



Evaluating the Awareness of Preoperative Fasting among Adult Patients for Elective Surgery in National Guard Health Affairs (NGHA), Riyadh, Saudi Arabia.

¹Dr. Mohammed Al Harbi, ¹Ms. Nour Mohamed, ¹Dr. Nancy Khalil Hassan, ²Mr. Salem Mohammed Alshammari , ²Noor Ghalib Abdrabalnabi, ²Sundus Abdullah Alrasheed, ²Nada Fahad Alsuwaihib, ²Ibtihal Zaid Alrefeiah, ²Fatimah Abdulaziz Almuzini, ³Mr. Abdulla Alharbi, ³Ms. Norah Musaed Alawad , ³Ms. Winnie Philip, ³Ms. Saja Alharbi.

First Author: Dr. Mohammed Al Harbi

¹Associate professor, Anesthesiology, Anesthesia Consultant, Anesthesia Technology program, King Saud Bin Abdul Aziz University for Health Science, Mail Code 3129, P.O Box 3660, Riyadh 11481, Saudi Arabia

² Research units, College of Applied Medical Sciences, King Saud Bin Abdul Aziz University for Health Science, Riyadh, Saudi Arabia

Second Author: Ms. Nour Mohamed

¹Anesthesia lecture, Anesthesia Technology program, King Saud Bin Abdul Aziz University for Health Science, Mail Code 3129, P.O Box 3660, Riyadh 11481, Saudi Arabia

² Research units, College of Applied Medical Sciences, King Saud Bin Abdul Aziz University for Health Science, Riyadh, Saudi Arabia.

Third Author: Dr. Nancy Khalil Hassan

¹Anesthesiology, Anesthesia Consultant, Anesthesia Technology program, King Saud Bin Abdul Aziz University for Health Science, Mail Code 3129, P.O Box 3660, Riyadh 11481, Saudi Arabia

²Research units, College of Applied Medical Sciences, King Saud Bin Abdul Aziz University for Health Science, Riyadh, Saudi Arabia

Corresponding Author: Ms. Nour Mohamed

Citation this Article: Dr. Mohammed Al Harbi, Ms. Nour Mohamed, Dr. Nancy Khalil Hassan, Mr. Salem Mohammed Alshammari , Noor Ghalib Abdrabalnabi, Sundus Abdullah Alrasheed, Nada Fahad Alsuwaihib, Ibtihal Zaid Alrefeiah, Fatimah Abdulaziz Almuzini, Mr. Abdulla Alharbi, Ms. Norah Musaed Alawad , Ms. Winnie Philip, Ms. Saja Alharbi.,“Evaluating the Awareness of Preoperative Fasting among Adult Patients for Elective Surgery in National Guard Health Affairs (NGHA), Riyadh, Saudi Arabia”, IJMSIR- February - 2021, Vol – 6, Issue - 1, P. No. 272 – 284.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Background: Preoperative fasting plays a critical role in maintaining the patients' wellbeing during general anesthesia induction. Understanding of preoperative fasting importance among patients undergoing elective

surgery depend mainly on the clarity of fasting guidance explained by the anesthesia providers. Previous studies have reported an over-all low level of knowledge of the importance of preoperative fasting who underwent elective surgery.

Objectives: This study intended to evaluate the awareness and knowledge of adult patients undergoing elective surgery towards preoperative fasting and to assess the patient's awareness toward the purpose of preoperative fasting and the fasting hour.

Materials and methods: A cross-sectional study have been carried out among patients who scheduled for an elective procedure at King Abdulaziz Medical City (KAMC), King Fahad Medical City (KFMC), and King Abdullah Specialized children hospital (KASCH) from July to December 2020. A validated questioner has been used in this study. The survey included a total of 15 questions, divided into three demographic questions and 12 questions to estimate the patients' knowledge about the purpose of preoperative fasting, and duration, and risks of not following the preoperative fasting instructions.

