaf was managed during the time of the Prophet. In a discussion between Ata bin Abi Rabah and Aisha, the latter clarifies that even in the Prophet’s time the men and women did not perform tawaf in mixed

crowds; the segregation was not in terms of time but space i.e. during the Prophet's time, males and females did perform tawaf at the same time but spatially away from each other [54]. During the reign of Umar ibn al-Khattab, he ensured that during tawaf, men did not invade the female crowd [55].

Even in pre-Islamic Arabia, the men did tawaf in daylight and the women did so under the cover of darkness [56]. Al-Mosleh writes that the manner in which men and women push against each other in the crowd nowadays cannot be endorsed in Shariah law [37]. Lebanese Imam, Sheikh Hasan Al-Shall also stated that men must refrain from crowding around women because it is a severe violation; the sanctity of the Haram and the laws of Almighty Allah must be upheld if one hopes for an accepted Hajj [57]. The sanctity of the Haram demands that if an individual enters it to remain safe from wild beasts then they must be permitted entry and kept safe [58]. By contrast, a female pilgrim seeking closeness to Allah through tawaf deserves the utmost respect and dignity.

The discussion around whether or not tawaf is permitted beyond the Maqam becomes obsolete given the fact that the present design of the Mataf constitutes the entirety of the Haram courtyard. Some groups of pilgrims, mostly women and wheelchair users, perform their tawaf on a circular ramp elevated from the ground and yet more pilgrims perform the tawaf beyond even the courtyard on three levels. The design of al-Masjid al-Haram in the 21st century leaves readers with a sense of surrealism when compared to the way the masjid appeared in the past 13 centuries. Nevertheless, the manner in which the earlier tawaf was conducted must be considered for the lessons it can provide concerning the protection of female pilgrims. Importantly, the Mataf, as previously discussed, consisted of a shorter space that was supervised by the Prophet whilst mounting a camel. This approach allowed the Prophet to effectively manage the crowd as well as to observe and prevent any misconduct. Equally, the pilgrims would also have felt safer under the Prophet's supervision.

Another difference to note in the modern design of the Haram is that males are seen occupying not only the original Mataf area but up to a radius of approximately 30 metres. In contrast to earlier times, female pilgrims today find themselves performing the tawaf at much greater distances from the original Mataf and that too by walking.

The major schools of Islamic jurisprudence agree that wudhu in tawaf is needed for a minimum of the first three

and a half rounds. The Maliki and Hanbali schools assert that the termination of wudhu results in the tawaf being nullified. The Jafari, Hanafi, and Shafi schools, however, agree that the tawaf remains pending. If one's wudhu is terminated after the first three and a half rounds then according to the Maliki and Hanbali schools, fresh wudhu is necessary. The Jafari and Hanafi schools, however, agree that having done half of the tawaf, if one's wudhu is terminated, there is no such requirement. When Sheikh Ibn Uthaymeen was asked about the need to perform wudhu in these circumstances, his response was "How long would it take people to exit the courtyard? How long would they then need to wait because the toilets are occupied? How long after that to find water? How long after that to return to the courtyard?" Given the extreme difficulty, Ibn Uthaymeen concludes that 'therefore, when a person's wudhu is terminated in tawaf, especially in these 'dire times', continuing the tawaf would be acceptable' [60].

As for resuming the tawaf, the Jafari, Hanafi, and Shafi schools agree that when resuming tawaf, one may continue from the same last location. Another similar scenario arises when a pilgrim requires a rest break or feels the need to exit an increasingly dense crowd. In such cases, based on above mentioned principles, according to the Jafari and Hanafi schools, one may simply pause their tawaf and resume from the same location once they are ready to continue with the tawaf [37].

Approaches to tawaf in a mixed crowd

Because female pilgrims are likely to want to avoid undertaking such long lapses, they are likely to get closer to the Kabah by infiltrating the male crowd. Seeing a less dense crowd in the Mataf, the motivation for getting closer could also include additional factors such as a) saving time, b) the belief that the closer the tawaf to the Kabah, the greater the reward, or c) wanting to perform the tawaf with family and fellow pilgrims. Compared to previous centuries, such scenarios have led to a change in the way tawaf is performed in modern times. Classical sources discuss males and females performing tawaf separately. In modern times, female pilgrims are seen to infiltrate male crowds in various ways:

1. by being shielded by their husbands or family members
2. by creating a large cell with a male wall with females inside the cell (Photo A)
3. by creating a large cell with a female wall with females inside the cell
4. by joining in as small groups of females or even individually.

