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Jurisprudence on Fasting and Chronic Disease: Knowledge, Attitudes, and Behaviors among Patients and Their Households

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Abstract

Fasting is a fundamental practice that shapes not only physical health behaviours but also spiritual meaning, moral emotions, and decision-making among people living with chronic diseases. This study examined how legal, cultural, and religious rulings on fasting are associated with health-related knowledge, attitudes, perceptions, and behavioural practices among patients with chronic conditions and their households in Saudi Arabia. A cross-sectional online survey was conducted with 1,033 respondents. A researcher-developed questionnaire assessed demographic characteristics, knowledge of obesity, diabetes, and hypertension, attitudes toward fasting (including health benefits and guilt about breaking the fast), perceptions of Islamic rulings on fasting during illness, lifestyle habits, and practices related to fasting. Descriptive statistics and ordinal logistic regression were used to identify predictors of higher knowledge and healthier practices. Approximately half of the participants demonstrated moderate knowledge of the clinical effects of fasting on chronic conditions, and about one-third had a positive attitude toward fasting, despite the disease exemptions in Islamic law. Knowledge of the rulings was consistently associated with higher health knowledge, more favourable perceptions of the exemptions, and better behavioural practices during fasting. Older age, female gender, poorer health and single marital status were also associated with more positive orientations toward health-promoting behaviours. These findings highlight the complex interplay between obligation, spiritual conscience, and clinical risk in fasting decisions. Strengthening collaboration between healthcare professionals and scholars may support spiritually sensitive counselling that aligns fiqh-based rulings with evidence-based care for chronic diseases and reduce spiritual distress and health risks for fasting with chronic diseases.

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Introduction

Over the past few decades, spirituality has become an increasingly prominent topic in health research, with a large body of evidence suggesting that religious beliefs and practices can influence health behaviours, coping, and clinical outcomes across a wide range of conditions (Koenig, 2012; Kruk & Aboul-Enein, 2024). Religion is not only a source of personal meaning and emotional comfort; it also shapes norms around illness, suffering, and help-seeking, and can function as a social and psychological resource that supports resilience or, in some contexts, contributes to distress (Sugimori *et al*., 2022; Feng *et al*., 2024; Lin & Mukai, 2024; Roszak *et al*., 2025). Within this broader field, it offers a particularly rich framework for understanding how religious obligations, spiritual conscience, and health-related decision-making intersect in everyday clinical practice (Moeini *et al*., 2016).

Fasting in the month of Ramadan is beyond the physical discipline of abstaining from food, drink, and sexual relations from dawn to sunset; Ramadan fasting is understood to cultivate spiritual purification, self-restraint, and solidarity with those who are vulnerable (Hussain *et al.*, 2026). Islamic Jurisprudence (fiqh) has long recognised, however, that the overarching principle of preventing harm conditions the duty to fast. The Quran explicitly exempts individuals who are sick, travelling, pregnant, elderly, or otherwise unable to fast safely, and classical and contemporary jurists have elaborated detailed rulings regarding temporary and chronic illness, compensatory acts (qada', fidya), and consultation with physicians (Chamsi-Pasha *et al*., 2014). These legal provisions frame fasting as a moral obligation that must be balanced with preservation of health, and they are central to how Muslim patients and families evaluate the permissibility of fasting in the context of chronic disease (Guo *et al*., 2022; Bei *et al*., 2023; Malik *et al*., 2023).

A growing number of clinical and epidemiological studies have examined the physiological impact of Ramadan fasting. In generally healthy populations, Ramadan fasting has been associated with modest reductions in body weight, improvements in lipid profiles, blood pressure, and markers of inflammation and oxidative stress. However, findings are not uniformly consistent

(Rouhani & Azadbakht, 2014). Among people living with type 2 diabetes and other non-communicable diseases, recent systematic reviews and meta-analyses suggest that Ramadan fasting may improve glycaemic control and some cardiovascular parameters in selected, clinically stable patients, provided that medication regimens and dietary patterns are carefully adjusted (Rouhani & Azadbakht, 2014; Elmajnoun *et al*., 2023; Kamrul-Hasan *et al*., 2025). At the same time, fasting can increase the risk of hypoglycaemia, hyperglycaemia, dehydration, and thrombotic events when undertaken without appropriate medical supervision, particularly in patients with advanced, unstable, or poorly controlled conditions (Elmajnoun *et al*., 2023).