Results: Over two months, 30 (16%) responses were obtained from a total of 187 patients. Demographically, the respondents were female (56.67%), and 18% were between 18-30 years old. A total of 21(70%) patients did not know the purpose of preoperative fasting. 4(13%) of patients gave an incorrect answer, and 17(57%) of patients did not know the reason at all. Only 9(30%) of patients knew the purpose of POF. Patients with a high level of education have a better awareness of preoperative fasting (p-value 0.003)

Conclusion: This study's finding suggests a lack of awareness regarding preoperative fasting among patients who underwent elective surgery. Health care providers need to provide detailed preoperative fasting guidance and care to avoid post-operative complications.

Keywords: Preoperative fasting, Awareness of Preoperative fasting, knowledge, Effects of Preoperative fasting, elective adult surgical patients.

Introduction

Preoperative fasting (POF), which is defined as a period of time prior to general anesthesia (GA) where liquids and solids are prohibited to be consumed orally by patients, plays a critical role in the maintenance of the patients' wellbeing during the induction of general anesthesia (GA) ⁽¹⁾⁽²⁾. GA causes depression of the defensive reflexes that are usually responsible for protecting the airway (cough, gag, and swallow) and decreases lower esophageal sphincter tone which normally works by preventing acid and stomach contents from travelling to the esophageal ⁽³⁾⁽⁴⁾⁽⁵⁾. Thus, the key purpose of preoperative fasting is to reduce the risk of regurgitation, vomiting, and pulmonary aspiration and other complications during general anesthesia and surgery ⁽⁶⁾⁽⁷⁾. According to the recommendations of the American Society of Anesthesiologists (ASA), the required fasting time for solid food is roughly 6-8 hours and 2-4 hours for clear liquids ⁽⁸⁾. The span of preoperative fasting, however, is determined by the state of the patient and the type of procedure ⁽⁹⁾. The patients' awareness toward POF from all aspects is important to guarantee that the patient will adhere to the instructions. This mainly rely on how clear the instructions given to the patients.

A fair number of studies have shown that because of the patients' lack of awareness about this issue, some of them do not understand the consequences and complications of not following the preoperative fasting instructions. Knowledge and understanding of preoperative fasting among patients undergoing elective surgery depends largely on the clarity of fasting guidance explained in the pre-anesthesia clinic by the anesthesia provider. The guidelines often consist of fasting hours with insufficient clarification of how many hours the patient should be fasting for solid food

and liquids. In addition, the more specific the instructions are, the more the patient would be devoted to follow the instructions. The patient's understanding represents the quality of instructions, and when they acknowledge the reasons behind a fasting order, they are more likely to comply⁽¹⁰⁾⁽¹¹⁾. Patients who obtain a straightforward reason behind preoperative fasting are more prone to commit to the guidelines particularly the fasting hours, as this will guarantee the patient's physiological health, reduction of complications, hospital stay, and expense. Prolonged fasting hours are unnecessary, and may result in complications such as anxiety, confusion, instability, hypoglycemia, headache, dehydration, electrolyte imbalance, and increased insulin resistance⁽¹¹⁾. In order to determine the patients' understanding of this topic, numerous studies have looked at the knowledge, attitude, and awareness of the patient.

A study carried out in 2017 at Kenyatta National Hospital (KNH), Kenya. This study was a cross-sectional descriptive comprising 65 adult patients admitted for elective surgery. Pediatric, obstetric, and unwilling subjects were eliminated from the study. The purpose of this study was to examine the preoperative fasting of adult patients scheduled for elective surgery 93.8 percent amongst 65 respondents lacked knowledge of the right reasons for POF and thought that the instructions were confusing⁽¹²⁾.

Another study conducted in Singapore in 2014 at a major tertiary referral hospital. The study was carried out on 130 patients expected to perform day-to-day surgery under general or regional anesthesia to determine the degree of the patient's preoperative fasting commitment and the causes of the lack of compliance, as well as to explore the extent of patient awareness, understanding, and attitude to fasting before

surgery. The purpose of POF was understood by just 44.6 percent of patients, and 46.9 percent of patients did not know the reason for POF, whereas 8.5 percent provided a mistaken reason. In addition, it explored the understanding and attitude of patients towards preoperative fasting. About 0.8 percent felt that compliance with preoperative fasting was not necessary, whereas 64.3 percent thought it was really important to comply with preoperative fasting⁽¹³⁾.

