

Physicians' Knowledge from Different Religious Background on Management of Diabetic Patients during Ramadan Fasting in Saudi Arabia

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Abstract

The objective of this study is to assesses the knowledge of physicians about basic facts of Ramadan and their ability to give health guidance for diabetic patients to people who are funding and changing their wishing to fast during Ramadan. We studied the knowledge of physicians on Ramadan fasting as a religious duty and impact of some social practices on the fasting diabetic patients. The sample included all the non-Muslim physicians working in different hospitals and health care centers in Najran. Data was collected over a period of one month. This was a quasi-experimental study where non-Muslim physicians were questioned on their knowledge and advice they give to diabetic patients and professional practice of physicians, pre and post a focus group intervention. There were 52 non-Muslim physicians most of the respondents (55.8%) see more than five diabetic patients per week in Ramadan, who had some enquires relevant to Ramadan fasting. Major source of information on Ramadan fasting was through personal communication with Muslim colleagues. Factors that impair diabetic control include cessation of medications, self-modification of dose, increase in consumption of sugar and increased physical activity. We conclude that physicians in Saudi Arabia lack basic religious knowledge on Ramadan that influences health and disease. By simple measures such as distributing written teaching materials or focused group discussions, we can empower their abilities to provide efficient advice to diabetic patients wishing to observe Ramadan fasting.

Keywords: Ramadan Fasting, Diabetic Patients, Medical Education, Saudi Arabia, Public Health, Guidance and Counseling

INTRODUCTION

Ramadan is a holy month of Muslims around the world. The month commemorate the revelation of Islam's holy book the Quran. Fasting, in Ramadan cultivates self-control, gratitude and compassion. Muslims fast for a whole month during Ramadan which happens to be on the ninth month of the Islamic lunar calendar. During Ramadan, Muslims around the world are expected to completely abstain from food, drink, and sexual relations from dawn to dusk. However, there are exemptions for some people fasting is exempted from fasting particularly those whose health might be impacted (Yildirim, 2019). There are several studies that have shown the impact of fasting with varying results on human health (Neff et al., 2007; Akin, 2008). For example, patients with metabolic diseases such as diabetes need a special care and require adequate guidance during Ramadan whether it is a new regiment of drugs or exercise. Various metabolic processes in the human body are influenced profoundly due to Ramadan fasting (Seligman & Csikszentmihalyi, 2014; Seligman, 2004) and specifically in the period, quantity, and quality of intake of food.

Some diseases necessitate long-term medical care. In the process patients receive education to avert acute and long-term complications. In some cases, care is complex and requires multi-factor risk reduction strategies. The epidemiology of certain diseases is continuously evolving and becoming more problematic (Baker & McNulty, 2011). A patient's decision to fast should be made after abundant discussion with their physician. Risks involved, and possibility of changes in medications or lifestyle are quite adverse (Barnard & Curry, 2012). Pre-Ramadan counseling can significantly reduce medical disorders and health risks (Ryan & Deci, 2001; Voon et al., 2022).

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There are correlations between medical diseases and certain socio-cultural habits, lifestyles, and customs. In the Arab Gulf Diabetes is found to be one of the most prevalent diseases in the world (Neely, et al.,2009). Although diabetic patients may be exempted from fasting during Ramadan for medical reasons, many of them insist to fast. At the same time, fasting during Ramadan without medical supervision for patients with diabetes or other diseases carries a risk of variety of complications. Additionally, many physicians are of the opinion that Ramadan fasting is acceptable for certain diabetics but not for others. Muslim diabetics who are conscious of their disease and compliant with their diet and medication may consider not fasting during Ramadan. But many others may consider it as a behavioral deviation, despite the prevalence of the disease and against the advice of the physicians, they undergo the regiment of fasting. Many physicians and other health workers whether dieticians, nurses or even physicians are not fully aware of the cultural and traditional practices of Muslims during Ramadan. No special counselling in public hospitals' settings is made during Ramadan month regarding patients. The adherence to Islamic practices is high among Muslim people in Kingdom of Saudi Arabia they observe fasting during Ramadan steadfastly even when they are ill; sometimes they disregard the advice of their physicians not to fast. There are profound changes in dietary habits during Ramadan that may adversely affect the progress and care of people with certain diseases and should be recognized by the physicians who advise the fasting patients. Fasting can affect people with diabetes because of metabolic disorders. There are other lifestyle changes during Ramadan, for instance, many people sleep most of the day hours; for example, this may impair the glycemic control of diabetes, and affect particularly the management of diabetes.