Despite clear exemptions and accumulating medical guidance, many patients with diabetes, hypertension, obesity, and cardiovascular disease continue to fast during Ramadan, often against professional advice (Abolaban & Al Moujahed, 2017; Oqal *et al*., 2023). Qualitative and clinical reports indicate that these decisions are shaped by multiple factors, including the desire to fulfil religious obligations, fear of spiritual loss or divine displeasure, social and family expectations, and varying interpretations of who qualifies as "ill enough" to break the fast (Al-Thani, 2025). Patients may also struggle with feelings of guilt or moral failure when told to stop fasting, especially if they lack confidence in the legitimacy of the exemption or are uncertain about the legal basis for medical recommendations (Bhuiyan *et al*., 2024). This tension can generate spiritual distress and ambivalence, and may undermine adherence to evidence-based guidance on medication use, diet, and hydration during Ramadan (Abolaban & Al Moujahed, 2017).

Saudi Arabia provides a critical context for studying these dynamics. Chronic non-communicable diseases are highly prevalent, and Islam informs not only personal spirituality but also the broader cultural and institutional landscape of health care. In this setting, decisions about fasting are typically negotiated at the intersection of guidance from religious scholars, expectations within extended families, and advice from healthcare professionals. However, there is limited empirical evidence on how knowledge of Islamic rulings on fasting during illness interacts with general health knowledge, attitudes toward fasting, and day-to-day behavioural practices among patients with chronic conditions and their households. Existing work has focused mainly on clinical outcomes or clinician perspectives, rather than on the combined religious, psychological, and behavioural dimensions of fasting decisions in Muslim-majority contexts (Hasan *et al*., 2021; Mobeen & Dawood, 2022; Ekpo *et al*., 2023; Harbi & Saadi, 2023; Elsahoryi *et al*., 2025).

The present study addresses this gap by examining the relationships between knowledge of Islamic rulings on fasting, knowledge of obesity, diabetes, and hypertension, attitudes toward fasting, and fasting-related lifestyle and behavioural practices among patients with chronic disease and their families in Saudi Arabia. By situating these relationships within the broader literature on religion, spirituality, and health, the study aims to illuminate how legal and spiritual understandings shape health-related decision-making and to inform more spiritually sensitive approaches to chronic disease management in Muslim populations.

Materials and Methods

Design

We used a cross-sectional survey design to explore how people living with chronic conditions, and their close household members, understand and manage fasting in light of fiqh rulings and clinical advice. The design allowed us to capture a broad snapshot of knowledge, attitudes, perceptions, and practices during a single fasting season.

Setting

The study was conducted in Saudi Arabia. To reflect the population's diversity, we recruited participants from all five main regions of the Kingdom (central, eastern, western, northern, and southern). Data were collected online over a two-month period, which enabled participation from urban and non-urban communities and from a range of socioeconomic backgrounds.

Sample and Sampling

The target population consisted of individuals living in Saudi Arabia who either had a chronic disease themselves (such as diabetes, hypertension, or obesity) or lived with or closely cared for someone with a chronic condition. Because the study relied on an online questionnaire, participation was voluntary and self-selecting. The survey link was widely disseminated, and any eligible person who read the invitation, agreed to the electronic consent, and completed the questionnaire could participate.

A total of 1,033 respondents from the five regions completed the survey and were included in the analysis. This number reflects all fully completed questionnaires received during the data collection period. The final sample included patients, family caregivers, and other household members, allowing us to capture both personal and family perspectives on fasting and chronic disease.

Data Collection Tools

Data were collected using a researcher-developed questionnaire explicitly designed for this study to capture the intersection between legal rulings on fasting and clinical aspects of chronic disease management. The multidisciplinary research team developed the instrument after reviewing relevant literature on fasting, chronic disease education, and religion-and-health research, as well as existing clinical guidelines on fasting with diabetes, hypertension, and obesity. The main aim of the tool was to assess: (a) knowledge of the clinical effects of fasting on chronic conditions, (b) attitudes toward fasting, (c) perceptions of Islamic rulings related to fasting and illness, (d) general knowledge of obesity, diabetes, and hypertension, and (e) lifestyle habits and behavioral practices during fasting.

The questionnaire comprised five sections. The first section covered sociodemographic and health characteristics (e.g., nationality, region of residence, age, sex, marital status, education, profession, and health status). The second section included six items on knowledge about the clinical effects of fasting on diabetes, hypertension, and obesity. The third section contained three Likert-type items that explored participants' attitudes toward

fasting (e.g., perceived health benefits, willingness to fast despite illness, feelings of guilt when breaking the fast). The fourth section included four items on perceptions of Islamic rulings regarding fasting with illness (e.g., awareness of exemptions, beliefs about God's satisfaction, and consultation with scholars). The fifth section comprised four items on lifestyle and behavioral practices, focusing on smoking, diet, physical activity, medical follow-up, and fasting-related decisions.