The third study conducted at Wellington Hospital, New Zealand, in 2006, surveyed one hundred adult patients scheduled for day operation under general anesthesia in the peri-operative unit to evaluate their knowledge on preoperative fasting. Patients who could not read English and those with intellectual disabilities were excluded. According to the survey, only 22 percent of these selected patients knew precisely why fasting was important, and 4 percent of them said they would misrepresent their fasting status if they were unable to postpone the procedure. The outcome of this study showed that the failure to accurately inform the patients about preoperative fasting is uncertain, as it could be due to the forgetfulness by the patient or lack of instructions given to the patient⁽¹⁰⁾. In addition, unless the instructions given to the patient are clear, education and understanding will not be achieved; furthermore, the clarity of instructions will significantly contribute to the compliance of the patient with the fasting hours.

A study was conducted in North Bristol NHS Trust, Bristol, UK, 2018, in plastic surgery department. The aim was to reduce the patients' fasting time by 50% over 12-months period through 2 cycles. In the second cycle, the mean fasting time for food reduced to 14.8 hours and 9.5 hours for clear fluid, and due to sufficient fasting times, no procedures were postponed. This was

accomplished by supplying the nurses and patients with education, no longer applying the word 'Nil by mouth from midnight, and preoperative drinks have become routine⁽¹⁴⁾.

Another study was conducted at the Medical Center of Riverside University Health System in California, USA. It was designed to analyze the frequency of extended fasting periods in order to find ways to enhance the experience of the patient. The purpose of this study was to investigate a random sample of elective scheduled surgeries in Southern California in October 2016 at a 439-bed safety-net teaching hospital. They excluded the first cases in each operating room and the emergency add-ons or critical cases during the collection of data from this study and included all elective cases, on time cases, and substantially delayed cases. Between the cases included in the review, 102 cases began at their scheduled time, and 168 cases (62.2%) were confirmed to have been significantly delayed. Therefore, the fasting status offers a precise measure of patient experience, patient protection, and organizational effectiveness⁽¹⁵⁾.

A cross-sectional study was conducted at the University of Botswana. The research included 260 elective surgical patients aged 5 years and older and the physical classification of ASA was between class I and class II. Patients who were excluded were patients under 5 years of age, patients needing emergency surgery, Class III and above of ASA physical status, pregnant women, patients at elevated risk of aspiration (obese, symptomatic gastroesophageal reflux disease, diabetes mellitus, hiatus hernia, achalasia, etc.), patients receiving intravenous fluid, parenteral or enteral tube feeding, and mental disabilities individuals. The objectives of this study is to analyze the preoperative fasting period and compare it with the ASA guideline,

as well as to evaluate the fasting duration of foods and liquids before surgery by each patient; to examine preoperative fasting directions and to evaluate other possible factors that may affect the fasting period of the patient. The study also observed that the average fasting periods for plain fluid were 7.65 times longer and for solids 2.5 times longer than the ASA guidelines⁽¹¹⁾.

Finally, a cross-sectional study was conducted at St George's Hospital, Moorfield's South. The survey was performed for patients undergoing elective anesthesia or sedation in two-cycles. The goal of the study was to determine the clearness and correctness of the instructions and the hydration status of patients. Specific instructions were given by 10 patients surveyed in the first cycle and subjective dehydration was seen at 70 percent and clinical signs of dehydration was seen at 40 percent. Patients were fasting for disproportionately long periods; the longest fasting period was 17 hours. Twelve patients who were surveyed advised to drink clear liquids within two hours prior to surgery in the second cycle. Therefore, subjective dehydration showed a substantial reduction of 25%, and 25% was revealed by clinical evidence of dehydration. The longest fasting period has been reduced to 8 hours⁽¹⁶⁾.