Location	Distance from the Kabah centre (radius in metres)	Distance of one lapse (circumference in m)	Tawaf distance (in metres)	Tawaf distance (in miles)	Tawaf distance (in km)
Close to the Kabah	11-18	70-113	791	0.5	0.8
Closer to the Maqam	18-25	113-157	1099	0.7	1.1
Beyond the Maqam	25-32	157-201	1407	0.9	1.4
Two-thirds closer to the Kabah	32-39	201-245	1715	1.1	1.7
Two-thirds away from the Kabah	39-46	245-289	2023	1.3	2.0
Outer circles of the courtyard	46-53	289-333	2331	1.4	2.3
Closer to the edge of the courtyard	53-60	333-376	2632	1.6	2.6
Beyond the courtyard	60-67	376-420	2940	1.8	2.9

Table 1. Estimated tawaf distances in relation to the Kabah



Figure 2. Cell with male wall and females within [61]

Although taking approaches III and IV appear safe in less dense crowds, crowd management in Hajj times does not have the most admirable reputation. What might appear to be a moving crowd with a density of 2 people/m² (Figure 3, Image 2) can appear appealing to female pilgrims to get closer to the Kabah to kiss the Black Stone, supplicate at the Multazam, or touch the kiswa [59][62].

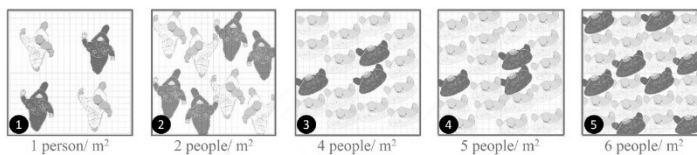


Figure 3. Crowd density per square metre (Adaptation of Still, 2011) [63]

However, during the course of performing tawaf, there is a risk that crowd density will increase. Concerns arise then with approach IV, especially in a highly dense crowd. For instance, 4 people/m² (Figure 3, image 3) is considered close together yet this is safe when the crowd is static. This level of density is similar to people queuing in the UK or in the US [64]. The Haram, however, is reported to have a large influx of 28,000 pilgrims leading to a crowd density of 4 people/m². At 5 people/m², physical contact between people is unavoidable and

instead of walking, the crowd would be shuffling; rather aerial images of the crowd would show it as static. Such density is not advised for a moving crowd because it would lead to unsafe pushing and shoving. During peak times in Ramadan and Hajj, a moving crowd of 40,000 pilgrims in the Haram courtyard can lead to a crowd density of 6 people/m². This high level of density is considered dangerous, especially because not only would female pilgrims be unable to maintain personal distance from men, but the latter would also enter the females' intimate space [65] (see Figure 4 below). Male and female pilgrims are most likely to make physical contact. Moreover, being unable to keep a wider stance, pilgrims can easily trip. In worst cases, pilgrims can lose autonomous movement and instead be pushed involuntarily by the crowd.

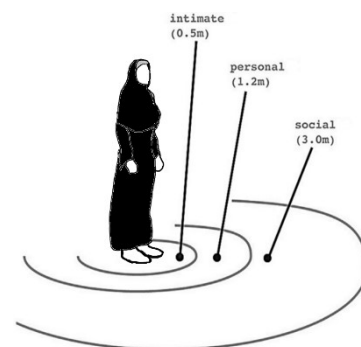


Figure 4. Distances (Adapted from Alghamdi et al.) [66]

Such scenarios can create many difficulties, especially for female pilgrims. If they are about to fall, they might find a male pilgrim grabbing them with the intent to save them from tripping; or even holding onto them with the intent to 'prevent' females from falling. Some males might hold on to females to support themselves. In extremely dense crowd situations, where intimate space is lost, the chances of sexual misconduct also increase.

Some male pilgrims might seek an opportunity to target specific female pilgrims through stalking. As the crowd density increases, difficulty arises to view the visibility of hand movements. With pilgrims unable to see who is behind them or turn around to see, female pilgrims in such positions are at increased risk of sexual victimisation.



Figure 5: female-centric tawaf from Hajj 2020 [67]- [68]

One seemingly unprecedented approach was implemented in Hajj 2020 during the coronavirus pandemic period (see Figure 5 above). This approach involves pilgrims maintaining a distance of approximately 2m apart. This distance also means that the crowd density is reduced to one person/ m² and is very safe. Moreover, females are seen performing the shortest tawafs closest to the Kaaba whilst the males performed the longest tawafs on the outer circles. Whilst this approach was possible due to the restrictions during the pandemic, alternative solutions for regular peak times

involve seven inward and outward spiralling designs to a) direct traffic with a one-way system, b) overcome the problem of pilgrims losing count of tawaf rounds, but importantly, c) maintain better ingress and egress control [69][70].

Challenging sexist attitudes and beliefs

Various pyramids have been developed to illustrate foundational attitudes and beliefs that can contribute to sexual violence and allow it to continue. The pyramid of sexual harassment against female pilgrims (Figure 6 below) is adapted from existing pyramids of sexual violence developed by anti-sexual violence educators [71][72].

The pyramid illustrates possible underlying factors that lead to sexual harassment against female pilgrims in the Mataf. The initial reaction to hearing such incidents taking place in the haram can create reactions of disbelief and anger. Individual acts of prejudice could involve considering the victim to be the cause of the problem; by making comments such as ‘it’s her fault for doing tawaf among men’ or ‘maybe she wanted the attention’. Cultural micro-aggressions could involve Muslims defending the perpetrator by saying ‘boys will be boys’ or ‘women should do tawaf far away from the men’. The greater problem, however, is that such sexual harassment is rooted in power and entitlement.