Scoring was structured to allow clear categorisation of levels. Knowledge items were scored 1 for each correct answer and 0 for incorrect or "I don't know" responses, giving a maximum of 6 points. Knowledge levels were then categorised as low (<50%), moderate (50% to <75%), or high (≥75%). Attitudes were measured on a 5-point Likert scale ("strongly agree" to "strongly disagree") with a maximum score of 15; total scores were grouped as negative (Chamsi-Pasha *et al*., 2014; Rouhani & Azadbakht, 2014; Moeini *et al*., 2016; Roszak *et al*., 2025; Hussain *et al*., 2026), moderate (Rouhani & Azadbakht, 2014; Abolaban & Al Moujahed, 2017; Elmajnoun *et al*., 2023; Kamrul-Hasan *et al*., 2025), or positive (Oqal *et al*., 2023; Bhuiyan *et al*., 2024; Al-Thani, 2025; Elsahoryi *et al*., 2025). Perceptions of Islamic rulings were scored on a scale of 4–20, with 4–10 indicating negative perceptions, 11–15 moderate perceptions, and 16–20 positive perceptions. Lifestyle and behavioral practices were assessed with "yes/no" questions; each "yes" was given 1 point and each "no" 0, and total scores were categorised into low, moderate, and high levels of practice.

The questionnaire was initially drafted in English and then translated into Arabic to ensure cultural and linguistic suitability for Saudi participants (Kitama *et al*., 2022; Shcherbin *et al*., 2022; Voiță-Mekereș, 2023; Raju, 2024). Translation followed a forward–backward process: two bilingual researchers independently translated the English version into Arabic, a third bilingual expert reconciled the versions, and a separate translator who was blinded to the original text back-translated the Arabic draft into English. Discrepancies were discussed until consensus was reached, with particular attention to religious and clinical terminology. Content validity was assessed by a small panel of experts in chronic disease care, public health, and Islamic jurisprudence, who reviewed the items for clarity, cultural appropriateness, and relevance to fasting and chronic illness; minor wording changes were made based on their suggestions (Abukanna *et al*., 2022; Kumar *et al*., 2022; Shams & Valiev, 2022). The final version was piloted with a small group of participants similar to the target population to confirm comprehension and ease of completion.

Data Collection Procedure

Data were collected between May and July 2025 using an anonymous online survey. The invitation briefly described the study purpose, emphasised that participation was voluntary, and explained that responses would be kept confidential and used only for research. Individuals who clicked on the survey link were first presented with an electronic informed consent statement; only those who agreed could proceed to the questionnaire.

The survey was available in both Arabic and English so that participants could choose the language they felt most comfortable with. Completion typically took between 10 and 15 minutes. Respondents answered the demographic and health questions first, followed by the sections on knowledge, attitudes, perceptions of Islamic rulings, and lifestyle and behavioral practices during fasting. To minimise missing data, most items were set to required, and respondents could review and change their answers before final submission.

Data Analysis

Data were exported from the online survey platform and analysed using SPSS version 24 (IBM Corp., Armonk, NY, USA). We first performed data cleaning to check for inconsistencies and confirm completeness. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to summarise participants' characteristics and the distribution of knowledge, attitudes, perceptions, lifestyle habits, and behavioral practices.

To explore factors associated with higher levels of knowledge, attitudes, perceptions, and practices, we used ordinal logistic regression models. Each outcome (e.g., low, moderate, high knowledge) was treated as an ordered categorical variable. Predictor variables included sociodemographic characteristics (age, sex, marital status, region of residence, education, and profession), health status, and knowledge of Islamic rulings. Results are presented as odds ratios (ORs) with 95% confidence intervals (CIs). Statistical significance was set at $P < .05$ for all analyses.

Ethical Considerations

The study was conducted in line with the ethical principles of the Declaration of Helsinki and the institutional guidelines for research involving human participants. The full protocol was reviewed and approved by the Research Ethics Committee at King Faisal University, Saudi Arabia (Ref. No. KFU-REC-ETHICS3694). Before accessing any survey items, potential participants read an electronic information sheet describing the study aims, what participation involved, possible risks and benefits, confidentiality safeguards, and their right to withdraw at any time without penalty.