Even though POF has been addressed in a large number of studies, patients still have a weak understanding of the significance of fasting prior to surgery. This study aims on evaluating the awareness and knowledge of adult patients undergoing elective surgery towards POF in the National Guard Health Affairs (NGHA). Among the objectives are to assess the patient's awareness toward the purpose of POF and the fasting hours, including fluids and solids. Also, to examine whether the patient's educational level is related to their

awareness of POF. To estimate the patients' importance of POF which reduces the incidence of complications related to pulmonary aspiration and to measure the association of POF with the success of anesthesia and surgery.

Materials and Methods

IRB approval: The study was carried out after obtaining IRB approval from King Abdullah International Medical Research Center (KAIMRC). The anonymity and dignity of the information obtained from each patient was assured and data access was limited to investigators only.

Study design and Study population: This study is a descriptive cross-sectional study that used a convenience sampling technique, where the patients were selected according to their feasibility and capability in the pre-anaesthesia clinic and the holding areas located in the main OR, surgical tower, day care, where patients stay before undergoing an elective procedure in the National Guard Health Affairs (NGHA), King Abdulaziz medical city (KAMC), King Fahad Medical City (KFMC), and King Abdullah Specialized children hospital (KASCH) from July to December 2020 during the morning period (8-11). The study targeted adult patients (male and female) who were scheduled for an elective surgery in NGHA. In contrast, paediatric patients, cognitive disability, pregnant, and patients for emergency procedures were excluded. The sample size was calculated using the Raosoft Website with a margin of error 5% and 95% confidence level; therefore, the sample size was established as 187 patients. However, only 30 patients were participated in the study with the survey.

Study variable: The method of collecting data was done through an electronic copy of questionnaire in google form. The study survey was developed in

reference of previous research questionnaire related to our subject which was taken from "An audit of preoperative fasting compliance at a major tertiary referral hospital in Singapore" research ⁽¹¹⁾ where validity was obtained. The questionnaire was written in two languages (Arabic and English) that was read to the patients in the holding areas by the anaesthesia technologists and interns, who agreed to assist in data collection. The questionnaire content varied between closed-ended and multiple-choice questions. The survey included a total of 15 questions, divided into 3 demographic questions (gender – educational level – age), and 12 questions to estimate the patients' knowledge about the purpose of POF, duration of POF in regard to solid food and liquids, instructions given, and risks of not following the preoperative fasting instructions.

Statistical analysis: The data were entered using Google sheet, organized, and converted to Microsoft Excel for further analysis. Excel was then used to draw graphs showing the association between education level and knowledge about the purpose of pre-operative fasting. The statistical test used is the Chi square test which examined the hypothesis between the two categorical variables. Moreover, the findings were summarized by a graphical representation using Pie chart with the percentage and frequency of each category. Additionally, an illustration of the demographic table of the patient's characteristics has been included.

Results

The total number of 1 who came for elective surgery in national guard hospital only 187 patients met our inclusion criteria. over a period of two months, 30 (16%) responses were obtained from a total of 187 patients. Demographically, the respondents were

female 17 (56.67%) and male 13 (43.33%). Patients aged between (18-30) represent 8 (26.67%) and an equivalent number of patients in both age categories

(30-50) and (+50) represent 11 (36.67%). Table 1 shows the educational level of the patients.

Table 1: demographic characteristics

Row Labels	Count of Gender:	Count of Gender:2
Female	17	56.67%
(+50)	7	23.33%
Nil	3	10.00%
Primary	2	6.67%
Secndry	2	6.67%
(18-30)	6	20.00%
Tertiary	6	20.00%
(30-50)	4	13.33%
Secndry	1	3.33%
Tertiary	3	10.00%
Male	13	43.33%
(+50)	4	13.33%
Primary	1	3.33%
Tertiary	3	10.00%
(18-30)	2	6.67%
Tertiary	2	6.67%
(30-50)	7	23.33%
Tertiary	7	23.33%
Grand Total	30	100.00%

A total of 21(70%) patients did not know the purpose of POF, 4(13%) of patients gave an incorrect answer and 17(57%) of patients did not know the reason at all. Only 9(30%) of patients knew the purpose of POF.