By advancing inappropriate non-consensual sexual contact, the perpetrator is acting in their own interest and disregarding the needs and boundaries of females and their autonomy. The Quran warns ‘Do not even go near zina’. From an Islamic viewpoint, therefore, the perpetrator is guilty of disregarding the boundaries set even by Almighty Allah. The perpetrator’s audacity to cross these boundaries reveals certain attitudes and beliefs whereby they feel a sense of privilege to dehumanise or devalue females. The poor crowd control in Hajj times, despite viral complaints on social media, could arguably be a symptom of a much deeper-rooted ideology which involves racism, sexism, and sectarianism. Therefore, to treat the symptoms at the top of the pyramid, the foundation needs to be challenged and problems uprooted.

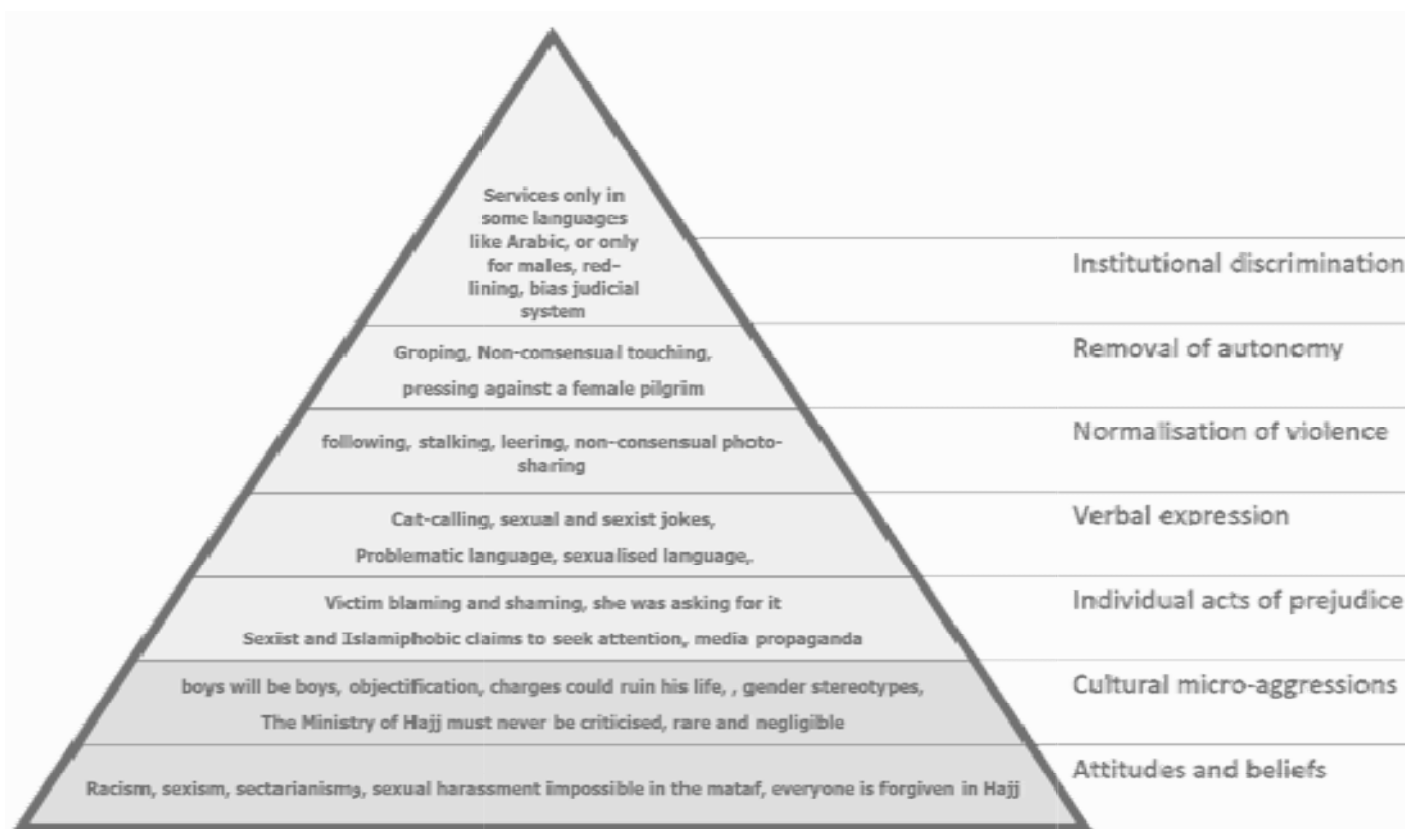


Figure 6. Pyramid of sexual harassment against female pilgrims

Recommendations

Sexual harassment needs to be tackled first and foremost by addressing the root of the problem - sexist attitudes, beliefs and institutionalised patriarchy. Action needs to be taken not only by the MOH but by Muslims and faith leaders collectively worldwide. Hajj operators also need to prioritise areas of training required for pilgrim safety.