Electronic informed consent was obtained from all participants; only those who clicked "agree" could start the questionnaire. No names, ID numbers, or other directly identifying information were collected. IP addresses were not used for analysis, and all data were stored on password-protected computers accessible only to the research team. Findings are reported in aggregate form to ensure that individual participants cannot be identified.

Results and Discussion

The Personal Characteristics of the Respondents

Table 1 presents the distribution of respondents by personal characteristics. Most respondents were Saudi nationals (88.5%), residing in the western region (36.8%), aged below 30 years (65.9%), female (81.9%), and single (61.5%). More than half held a bachelor's degree (53.6%) and were students (50.6%). In

addition, 54.4% reported being moderately familiar with Islamic rulings, 64.5% had a family member with a chronic disease, and 59.1% reported that they or one of their family members or friends had diabetes.

Table 1. Distribution of respondents according to personal characteristics (n = 1,033)

Characteristics	Categories	Frequency	Percentage
Nationality	Saudi	914	88.5%
	Non-Saudi (resident)	119	11.5%
Residence area in Saudi Arabia	Middle	279	27.0%
	East	201	19.5%
	West	380	36.8%
	North	73	7.0%
	South	100	9.7%
Age (years)	< 30	681	65.9%
	30–39	196	19.0%
	40–49	110	10.6%
	≥ 50	46	4.5%
Sex	Male	187	18.1%
	Female	846	81.9%
Marital status	Single	635	61.5%
	Married	365	35.3%
	Divorced	25	2.4%
	Widowed	8	0.8%
Educational qualification	High school or less	350	33.9%
	Bachelor's degree	554	53.6%
	Diploma degree	82	7.9%
	Postgraduate studies	47	4.6%
Profession	Student	523	50.6%
	Employee	164	15.9%
	Health practitioner	39	3.8%
	Religious researcher	2	0.2%
	unemployed	305	29.5%
Knowledge of Islamic rulings	Unfamiliar with Islamic rulings	35	3.4%
	Average familiarity with Islamic rulings	562	54.4%
	Familiar with Islamic rulings	436	42.2%
Health status	The respondent has a chronic disease	101	9.8%
	One of the respondent's family members	666	64.5%
	One of the respondents' friends	266	25.7%
Type of chronic disease	Diabetes	610	59.1%
	Hypertension	261	25.2%
	Obesity	162	15.7%

Knowledge of the Clinical Effects of Fasting on Chronic Conditions among Patients and Their Household Members

Figure 1 presents the distribution of respondents according to their knowledge of the clinical effects of fasting on chronic conditions. The results indicate that the highest proportion of respondents (48.8%) demonstrated a moderate level of knowledge regarding the clinical effects of fasting on chronic conditions, whereas 28.0% exhibited a high level of knowledge. In contrast, 23.2% of respondents reported low knowledge in this domain.

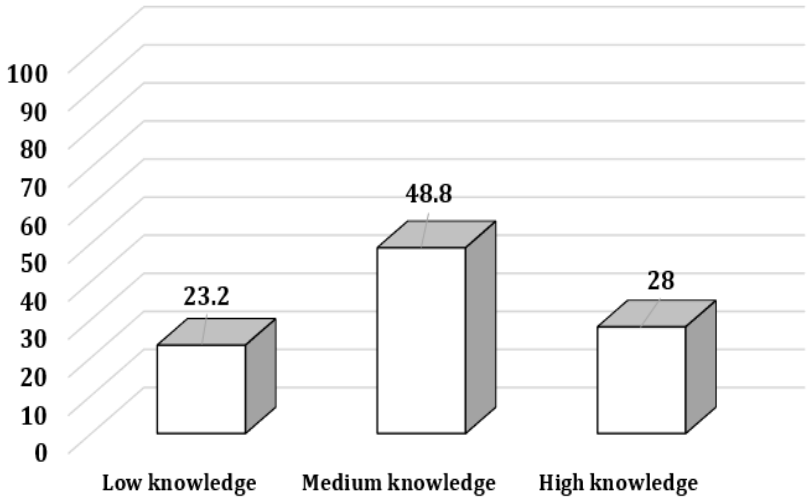

Figure 1. Distribution of respondents (%) according to their knowledge of the clinical effects of fasting on chronic conditions

Attitudes Towards Fasting among Patients and Close Caregivers

Table 2 presents the distribution of respondents according to their attitudes toward fasting. The results show that the highest proportion of respondents (49.5%) reported neutral attitudes toward fasting, while 31.4% demonstrated positive attitudes. In contrast, 19.1% expressed negative attitudes toward fasting for medical use.