The knowledge of the patients about the duration of the fasting hours regarding both solid food and liquids were measured and presented in figure 1 and 2.

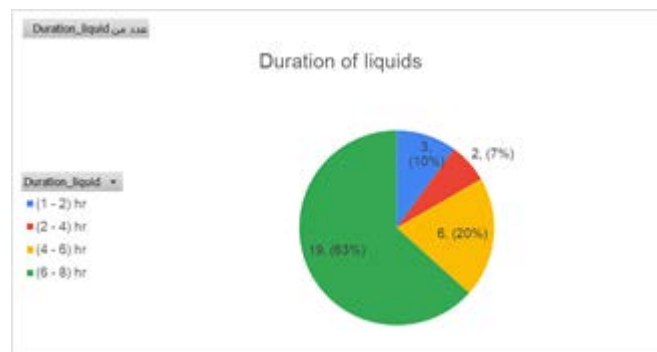


Figure 1: fasting hours duration of liquids

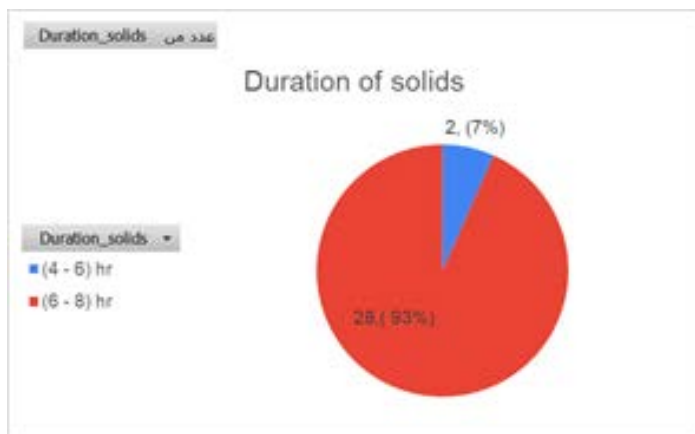


Figure 2: fasting hours duration of solids

According to the **P-value**, the **chi-square test** has been done to find the association between the educational level and the knowledge of patients about POF, where the **p-value is 0.0033**, which is considered less than **0.05** (significant level). Therefore, there is **evidence to reject the null hypothesis** which means there is an association between the two variables.

Discussion

This study focused on evaluating the patients' understanding and knowledge toward preoperative fasting. The findings of this study are summarized as following: the results indicated that the majority of the respondents undergoing elective surgery in national guard health affairs NGHA were not aware about the reason behind POF. While the rest of the respondents gave correct answer. Another finding indicated that great number of participants knew the fasting duration of food. On the other hand, they did not know the fasting hours of liquids. Furthermore, the knowledge of the patients toward the purpose of POF was found to be associated with their educational level, as 9 from 10 correct answers were from patients with tertiary education level. Lastly, the increase of patients' awareness and knowing the real purpose of POF and its complications enhances the commitment of patients towards the instructions.

One of the main findings of this study is knowing the purpose of POF. These findings further support the idea of lack of knowledge as mentioned in a study conducted in Singapore. Almost half of the patients of that study did not know the reason of fasting, in comparison to our study, there was increase in lack of knowledge with approximately 20.1% difference ⁽¹¹⁾. From our point of view, they did not know the reason of POF because there is lack of clarity about the instructions provided about the POF, and this may be due to several causes as not having full knowledge about the complications of not following the instructions of POF, and using advanced medical terminologies. Despite that all respondent said that the instructions were clear, most of them did not provide correct answers to the purpose of fasting hours which is a part of the instructions given to them. Establishing the patients' responses, there might be an underestimation in the importance of the POF guidelines among patients.