Faith leaders

Sexual harassment needs to be challenged by faith leaders explicitly and more frequently. Faith leaders are known to regularly remind males to lower their gazes, avoid unnecessary intermingling, and engage in pre-marital and extra-marital affairs. Such preaching helps to prevent sexual harassment, however, actual cases of sexual harassment also need to be condemned. Calling out sexual harassment must not be conflated with a poor representation of the faith. Rather, faith demands that sexual harassment is acknowledged and dealt with i.e. strong faith demands one to take care of one another by condemning instances of sexual harassment. To raise awareness of this issue, faith leaders could also verbally include victims of sexual harassment in their

congregational supplications. Moreover, faith leaders need to also be mindful of their choice of words and phrases in their lectures for the way they represent women. Islam teaches that males and females have equal status before God and each individual excels only by piety. The purpose of women in society, therefore, should not be limited in discussions to only marriage purposes, but to their greater role and contributions to the world – like when mention is made of luminaries (upon whom be peace) such as Maryam, Khadija, and Fatima al-Zahra.

Sexist jokes or over-focussing on narratives about women's inabilities, and shortcomings, and undermining their contributions to society only contributes to the problem of sexual harassment. As such, congregations need to challenge such sexist linguistic representations. In the changing landscape of the 21st century, Imams continue to lecture from pulpits, however, the voice of a female victim via social media is likely to have greater national, if not worldwide, influence.

Ministry of Hajj and security personnel

Addressing sexist attitudes must also be reiterated by the MOH. Before Hajj commences, the largest crowds of

pilgrims before are in the Haramain. The Imams of both mosques can emphasise the importance of treating female pilgrims with respect and dignity. Sermons during the Hajj season, including the Arafah sermon, can also be addressed directly to authorities responsible for crowd control and emphasise the fact that poor control could result not only in physical casualties but could also allow opportunities for sexual harassment.

Furthermore, easy-to-comprehend and follow policies for pilgrims need to be made transparent. The reporting process needs to allow victims to be able to voice their concerns in common languages to female staff. The process must also include policies on ways to report incidents of sexual harassment if perpetrated by male security officers. The MOH must also consider the possibility that black women are likely to be more hesitant to report their experiences out of fear that they will be ignored or treated unfairly. A clear process is crucial so that victims can avoid resorting to gossip or social media, which is likely to compromise formal investigations. Victims of sexual health should seek the professional help of a therapist as a first step. Posting personal experiences of sexual harassment online could result in negative reactions from other users, which would only add to the victim's trauma [73]. Additionally, female pilgrims travel to the Hajj zone from various parts of the world and expect to be treated with respect for their gender not only at airport customs but with even greater dignity in the Haram.

Strict crowd control and surveillance must be upheld by authorities. Trained male and female security personnel must be present and strategically located around the Mataf ideally on higher platforms. Occasions, when sexual harassment is highly likely, are when the crowd is dense. Enforced legislation is known to limit the range of sexual crimes [5]. Accordingly, the Mataf crowd control needs to be a matter of legislation endorsed by the criminal justice system, which in the case of negligence, would hold the crowd management team legally responsible. Perhaps, the legal limit for a moving crowd ought to be no more than 3 people/ m² for mixed crowds so that safe space is maintained between pilgrims and hand movements can be detected by surveillance cameras and security officers. Should the crowd density increase to 5 people/ m², inquiries need to be made to investigate reasons why the crowd management team was unable to maintain control. Additionally, better ingress and egress models that consider physiological, psychological and sociological aspects of human actions are required to produce simulations of crowd scenarios that are more realistic [59].

To limit opposing currents during the Mataf, the Zuhr and Asr prayers could be combined and likewise, the Maghrib and Esha prayers. This approach would allow pilgrims to continue tawaf in a one-directional current without additional visitors entering the Mataf waiting for congregational prayers. Moreover, the majority of the pilgrims are travellers, hence, greater the validity for combining prayers. Pilgrims who are unable to maintain their wudhu after 3. 5 rounds would also be able to complete their tawaf without the pressure of performing wudhu for congregational prayers.

Hajj operators

A key role that Hajj operators can play is to educate their groups by providing training on safety for female pilgrims. The training could involve the importance of treating female pilgrims with respect and dignity; addressing sexist attitudes; explaining appropriate conduct in a crowded setting, and providing steps to report sexual harassment. Before and after performing tawaf and after similar crowded occasions, Hajj operators must also pay careful attention to changes in the behaviour of female pilgrims. Some victims struggle to report their experiences after experiencing complex emotions after a traumatic event. Hajj operators must prioritise the maqasid al-Shariah (objectives of the law) which includes respecting human dignity.