A proportion of physicians in Kingdom of Saudi Arabia are non-Muslim, and therefore are not aware of the behavioral practices during Ramadan. The need to communicate and train health workers on sociocultural habits provides an essential to better address patients who adhere to religious practices. This study aimed at assessing the knowledge of non-Muslim physicians in Najran, Saudi Arabia. The main study variables measured in this study was physician knowledge and awareness of fasting and its importance to Muslims during Ramadan. Medically the study assessed the knowledge and awareness of the basics of Ramadan fasting, its relevant medical and social aspects that are necessary on advising patients suffering from diseases known by type-2 Diabetes Mellitus. The literature speaks little of fasting in Saudi Arabia and awareness of non-Muslim physicians in their ability to prescribe treatment on Ramadan fasting and how to communicate with their Muslim patients.

METHOD

Study Participants and Sampling

This study was done in Najran city in the Kingdom of Saudi Arabia, which is in the Southern part of the country with a population of half a million inhabitants. Islam is the only religion practiced by the people of Najran except for a few expatriates working in different sectors including health care services. Records from 2020 show that there are 1056 physicians in Najran area, 1012 of them were expatriates. There are 68 health care premises including main hospitals and primary care centers in Najran area, divided between public and private sectors.

This study was done between July 2020 to 2023. The subjects of this study were the non-Muslim physicians who work in Najran's public health sector. The study design is quasi-experimental. We studied first, the knowledge of non-Muslim physicians of Ramadan fasting social practices on the fasting diabetic patients. Once these data were available, provided training session inform of group discussion and were post-tested later. The sample included all the non-Muslim physicians working in different hospitals and health care centers in Najran. The data was collected over a three-years period starting from July 2020. We distributed the questionnaire and requested the non-Muslim physicians to complete it. A group of hundred Muslim physicians working at a health care facility in Najran were recruited as a control group in the study. Fifty-two physicians who were not Muslims was in the experimental group.

Study Instruments and Design

The data collection tool consisted of two parts. The first part of the instrument was used to document demographic data (age, gender, nationality, religion, primary language, and educational level), professional data such as position/rank (resident, specialist) and duration of professional experience and education around diabetic patients. While the second part of the questionnaire included true or false type of questions. These questions are presented in Table 1. Those participants who failed to provide a correct answer to five or more of the 15 knowledge questions were considered as having poor knowledge on religious practices related to Ramadan fasting. With the poor performing group a training session was held, providing physicians written material based and discussion on battery questions. The battery questions were considered as a pre-test and at the end of group training session, another test was conducted as a post-test consisting of the same questions of the pre-test.

Prior to administering the questionnaire, a pilot study was performed to detect and amend any ambiguity, and to assess feasibility and practicability of the questions of the research design. The questionnaires were circulated among 50 randomly selected physicians. The preliminary study was made to tackle any ambiguity and any unknown sources. The questionnaires of the pilot study were excluded from the main study.

Data Analysis

We prepared a master sheet to organize collected data. A computer software package, Statistical Package of Social Science (SPSS) version 26 of the recent Microsoft Windows version was used for data entry and analysis. Data analysis was performed using SPSSx an IBM product using frequencies and mean differences. The statistics were descriptive and inferential. The statistics are reported in Tables and textually in the Results sections and textual.

Ethical Aspects

An ethical approval was obtained from the College of Medicine, Najran University and from the General Directorate for Health Affairs, Najran Region, Saudi Arabia. Also, verbal informed consent was obtained from all participants after fully explaining the nature and procedures of the study and their participation and role in the study. The participants were clearly told that their participation was voluntary, that they were given the choice to refuse to participate or quit at any time and they were informed that confidentiality of obtained data would be secured and data will only be used for the purposes of the study and scientific publication.

RESULTS

Fifty two non-Muslims physicians, which included Christians and Hindus. Table 2 shows the demographic background of the study sample including age, gender, religion, and professional status. Most of the participants were under 45 years of age, with mean age (29 ± 5 years). More than half of the participants were male, and the rest were female. Regarding their professional status, almost three quarters of the study group were residents, and the remainder were specialist physicians. Table 3 shows the participants' time with diabetic patients during Ramadan. Three quarters of the sample saw their diabetic patients more than five times during Ramadan. A statistic of 39 (75%) physicians in the study were providing advice to diabetic patients wishing to fast during Ramadan. Out of the 52 physicians 29 (55.8%) were using personal communication with Muslim colleagues as a major source of information regarding fasting during Ramadan.

Table 1. True or false type of questions used to evaluate the knowledge and awareness of the basics of religious Ramadan fasting issues and its relevant medical and social aspects.

No	Questions
1	Ramadan fasting is one of the pillars of Islamic religion.
2	Every Muslim is required to fast in Ramadan.
3	Daily duration of fasting is from sunrise to sunset
4	Duration of fasting is one month.