Perceptions of Islamic Rulings on Fasting with Illness

Table 2 also presents the distribution of respondents according to their perceptions of Islamic rulings on fasting with illness. The findings indicate that the majority of respondents (55.9%) reported moderate perceptions regarding these rulings. This was followed by 31.1% who reported positive perceptions, while only 13.0% expressed negative perceptions of Islamic rulings on fasting with illness.

Table 2. Distribution of respondents according to their attitudes toward fasting and the distribution of respondents according to their perceptions of Islamic rulings on fasting with illness (n = 1033)

Distribution of respondents according to their attitudes toward fasting		
Statement	Mean	SD
- I believe that fasting is beneficial for general health	4.18	1.3
- I choose to fast even if my health condition might be affected	2.60	1.3
- I feel guilty if I break my fast due to illness	3.06	1.4
Average Overall Attitude Score	2.12	0.7
Categories of attitudes		
- Negative attitude	197 (19.1%)	
- Neutral attitude	512 (49.5%)	
- Positive attitude	324 (31.4%)	
Distribution of respondents according to their perceptions of Islamic rulings on fasting with illness		
Statement	Mean	SD
I know that Islam permits breaking the fast for a sick person if fasting would harm them	4.24	1.19
I believe that God is not pleased with those who break their fast due to illness	4.22	1.21
I think that the fatwa allowing breaking the fast due to illness only applies to severe cases	2.73	1.39
I consult scholars or a mufti before deciding to fast while ill	2.73	1.39
Average overall of perception scores	2.18	0.64
Categories of perceptions		
- Negative perceptions	134 (13.0%)	
- Medium perceptions	578 (55.9%)	
- Positive perceptions	321 (31.1%)	

General Knowledge Regarding Obesity, Diabetes, and Hypertension

Figure 2 presents the distribution of respondents according to their general knowledge of obesity, diabetes, and hypertension. The results indicate that the largest proportion of respondents (44.8%) demonstrated moderate general knowledge of these chronic diseases, followed by 39.5% with high general knowledge. The smallest proportion (15.7%) reported low general knowledge of obesity, diabetes, and hypertension.

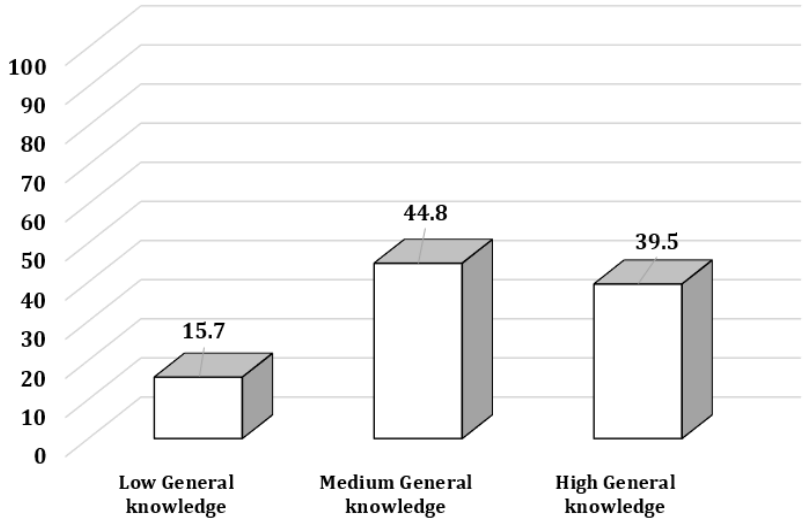

Figure 2. Distribution of respondents (%) according to their general knowledge regarding obesity, diabetes, and hypertension

Lifestyle and Dietary Habits (e.g., Smoking, Diet, Salt Use, Physical activity) that Influence Fasting Decisions

Table 3 presents the distribution of respondents by lifestyle and dietary habits. The results reveal that the majority of respondents (62.0%) reported moderate lifestyle and dietary habits. In contrast, 24.6% demonstrated low lifestyle and dietary habits, while only 13.4% reported high behavioral lifestyle and dietary habits.

Behavioral Practices during Fasting Periods

Table 3 also presents the distribution of respondents according to their behavioral practices during fasting periods. The findings indicate that the majority of respondents (50.6%) reported high behavioral practices (Makhdoom *et al*., 2022; Mwangi *et al*., 2022; Novak & Kralj, 2023; Rattanakorn & Dhep, 2023; Hakami, 2024). Meanwhile, 43.9% demonstrated moderate behavioral practices, and only 5.5% reported low behavioral practices during fasting periods.