Early Islamic sources highlight that following the massacre at Karbala, one pilgrim asked Ibn Umar about a judicial ruling related to mosquito blood. Ibn Umar retorted, 'The man asks me about mosquito blood after they took the life of the Prophet's grandson!' [74] The lesson for Hajj operators to learn from this encounter is that one might be tempted to over-focus on minor rulings and lose sight of the great importance that Islam places on the dignity and sanctity of human life. The same Ibn Umar narrated that he once saw the Prophet performing the tawaf saying to the Kabah:

مَا أَطْيَبَكَ وَأَطْيَبَ رِيحِكَ مَا أَعْظَمَكَ وَأَعْظَمَ حُرْمَتَكَ وَالَّذِي نَفْسُ مُحَمَّدٍ بِيَدِهِ
لِحُرْمَةِ الْمُؤْمِنِ أَعْظَمُ عِنْدَ اللَّهِ حُرْمَةً مِنْكَ

"How pure you are and how sweet is your fragrance! How sacred you are and how great is your sanctity. But I swear by He who has authority over my soul, for Allah, greater than your sanctity is the sanctity of a believer [75].

Female pilgrims

Pilgrims, male and female, intending to perform the tawaf are strongly advised to not go alone. Upon

reaching the Mataf, pilgrims should have awareness of the locations of security officers. The outermost circle of pilgrims performing the tawaf is the safest route because of its lesser density and better flow of movement.

Upon completing the tawaf, the outermost circle also allows for a convenient exit. Although a less dense crowd can be tempting to move closer to the Kabah, pilgrims need to be observant of any increase in crowd density by having spatial awareness.

As more people join the Mataf during one's tawaf, crowd density is likely to increase. Upon noticing an increase in crowd density, pilgrims are advised to start moving further toward the outer circle. If a pilgrim experiences sexual harassment, they should call out the action as well as report their experience according to policy. Sexual victimisation can also be a stigmatised experience [76][77], however, keeping such traumatising experiences a secret would be toxic to physical and mental health as well as social and spiritual health.

Conclusion

Whilst the sacred time and place of Hajj serve as reminders of being more God-conscious, hajj authorities need to ensure that pilgrims are not left vulnerable. Female pilgrims performing tawaf, especially for the first time, are not only likely to be in awe of the majestic atmosphere of the Haram but are also likely to be overwhelmed by the dense crowd. Resultantly, seeing a less dense crowd might encourage female pilgrims to gain closeness to the Kabah as well as wanting to complete their rituals following their understanding of Islamic jurisprudence.

Perhaps, the unexpected scenario for female pilgrims is when authorities allow a large influx of people to enter the Mataf in exponential numbers resulting in a dense crowd that is dangerously shuffling. Trapped among men, female pilgrims are left vulnerable to sexual harassment. Along with provisions for males and females, Mataf designs also need to consider intersex pilgrims.

The harms of sexual harassment must not be underestimated as it can have detrimental long-term effects on the victim's mental and physical health. A clear action plan needs to be created and enforced by the MOH to provide safety to all pilgrims, especially to the female pilgrims in the Mataf. Reports and symptoms must not be dismissed as victims 'over-reacting' or being 'dramatic'. Pilgrims must bear in mind, that other

pilgrims might already have underlying health conditions that they are aiming to spiritually overcome. Sexual harassment can exacerbate those conditions. Should a female pilgrim report sexual harassment, a fair and just policy needs to be in place so that the crime can be reported. A moving crowd density of 5 people/ m² needs to be met with legal inquiries.

Revisiting early models of the Mataf and approaches to tawaf could help to refute sexist attitudes. Although historical accounts depict the ritual whereby male pilgrims performed tawaf closer to the Ka'bah and females did so around the men, the same argument in the context of today's Mataf practices would be a misapplication. The maximum number of pilgrims needs to be limited to an amount that the MOH can effectively handle. Sexist attitudes and institutionalised patriarchy need to be addressed by Muslims worldwide through the lens of respect and human dignity toward female pilgrims.

Notes

- 1 *Tawaf is one of the essential acts of Hajj, which consists of walking seven lapses around the Kaba.*
- 2 *The Mataf is the area wherein pilgrims perform the tawaf.*

References

- [1] Ceccato, V., Näsman, P. and Langefors, L. Sexual violence on the move: An assessment of Youth's victimization in public transportation. *Women & Criminal Justice*. 2021, 31(4), 294-312.
- [2] Ceccato, V., Li, G. and Haining, R. The ecology of outdoor rape: The case of Stockholm, Sweden. *European Journal of Criminology*. 2019, 16(2), 210-36.
- [3] Ceccato, V. The nature of rape places. *Journal of environmental psychology*. 2014, 40, 97-107.
- [4] Brantingham, P. and Brantingham, P. Criminality of place: Crime generators and crime attractors. *European Journal on Criminal Policy and Research*. 1995. 3(3), 5–26.
- [5] Ceccato, V., & Loukaitou-Sideris, A. (2020). *Transit crime and sexual violence in cities: International evidence and prevention*. London: Routledge.