5	Children are exempted from fasting.
6	Sick people are exempted from fasting.
7	Taking foods and drinks are liberal after breaking the fast.
8	Sex is prohibited during fasting hours.
9	Travelers for long distances are exempted from fasting.
10	Pregnant and lactating ladies are exempted from fasting.
11	A dawn meal before sunrise is preferred to be taken.
12	Drugs should not be taken during fasting hours.
13	Menstruating ladies are exempted from fasting.
14	Intravenous fluids are not allowed during fasting hours.
15	Elderly people of unfit health are exempted from fasting.

Table 2. Personal data of participants

Age group (years)	Number	Percentage
25-35	21	(40.4%)
35-45	17	(32.7%)
≥ 45	14	(26.9%)
Gender		
Male	43	(82.7%)
Female	9	(17.3%)
Professional status		
Resident	35	(67.3%)
Specialist	17	(32.7%)

Table 3. Participants' practice with diabetic patients during Ramadan

Frequency of diabetic patients seen in Ramadan per week	No. of physicians	
0-3	6	
4-5	17	
≥ 5	29	
Provision of advice to patients wishing to fast	No. of physicians	
I advise them	39 (75%)	
I refer them to a Muslim colleague	13 (25%)	
Major sources of information on Ramadan	No. of physicians	
Internet articles (data from medical websites)	18 (34.6%)	
Medical journals	5 (9.6%)	
Advice to fast or not to fast	Yes	No
I advise all diabetic patients not to fast	8 (15.4%)	44 (84.6%)
Presence of complications	21 (40.4%)	31 (59.6%)
Newly diagnosed patients	38 (73.1%)	14 (26.9%)
Very old patients	40 (76.9%)	12 (23.1%)
Major problems encountered during Ramadan in any practice - types of complications	Yes	No
Hypoglycemia	7 (13.5%)	45 (86.5%)
Insisting to continue fasting despite encountering problems	18 (34.6%)	34 (65.4%)
Factors that impair diabetic control in Ramadan	Yes	No
Stopping of medications	39 (75%)	13 (25%)

Self-modification of doses of drugs	30 (57.7%)	22 (42.30%)
Increased consumption of sugars	33 (63.5%)	19 (36.5%)
Physical inactivity	35 (67.3%)	17 (32.7%)
Self-reporting of health of fasting diabetic patients that I saw in last Ramadan (average)	No. of physicians	
Improved	29 (55.8%)	
Got worse	5 (9.6%)	
Not changed	18 (34.6%)	

In terms of professional practice, many physicians 44 (84.6%) were willing to advise all diabetic patients in Ramadan. The sample 45 (86.5%) did not encounter any adverse medical conditions such as hypoglycemia during Ramadan. A total of 39 (75%) of the sample stated that stopping of medications was the main factor that impaired disease control in Ramadan, followed by 35 (67.3%) who were physically inactive. Regarding self-reporting of the health of fasting diabetic patients, three quarters of the sample alleged that fasting had improved their health.

Physicians revealed more than half 31(59.6%), had poor information and the rest 21(40.4%) of the participants had fair amount of information compared to the control group 5(9.6%), 47(90.4%) respectively, with statistically significant difference ($p>0.001$). The physicians were tested on their knowledge through a paired t-test The finding suggest a higher knowledge score after training ($M=8 \pm 3$) compared to pre-training ($M=4 \pm 2$) at a statistically significant level ($p>0.001$).

DISCUSSION

The study had a small number of physicians, we extended the period of the study to recruit physicians over time. The sample may not reflect the true number of the non-Muslim health care professionals in Saudi Arabia. The true number may be markedly higher in major cities such as Riyadh and Jeddah of Saudi Arabia. Even in Najran area, we may find considerable number of non-Muslim nurses (Verma & Tiwari, 2017; Neff et al., 2005). Most of the participants were young which is consistent with the age trend of emigrant health professionals in Saudi Arabia. In addition, most participants were male being non-Saudis which is consistent also with the gender and national trends among health professional in Najran. The non-Muslim health workers might face challenges dealing with patients that are adherent to Islamic faith and practice. (Neff & Rude, 2006; Neff & Vonk R, 2009). The non-Muslim physicians in the sample were found to be poorly knowledgeable on the basic facts of Ramadan fasting and the significance of socio-cultural and behavioral structure among Muslims. Physician counsel of patients may affect and stigmatize religious patients who see their religious habits as a measure of status, wisdom, and sufferance. Such practices within the health profession must address the sensitivities related to habits and tradition of handling patients who are wishing to fast.