Table 3. Distribution of respondents according to their (lifestyle and dietary habits) and the distribution of respondents according to their behavioral practices during fasting periods (N = 1033)

Distribution of respondents according to their lifestyle and dietary habits		
Categories of lifestyle and dietary habits	Frequency	Percentage
Low lifestyle and dietary habits	254	24.6%
Medium lifestyle and dietary habits	640	62.0%
High lifestyle and dietary habits	139	13.4%
Distribution of respondents according to their behavioral practices during fasting periods		
Statements	Frequency of correct response (yes)	%
- **Do you consult your doctor before fasting?**	935	90.5%
- **Have you ever broken your fast based on medical advice**	718	79.1%
- **Do you monitor your health condition during fasting (such as blood sugar or blood pressure)**	907	87.8%
- **Do you consult a religious scholar before deciding to fast in your situation**	713	69.0%
Categories of behavioral practices		
- **Low behavioral practices**	57	5.5%
- **Medium behavioral practices**	453	43.9%
- **High behavioral practices**	523	50.6%

Effect of Respondents' Personal Characteristics on Health Knowledge, Attitudes, Perceptions, Lifestyle, and Behavioral Practices.

Table 4 shows that in terms of health knowledge, residence area in Saudi Arabia was significant (Wald χ^2 = 8.376, P = 0.004). The odds ratio (OR = 1.151) indicates that moving one category higher in residence area (from middle, east, west, north to south) increases the likelihood of being in the high health knowledge level by 15.1%. Knowledge of Islamic rulings was also significant (Wald χ^2 = 6.067, P = 0.014), with an OR of 1.303, suggesting that a one-unit increase in knowledge of Islamic rulings raises the probability of being in the high health knowledge group by 30.3%. Health status significantly affected health knowledge as well (Wald χ^2 = 9.132, P = 0.003; OR = 0.729), indicating that decreasing one category in health status (from "friends with chronic disease" → "family members with chronic disease" → "self with chronic disease") increases the likelihood of high health knowledge by 27.1%.

For attitudes towards fasting, age was a significant predictor (Wald χ^2 = 7.616, P = 0.006; OR = 1.303), suggesting that each increase in age category increases the likelihood of a positive attitude by 30.3%. Sex also had a significant effect (Wald χ^2 = 5.531, P = 0.019; OR = 1.443), indicating that females are 44.3% more likely than males to have positive attitudes towards fasting.

Perceptions of Islamic rulings were significantly influenced by nationality (Wald χ^2 = 4.112, P = 0.043; OR = 1.483), meaning that non-Saudi residents are 48.3% more likely than Saudi respondents to hold positive perceptions regarding fasting with illness.

Regarding general knowledge of chronic diseases, knowledge of Islamic rulings was significant (Wald χ^2 = 12.165, P < 0.001; OR = 1.459), indicating that each unit increase in Islamic knowledge increases the likelihood of high general knowledge by 45.9%. Health status was also significant (Wald χ^2 = 8.560, P = 0.003; OR = 0.735), showing that respondents personally affected by chronic disease are 26.5% more likely to demonstrate high general knowledge than those with affected family members or friends.

Lifestyle and dietary habits were significantly predicted by marital status (Wald χ^2 = 10.237, P = 0.001; OR = 0.604), with single respondents 39.6% more likely to exhibit healthier habits compared to married, divorced, or widowed participants. Knowledge of Islamic rulings was also significant (Wald χ^2 = 6.775, P = 0.009; OR = 1.335), suggesting a 33.5% increased likelihood of healthier lifestyle practices with each unit increase in religious knowledge.

Finally, behavioral practices during fasting were significantly influenced by knowledge of Islamic rulings (Wald χ^2 = 4.997, P = 0.025; OR = 1.283), meaning that each unit increase in Islamic knowledge increases the probability of engaging in high behavioral practices during fasting by 28.3%.