The other finding of this study is to evaluate the knowledge of the patients about the fasting hours. According to the result of this study, the majority of the patients knew the fasting hours for solids whereas they did not know the fasting hours for liquids. This finding is in agreement with a study conducted in Botswana ⁽¹²⁾ which showed that there is a big difference of the fasting duration for liquids and solids among respondents. Moreover, the instructions of that study did not classify the specific fasting hours for both solids and liquids where the vast majority of patients were given instructions to fast after midnight. This led to various complications in patients with comorbidities who cannot tolerate prolonged fasting. These complications are headache, dehydration, post-operative nausea and vomiting ⁽¹²⁾. Lastly, Preoperative

fasting is an essential component of reducing the risk of perioperative pulmonary aspiration.

The last finding of this study is the identification of the educational level of the patients who knew the purpose of POF. We found that there is a correlation between educational level and the knowledge of the patients about the purpose of POF. Patients with low level of education had lower understanding of the purpose of POF. Furthermore, this finding supports previous result of Kenya's study⁽⁹⁾ where the respondents who had low educational level had more complain regarding the instructions of pre-operative fasting compared to other educational levels⁽⁹⁾. Ultimately, educational level had an important role in understanding the reason of POF.

Like other studies, this study has several strength points. One of the strength points is the strict policies of POF, verbally or on paper, given by the healthcare providers in the hospital. Another strength point is the validity of the questionnaire that was taken from previous study which shows that the questionnaire was used and published before this study. However, some limitations of this study have been noted. As the study was conducted in one hospital, the results can not be generalized in all patients in the other hospitals. Another limitation was the place and time the questionnaire was given to the patients. The questionnaire was given to the patients' in a short period before entering the operation room, therefore, we must consider that the patients' answers, and the survey outcomes may be affected by the patients stress and fear before the operation. Moreover, we encourage other researchers to look up for further information about the relationship between the educational level of the patients and the knowledge of the purpose of POF. Further studies are required to find out the awareness of

healthcare providers' guidance of the reasons of preoperative fasting and modern guidelines.

Conclusion

The main goal of the current study was to determine the awareness of patients toward POF. There are many aspects affecting the patients' awareness. One of the aspects is the underestimation of the importance of POF as the increase in patients' awareness and knowing the real purpose of POF and its complications enhances the commitment of patients towards the instructions. Another aspect is the instructions given to the patients. Some medical providers do not explain the instructions probably, so clinical approaches need to be strengthened in reference to the existing recommendations established by ASA guidelines where the patients can undergo fasting without exceeding the recommended duration. The last aspect is the association between the educational level and the patients' knowledge about POF. There is a direct relationship between them where the increase in the educational level will lead to increase in the awareness of POF. Based on our findings we suggest that the patients in our institution needs more knowledge and information about POF in general, this can be achieved by holding campaigns in the hospital, social media, and spreading booklets in public areas. This research will hopefully serve as a start point for future studies and the development of healthcare and patient safety

References

1. Adiga V, Registrar A, Walker I, Wilson K. Tutorial 352 Preoperative Fasting in Children Edited by. WwfahqOrg. 2017;(May):1-5.
2. Hamid S. Pre-operative fasting - a patient centered approach. BMJ Quality Improvement Reports. 2014;2(2):u605.w1252.