- [6] Kelling, G.L. and Wilson, J.Q. Broken windows. *Atlantic monthly*. 1982. 249(3),29-38.
- [7] UN-Habitat, T.S.C.P. (2019). Safer cities programme. Activities of the United Nations human settlements programme draft United Nations system-wide guidelines on safer cities and human settlement. United Nations-Habitat, Safe cities programme, Nairobi.
- [8] Daghestani, S. Groped by Holy Mosque guard during Hajj' in Mecca [Internet]; 2018, Feb 24 [cited 2023, Apr 15]. Available from: <https://www.bbc.co.uk/news/av/world-middle-east-43174322>
- [9] Slight, J. The Hajj and Europe in the Age of Empire. In: Umar R. (ed.). *The Hajj in the Age of Empire*. Brill; 2017, pp. 81-111.
- [10] Al-Tirmidhi, M. I. *Sunan al-Tirmidhi; Abwad ar-radha'a; Bab ma ja'a fi haqq al-mar'a ala zawjiha, #1163*. Beirut, Lebanon: Dar al-Gharb al-Islami; 1998.
- [11] Allam, S. Taharrash bee ajouz athna at-tawaf fi'l Haram al-makki [Internet]; 2020, Jul 8 [cited 2023, Apr 15]. Available from: <https://raseef22.net/article/1078965-تحرش-بي-عجوز-أثناء-الطواف-في-الحرم-المكي>
- [12] Al-Bukhari, M. I. *Sahih al-Bukhari; Kitab an'nikah; Bab ma yuttawa min shu'm al-mar'a*. Beirut, Lebanon: Dar Tauq al-Naja; 2001.
- [13] Hanbal, A. *Musnad Ahmad bin Hanbal; Awwalu musnad Umar bin al-Khattab*. Cairo, Egypt: Darel Hadith; 1995.
- [14] Abu Nasr, M.A. *Al-ikhtilat asl ash-sharr fi dimar al-umam wa'l usr*. Sanaa, Yemen: Dar al-Athar; 2009.
- [15] Benoit, C., Shumka, L., Philips, R., Kennedy, M. C., Belle-Siel, L. (2015, December). Issue brief: Sexual violence against women in Canada. *Status of Women Canada* [Internet]; 2015 Dec [cited 2023, Apr 15]. Available from: <https://cfc-swc.gc.ca/svawc-vcsc/index-en.html>
- [16] Asian Image. I was groped and sexually harassed whilst on the Hajj [Internet]; 2017, Dec 7 [cited 2023, Apr 15]. Available from: <https://www.asianimage.co.uk/news/15708270.i-was-groped-and-sexually-harassed-whilst-on-the-Hajj/>
- [17] Buchanan, R.T. These Women Are Sharing Stories Of Being Sexually Harassed During Pilgrimage In Saudi Arabia [Internet]; 2018, Feb 7 [cited 2023, Apr 15]. Available from: <https://www.buzzfeed.com/rosebuchanan/muslim-women-are-speak-out-about-being-sexually-harassed>
- [18] Eltahawy, M. Opinion #MosqueMeToo: What happened when I was sexually assaulted during the hajj [Internet]; 2018, Feb 15 [cited 2023, Apr 15]. Available from: <https://www.washingtonpost.com/news/global-opinions/wp/2018/02/15/mosquemetoo-what-happened-when-i-was-sexually-assaulted-during-the-Hajj/>
- [19] Barron, L. With #MosqueMeToo, Muslim women are speaking out about abuse [Internet]; 2018, Feb 15 [cited 2023, Apr 15]. Available from: <https://time.com/5159888/mosquemetoo-muslim-women-speaking-out-about-abuse/>
- [20] Ibrahim, A. Muslim women speak out about sexual assault in Mecca [Internet]; 2018, Feb 14 [cited 2023, Apr 15]. Available from: <https://www.middleeasteye.net/news/muslim-women-speak-out-about-sexual-assault-mecca>
- [21] Nasreen, T. Women reveal the sexual harassment they face even on Haj [Internet]; 2018, Mar 20 [cited 2023, Apr 15]. Available from: <https://theprint.in/opinion/women-reveal-sexual-harassment-face-even-haj/43222/>
- [22] Nugali, N. 'Justice for all': How Saudi Arabia's sexual harassment law will work [Internet]; 2018, Jun 3 [cited 2023, Apr 15]. Available from: <https://www.arabnews.com/node/1314546/saudi-arabia>
- [23] Hanbal, A. *Musnad Ahmad bin Hanbal; Musnad Abi Huraira*. Cairo, Egypt: Darel Hadith; 1995.
- [24] S.N. Canan, M.A. Levand A feminist perspective on sexual assault. In: William, T. O'D. and Paul, A.S (eds.). *Handbook of sexual assault and sexual assault prevention*. Cham, Switzerland: Springer Publishing; 2019. pp. 3-16.
- [25] The Holy Qur'an, chapter 24: verses 30-31
- [26] Al-Tabarani, S. A. *Al-Mu'jam al-Kabeer; Bab al-meem; Abul alaa Yazeed bin Abdullah bin ash'Shakheer an Ma'qal bin Yasaar*. Mosul, Iraq: Dar Amman. Maktaba al-Ulum wal Hikam; 1983.