Table 4. Effect of respondents' personal characteristics on health knowledge, attitudes, perceptions, lifestyle, and behavioral practices

Outcome	Predictor	Logit estimate (B)	Wald test	Sig.	OR
Health knowledge	Residence area	0.141	8.376	0.004	1.151
	Knowledge of Islamic rulings	0.265	6.067	0.014	1.303
	Health status	-0.316	9.132	0.003	0.729
Attitudes towards fasting	Age	0.265	7.616	0.006	1.303
	Sex	0.367	5.531	0.019	1.443
Perceptions of Islamic rulings	Nationality	0.394	4.112	0.043	1.483
General knowledge	Knowledge of Islamic rulings	0.378	12.165	<0.001	1.459
	Health status	-0.308	8.560	0.003	0.735
Lifestyle/Diet	Marital status	-0.505	10.237	0.001	0.604
	Knowledge of Islamic rulings	0.289	6.775	0.009	1.335
Behavioral practices (fasting)	Knowledge of Islamic rulings	0.249	4.997	0.025	1.283

The Effect of Respondents' Health Knowledge, Attitudes, Perceptions, General Knowledge, and Lifestyle and Dietary Habits on Behavioral Practices

The ordinal logistic regression results presented in **Table 5** demonstrate that four variables had a statistically significant effect on respondents' behavioral practices during fasting periods: health knowledge, attitudes towards fasting, perceptions of Islamic rulings, and general knowledge regarding chronic diseases.

Health knowledge was a strong predictor (Wald χ^2 = 15.804, P < 0.001; OR = 1.160). A one-unit increase in health knowledge was associated with a 16.0% higher likelihood of being in the high behavioral practices category. Similarly, attitudes towards fasting showed a significant effect (Wald χ^2 = 4.676, P = 0.031; OR = 1.050), indicating that more positive attitudes increased the probability of high behavioral practices by 5.0%.

Perceptions of Islamic rulings were also significant (Wald χ^2 = 8.316, P = 0.004; OR = 1.065). Respondents with stronger perceptions of Islamic rulings had a 6.5% higher likelihood of exhibiting high behavioral practices. Likewise, general knowledge regarding chronic diseases (Wald χ^2 = 10.128, P = 0.001; OR = 1.069) was positively associated with behavioral practices, with each unit increase raising the probability of high behavioral practices by 6.9%.

In contrast, lifestyle and dietary habits did not show a statistically significant effect on behavioral practices in this model.

Table 5. Ordinal logistic regression results for the effect of respondents' health knowledge, attitudes, perceptions, general knowledge, and lifestyle and dietary habits on behavioral practices

Predictor variables	Logit estimate (B)	Wald test	Sig.	OR
Health knowledge	0.148	15.804	0.000	1.160
Attitudes towards fasting	0.049	4.676	0.031	1.050
Perceptions of Islamic rulings	0.063	8.316	0.004	1.065
General knowledge regarding chronic diseases	0.067	10.128	0.001	1.069
Lifestyle and dietary habits	-0.003	0.003	0.960	0.997

Overall, participants demonstrated moderate knowledge of obesity, diabetes, and hypertension, medium-to-high awareness of Islamic rulings, and generally positive attitudes and practices. Knowledge of Islamic rulings emerged as a consistent predictor of higher health knowledge, more flexible attitudes toward fasting exemptions, and healthier lifestyle and behavioral practices, alongside effects of residence area, age, sex, and health status (Ishaq *et al*., 2021; Hornung *et al*., 2023).

These findings align with previous work showing that many Muslims value the spiritual and communal benefits of Ramadan fasting while navigating genuine medical risks, particularly in the context of non-communicable diseases (Rouhani & Azadbakht, 2014). Clinical studies suggest that fasting can improve some metabolic and cardiovascular parameters in appropriately selected patients. Still, they can also precipitate hypoglycaemia, dehydration, and other complications in those with advanced or poorly controlled conditions (El Ghazawi *et al*., 2025). Our results reinforce this dual picture: participants reported reasonably health-conscious behaviors but did not uniformly demonstrate high clinical knowledge, indicating that fasting decisions are shaped by both biomedical information and religious meaning, spiritual commitment, and social expectations (Pathy *et al*., 2011; Majda *et al*., 2022).

The strong association between knowledge of Islamic rulings and multiple health-related outcomes suggests that fiqh can serve as a spiritual health asset when well understood (King *et al*., 2023). Respondents who knew more about the conditions and exemptions for fasting during illness were more likely to adopt safer medication schedules, consult clinicians, and adjust their behavior appropriately (Sedova, 2022; Williams *et al*., 2022; Bahrawi & Ali, 2023; Xie *et al*., 2024; Young *et al*., 2024). This is consistent with core Islamic legal principles that prioritise the preservation of life and permit, or even require, breaking the fast when harm is likely (AUDA, 2008). At the same time, other studies indicate that some patients experience guilt or spiritual struggle when advised not to fast, especially when religious guidance is unclear or inconsistent (Al-Balhan *et al*., 2018). Our findings indirectly point to this tension, as moderate knowledge and variable attitudes can translate into uncertainty about who is "ill enough" to be exempt.