To assess the ability of non-Muslim physicians to manage a health issue of Muslim patients. The study addressed the case of handling of Muslim diabetic patients wishing to fast. In Saudi Arabia, a high proportion of diabetic patients insist to fast, sometimes even against the medical advice. Non-Muslim physicians are expected to learn quickly about Muslim tradition without proper advice and communication from national health organizations. There is common perception that people who enter Saudi Arabia or other gulf countries understand customs and traditions, on the contrary they have little knowledge of the cultural and religious practices. For example, many expatriate didn't know that Muslim in Najran sleep during the day in the month of Ramadan during the early days of the day which may impair the glycemic control of diabetes. In addition, there are profound changes in dietary habits in Ramadan that may adversely affect diabetes (Baer, et al., 2012; Chirico & Ferrari, 2021). Prescribing drugs or physical exercise impaired by the behavioral changes in people lives.

The disease of Diabetes mellitus is a common disease in Kingdom of Saudi Arabia. Physicians see more than five cases of diabetes per week during Ramadan. Diabetic patients tend to rush to the clinics in Ramadan for counselling as to whether they can fast or not, and to enquire about any relevant therapeutic or dietary modifications for safer fasting (Azizi, 2002). This task is a true challenge for a non-Muslim physician. But,

despite many of the non-Muslims physicians try to give a scientific based advice to such patients and only a minority refrain from advising patients on Ramadan fasting. A probable reason for refraining could be that non-Muslim physicians may be accused of heresy in a closely-knit and religious society in Saudi Arabia (Baer, et al., 2012). Those who refrain usually pass the responsibility of their patients to a Muslim physician without the consent of the patient. In some cases, offsetting the patient-physician rapport and in cases, the patient having to travel long distance to reach a Muslim specialist. Even though in Islam, Muslims are not discouraged to seek help or advice from non-Muslims. Muslims have a highly charged feeling towards their religion. Fasting is one of the five pillars of Islam and consider the interpretation of the Holy Quran and its commandments as a sacred duty of every Muslim to follow.

There is a lack of information sources on Ramadan fasting and its effects on health and disease (Trepanowski & Bloomer, 2009). What is available through public and open sources such as scientific articles written by scientists rarely make an impact on the practical points that are retailed for use in clinics or by the public spaces. Some of the physicians in the sample tried to use sources medical journals as a source to enrich their knowledge about diabetes, but they found personal communications with Muslims colleagues to be more useful. One reason for this could be the complexity of the scientific articles and the time required to provide diagnoses and treatment was limited. Unfortunately, no special arrangements of counselling are made for diabetic patients in Najran health care premises (Jam et al., 2017). Even in the Gulf there is little knowledge related to fasting. More recently this topic has grasped interest worldwide and regionally. In the United Arab Emirates, the first International Conference is being held on February of 2024 on Fasting and Health. Furthermore, there are no specific training programs for health workers whether Muslims and non-Muslims; junior staffs including nurses, dieticians, and educators to advice patients with health effect of Ramadan fasting.

People living in Kingdom of Saudi Arabia appeals to an ethos to insist on fasting regardless of the health conditions; this is more observed in the elderly diabetic patients who usually have multiple complications due to the prolonged duration of disease. Some diabetic patients tend to self-modify or even stop their anti-diabetic medications in fear of hypoglycemia (Elnasri & Ahmed, 2006). Also, the marked and low level of physical inactivity in Ramadan is commonly encountered, as patients tend to sleep most of the fasting hours; this may impair control of diabetes (Alhifzi et al., 2018; Bahammam 2006). So, they may end up with uncontrolled diabetes with the intake of large amounts of sugar and sweet drinks at the break of their fast. Contrary to the expected, hypoglycemia according to the physicians was not encountered by the sample in this study among the fasting diabetic patients. self-reduction or omission of the drug dose or the tendency to consume large amount of sugar during Ramadan could be a fatal consequence to a lack of professional advice by non-Muslim physicians who are not aware of Islamic practices.

CONCLUSION

In conclusion, non-Muslim physicians may lack knowledge on basic religious and traditional behaviors during Ramadan, and its impact on health and disease. Medication and physical activity guidance is one of the things physicians need to address when dealing with a diabetic patient during Ramadan. One important conclusion in this study is that all physicians go through a training program whether Muslims or non-Muslims through the medical board or medical license office. There will be religious contemplations on diet and practice in context of Ramadan fasting. Thus, booklets and brochures are useful guidelines for patients' educational programs using mass media as a necessary step to rectify these changes so Ramadan fasting as to be safe and healthy. We also recommend that Ramadan fasting as teaching topic for undergraduate students. We suggest further studies to investigate the attitudes and knowledge of non-Muslim physicians on Ramadan fasting and other religious and how to communicate with Muslim patients in these issues. Further research could consider observation of patients on Ramadan and how they interact with their physicians.

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