- [27] The Gospel of Matthew: Chapter 5, verse 29.
- [28] The Gospel of Matthew: Chapter 5, verse 21-22, 27-28.
- [29] Exodus: Chapter 20, verse 17.
- [30] Deuteronomy: Chapter 5, verse 21.
- [31] The Holy Qur'an, chapter 2: verse 197.
- [32] Al-Bukhari, M. I. Sahih al-Bukhari; Kitab al-Hajj; Bab fadh al-Hajj al-mabrou. Beirut, Lebanon: Dar Tauq al-Naja; 2001.
- [33] Al-Tabari, M.J. Jami'al Bayaan fi Ta'weel al-Qur'an; 3:96. Beirut, Lebanon: Mu'assasat al-Risele; 2000.
- [34] The Holy Qur'an, chapter 22: verse 27
- [35] The Holy Qur'an, chapter 3: verse 97.
- [36] Al-Zurqani, M.A. Sharh al-Zuraqni alal mawahid al-ladunniyya bi'l manh al-Muhammadiyya; Hajjat al-wadaa'. Dar al-Kutub al-Ilmiyya; 1996.
- [37] Al-Mosleh, K.A. Az-ziham wa atharuhu fi ahkam an-nusuk al-hajj wa'l umrah. Journal of Arabic Studies. 2021, 5(1428).
- [38] The Holy Qur'an, chapter 22: verse 25.
- [39] Al-Isbanahi, M.A. Al-Muatta. Kitab al-Hajj; Hajjat al-wadaa'; al-hajj anman yahujj anh. Abu Dhabi, UAE: Zayed Charitable & Humanitarian Foundation; 2004.
- [40] Al-Kulayni. Al-Kafi; Kitab al-Hajj; Bab hadd mawdhi' at'tawaf, #17558. Tehran, Iran: Dar al-Kutub al-Islamiyya; 1942.
- [41] Al-Sadouq, M. Man la yahdhuru'li faqeeh. Bab ma ja'a fi't tawaf khalf al-maqam. Qom, Iran: Mu'assasat al-nashr al-Islami al-tabii'a li-jama'at al-mudarriseen bi-qum al-muqaddasa; 1992.
- [42] The Holy Qur'an, chapter 2: verse 185.
- [43] The Holy Qur'an, chapter 4: verse 28.
- [44] The Holy Qur'an, chapter 5: verse 6.
- [45] The Holy Qur'an, chapter 22: verse 78.
- [46] Al-Hakeem, N.T. Tawsi'a sahn at-tawaaf dharura shar'iyya tusaniduha'l fatawa .. Al-ulama yutalibun bi'l huloul al-handasiyya [Internet]; 2009, Dec 23 [cited 2023, Apr 15]. Available from: <https://www.okaz.com.sa/article/305531>
- [47] Hanbal, A. Musnad Ahmad bin Hanbal; Hadith Zayd bin Kharija. Cairo, Egypt: Darel Hadith; 1995.
- [48] Naisapuri, M. H. Sahih Muslim; Kitab al-Hajj; Bab jawaz at'tawaf ala ba'eer wa ghayrih w'astilam al-hajar bi-mihjan wa nahwih lir-rakib. Beirut, Lebanon: Dar Ihya al-Turath al-Arabi; N.D.
- [49] Al-Sijistani, A.D. Sunan Abi Dawud; Kitab al-manasik; Bab fi ramy al-jimar. Beirut, Lebanon: Dar Ehia al-Tourath al-Arabi; 2000.
- [50] Al-Kashmiri, M.A. Kitab al-Hajj; Bab tawaf an-nisa ma'ar rijaal. Beirut, Lebanon: Dar al-Kutub al-Ilmiyya; 2005.
- [51] Ibn Battal, A.K. Sharh Sahih al-Bukhari; Kitab al-adhaan; Bab salat an-nisa khalf ar-rijaal. Riyadh, KSA: Makatabat al-Rushd; 2003.
- [52] Al-Qastalani, A.M. Irshad as-sari li sharh Sahih al-Bukhari; Kitab al-hajj; bab al-kalam fi't tawaf. Egypt: Al-Matba'ah al-Kubra al-Amiriyah; 1902.
- [53] Ibn Battal, A.K. Sharh Sahih al-Bukhari; Kitab as-salah; Bab idkhal al-ba'eer fi'l masjid lil-illa. Riyadh, KSA: Makatabat al-Rushd; 2003.
- [54] Ibn Battal, A.K. Sharh Sahih al-Bukhari; Kitab al-Hajj; Bab tawaf an-nisa ma'ar rijaal. Riyadh, KSA: Makatabat al-Rushd; 2003.
- [55] Rooqi, A.M. Al-Hulal al-ibreeziyya min at'ta'leeqat al-baziya ala Sahih al-Bukhari; Kitab al-Hajj; Bab tawaf an'nisa ma' ar-rijaal. Riyadh, KSA: Dar Al Tadmuriyyah; 2007.
- [56] Al-Qurtubi. Al-Jami li-ahkam al-Qur'an; 42:51. Cairo, Egypt: Dar al-Kutub al-Masriyya; 1964.
- [57] Ma'sarawi, L. Fatawa shari'iyya .. Tasa'ulaat an-nisa fi tareqqihinn li-ada fareedhat al-Hajj [Internet]; 2022, Jun 28 [cited 2023, Apr 15]. Available from: <https://www.aljazeera.net/women/2019/8/1/شريعة-تساؤلات-النساء-في-خصوصيات>