Lifestyle and dietary behaviors during Ramadan in this sample reflect the potential of Ramadan as both an opportunity and a challenge for chronic disease management. Some participants reported healthier eating, weight control, and attention to physical activity, in line with studies that describe Ramadan as a window for positive behavior change (Farooq *et al*., 2021; Mektebi *et al*., 2025). Yet other work highlights increased intake of energy-dense foods, disrupted sleep, and reduced activity during Ramadan (Shatila *et al*., 2021). The fact that better knowledge of Islamic rulings was linked to healthier lifestyle choices suggests that when religious principles about avoiding harm and using dispensations are well internalised, they may encourage patients to align their practices with clinical recommendations rather than oppose them (Nazar *et al*., 2025).

Sociodemographic differences—particularly age, sex, and health status—also influenced knowledge, attitudes, and practices. Older adults and those living with chronic illness tended to report higher knowledge and more cautious attitudes, likely reflecting greater contact with healthcare services and religious counselling (Abo-Rass *et al*., 2025). Women often showed more positive or protective behaviors, possibly due to gendered caregiving roles and heightened responsibility for family health (Duangjina *et al*., 2025). Regional variation likely reflects differences in access to health education and local religious discourse. These patterns highlight that fasting decisions are embedded in broader social and cultural contexts rather than merely individual beliefs (Ferreira *et al*., 2022; Cinar & Aslan, 2023; Joshi *et al*., 2023; Cakmak *et al*., 2024; Fischer *et al*., 2024; Lund *et al*., 2024; Al-Thani, 2025).

From a religion-and-health perspective, the study underscores that Islamic jurisprudence should not be viewed as a barrier to evidence-based care but as a potential ally when its harm-reduction ethos is clearly communicated (Muhsin, 2024). For clinicians, this means that Ramadan counselling for patients with diabetes, hypertension, and obesity should address not only medical risk but also the spiritual meaning of fasting, the mercy-based rationale for exemptions, and the legitimacy of following medical advice within an Islamic framework (Rahamtalla Musa, 2020). Collaborative approaches in which healthcare professionals partner with imams and Islamic scholars may enhance trust, reduce spiritual distress, and support safer fasting decisions (Hillier *et al*., 2024). Future research should build on these findings using qualitative and longitudinal designs to explore how Muslims with chronic conditions experience and negotiate fasting over time, and how integrated medical–religious interventions can best support them.

Limitations

This study relied on self-reported data collected through an online questionnaire, which may introduce response bias and limit the generalizability of the findings. Additionally, as a cross-sectional design was employed, causal relationships between fasting and chronic disease outcomes cannot be established. However, the study protocol was ethically approved, and all procedures adhered to institutional and international standards to ensure data integrity

and participant confidentiality. Future studies employing longitudinal or clinical designs are recommended to validate these findings.

Conclusion

This study demonstrated that most participants exhibited medium to high levels of knowledge regarding Islamic rulings on fasting exemptions, the interconnections among obesity, diabetes, and hypertension, as well as lifestyle, dietary habits, and behavioral practices during fasting. However, a significant knowledge and attitude gap was observed regarding the effects of fasting on chronic conditions. Residence area, knowledge of rulings, and health status emerged as important predictors of health knowledge on fasting and its clinical impact on diabetes, hypertension, and obesity.

Knowledge of Islamic rulings, increasing age, and being female were associated with higher knowledge levels regarding fasting, obesity, diabetes, physical activity, and hypertension, as well as more positive attitudes toward fasting. Likewise, individuals with knowledge of Islamic rulings and those reporting poor health status tended to demonstrate greater knowledge of chronic diseases.

Ordinal logistic regression results further indicated that general knowledge of chronic diseases was associated with a higher likelihood of engaging in positive behavioral practices during fasting. Collectively, these findings highlight the need for policy development and targeted interventions that integrate Islamic jurisprudence on fasting with clinical guidelines for chronic disease management. Knowledge, attitude, and practice (KAP)-based approaches should be emphasized to promote healthier lifestyles and to align health knowledge on fasting with perceptions of Islamic rulings. Such integration could help mitigate the adverse consequences of chronic conditions during fasting periods and promote safer fasting practices in accordance with both medical and Islamic perspectives.

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