- [58] Ayyashi, M. Tafsir al-Ayyashi. Qom, Iran: Al-Bi'thah Institute; 2001.
- [59] Sarmady, S., Haron, F. and Talib, A.Z. A cellular automata model for circular movements of pedestrians during Tawaf. Simulation Modelling Practice and Theory. 2011, 19(3), 969-85.
- [60] Ibn Uthaymeen. Majmu fatawa wa rasa'il al-Uthaymeen; Q.876. Riyadh, KSA: Dar al-Watan; 1992.
- [61] @Muradmaxtr. Untitled tweet. [Internet]; 2020, Sep 25 [cited 2023, Apr 15]. Available from: <https://twitter.com/madmaxtr/status/1309334486568644613>
- [62] Walaken, S. Elamiyya Su'oudaiyya kashafat en ta'arrduhiha li't taharrush dakhil al-Haram al-Makki [Internet]; 2023, Jan 5 [cited 2023, Apr 15]. Available from: <https://www.sharikawalaken.media/2022/01/11/-إعلامية-سعودية-كشفت-عن-تعرضها-للتحرش-د>
- [63] Still, G.S. Crowd safety and crowd risk analysis [Image]; 2019, Feb 13 [cited 2023, Apr 9]. Available from: <https://www.gkstill.com/Support/crowd-density/CrowdDensity-1.html>
- [64] Keefe, J. and Uzquiano, K. These are the warning signs that a crowd is dangerously dense [Internet]; 2021, Nov 10 [cited 2023, Apr 15]. Available from: <https://edition.cnn.com/interactive/2021/11/us/crowd-density-dangerous-warning-signs/>
- [65] N. Brown. Edward T. Hall, Proxemic Theory, 1966. University of California, USA: CSISS Classics; 2001.
- [66] Alghamdi, N.S., Khan, M.A., Karamti, H. and Nawaz, N.A. Internet of Things (IoT) enabled smart queuing model to support massive safe crowd at Ka'aba. Alexandria Engineering Journal. 2022, 61(12), 12713-23.
- [67] The Economic Times. Saudi Arabia to reopen borders for vaccinated umrah pilgrims [Photo]; 2021, Aug 8 [cited 2023, Apr 15]. Available from: <https://economictimes.indiatimes.com/nri/visit/saudi-arabia-to-reopen-borders-for-vaccinated-Umrah-pilgrims/articleshow/85150172.cms>
- [68] Ilm Feed. Untitled Facebook post. [Internet]; 2020, Jul 29 [cited 2023, Apr 15]. Available from: https://www.facebook.com/ilmfeed/photos/anyone-else-notice-how-they-let-the-women-do-tawaf-nearest-to-the-kabah-so-that-2689146958020683/?paipv=0&eav=AfYZ6GX4icOd3zHwnvoHv8NDm3wUJNr2ote0eECQqZ4icZ0BaLi75uw3pJqtLAGyD4&_rdr
- [69] Alghamdi, N.S., Khan, M.A., Karamti, H. and Nawaz, N.A. Internet of Things (IoT) enabled smart queuing model to support massive safe crowd at Ka'aba. Alexandria Engineering Journal. 2022, 61(12), 12713-23.
- [70] Al-Haboubi, M.H. and Selim, S.Z. A design to minimize congestion around the Ka'aba. Computers & Industrial Engineering. 1997, 32(2), 419-28.
- [71] St. Olaf College. Intersectionality [Internet]; N.D. [cited 2023, Apr 15]. Available from: <https://wp.stolaf.edu/sexual-respect-initiative/public-health-approach/intersectionality/>
- [72] University of Alberta. Create Change around Sexual Violence [Internet]; N.D. [cited 2023, Apr 15]. Available from: <https://www.ualberta.ca/current-students/sexual-assault-centre/create-change.html>
- [73] Naguib, M. Can social media help in the fight against sexual harassment in Egypt? [Internet]; 2021, Apr 14 [cited 2023, Apr 15]. Available from: <https://www.opendemocracy.net/en/north-africa-west-asia/can-social-media-help-fight-against-sexual-harassment-egypt/>
- [74] Hanbal, A. Musnad Ahmad bin Hanbal; Musnad Abdullah bin Umar bin al-Khattab, #5940. Cairo, Egypt: Darel Hadith; 1995.
- [75] Al-Qazwini, M.Y. Sunan Ibn Majah; Kitab al-fitan; Bab hurmat dam al-mu'min wa malih, #3932. Bechamoun, Lebanon: Dar al-Risala al-Alamiyya; 2009.
- [76] C.E. Ahrens Being silenced: The impact of negative social reactions on the disclosure of rape. American Journal of Community Psychology. 2006, 38, 263-74.
- [77] Dindia, K. Going into and coming out of the closet. In: Barbara M.M. and Leslie A.B. (eds.). Dialectical approaches to studying personal relationships. Mahwah, NJ: Lawrence Erlbaum Associates; 1998. pp. 83-107.