3. Dayanand K. Acute Intraoperative Pulmonary Aspiration HHS Public Access. *Physiology & behavior*. 2018;176(5):139–48.
4. Hussey J, Wise L. Pre-Operative Fasting Policy for Adults and. 2019;(January).
5. Tandon M, Pandey VK, Dubey GK, Pandey CK, Wadhwa N. Addition of sub-anaesthetic dose of ketamine reduces gag reflex during propofol based sedation for upper gastrointestinal endoscopy: A prospective randomised double-blind study. *Indian J Anaesth*. 2014;58(4):436–41.
6. J. E. Aguilar-Nascimento and D. B. Dock-Nascimento, “Reducing preoperative fasting time,” *World Journal of Gastrointestinal Surgery*, vol.2, no. 3, pp.57–60, 2010
7. Frykholm P, Schindler E, Sümpelmann R, Walker R, Weiss M. Preoperative fasting in children: review of existing guidelines and recent developments. *Br J Anaesth*. 2018;120(3):469–74.
8. Parameters P. Practice Guidelines for Preoperative Fasting and the Use of Pharmacologic Agents to Reduce the Risk of Pulmonary Aspiration: Application to Healthy Patients Undergoing Elective Procedures. *Anesthesiology*. 2017;126(3):376–93.
9. Njoroge G, Kivuti-Bitok L, Kimani S. Preoperative Fasting among Adult Patients for Elective Surgery in a Kenyan Referral Hospital. *International Scholarly Research Notices*. 2017;2017:1–8
10. Walker H, Thorn C, Omundsen M. Survey Patients’ Understanding of pre-operative Fasting. 2006;358–61.
11. Lim HJ, Lee H, Ji LK. An audit of preoperative fasting compliance at a major tertiary referral hospital in Singapore. *Singapore Medical Journal*. 2014;55(1):18–23.
12. Abebe WA, Rukewe A, Bekele NA, Stoffel M, Dichabeng MN, Shifa JZ. Preoperative fasting times in elective surgical patients at a referral hospital in Botswana. *Pan African Medical Journal*. 2016;23:1–8
13. Njoroge G, Kivuti-Bitok L, Kimani S. Preoperative Fasting among Adult Patients for Elective Surgery in a Kenyan Referral Hospital. *International Scholarly Research Notices*. 2017;2017:1–8.
14. Chon T, Ma A, Mun-Price C. Perioperative Fasting and the Patient Experience. *Cureus*. 2017;9(5)
15. Davies A, Pang WS, Fowler T, Dewi F, Wright T. Preoperative fasting in the department of plastic surgery. *BMJ Open Quality*. 2018;7(4):e000161.
16. Hamid S. Pre-operative fasting - a patient centered approach. *BMJ Quality Improvement Reports*. 2014;2(2):u605.w1252.

Appendix

1. Copy of the IRB approval memo

Kingdom of Saudi Arabia
Ministry of National Guard - Health Affairs

المملكة العربية السعودية
وزارة الحرس الوطني - الشؤون الصحية

King Abdullah International Medical Research Center
(KAIMRC)

IRB NCBE Registration No.:
H-01-R-005

IRB Office

Memo Ref.No. IRBC/0651/20 E-CTS Ref. No. RYD-20-419812-58085

Study Number: SP20/079/R
Study Title: **Evaluating the Awareness of Preoperative Fasting among Adult Patients for Elective Surgery in National Guard Health Affairs (NGHA), Riyadh, Saudi Arabia**

Study Sponsor: non grant
IRB Review Type: Expedited Review Full Board
IRB Approval Date: 01 May 2020
Study site(s): Central Region

Dear **Dr.Nancy Khalil Hassan**
Consultant Anesthesiologist KAMC, NGHA
Ministry of National Guard – Health Affairs.

Sub-investigator: Sundus Alrasheed, Nada Alsuwaih, Ibtihal Alrefeiah, Noor Abdrabalnabi, Fatimah Almuzini, Norah Alawad, Winnie Philip, Salem Alshammari and Noor Mohammed.

After reviewing your submitted research proposal/protocol and related documents, the IRB has APPROVED the submission.

The approval includes the following related documents:

Document/Title	Version	Date
Research Proposal	01	01 May 2020
Data Collection	01	01 May 2020
Inform Consent Form	01	01 May 2020

The approval of the research study is valid for **one year** from the above approval to expiration date.

Terms of Approval:

- Annual Reports:** An Annual report must be submitted for approval to avoid termination/suspension of your research.
- Financial report:** If your study is funded project, details financial report should be submitted with the scientific report.
- Final Report:** After completion of the study, a final report must be forwarded to the IRB.
- Retention of original data:** The PI is responsible for the storage and retention of original data pertaining to the project for a minimum of five years.
- Reporting of adverse events or unanticipated problems:** The PI is responsible to report any serious or unexpected adverse events or unanticipated problems, which could involve a risk to participants or others.
- Biological samples:** No biological samples to be shipped out of the Kingdom of Saudi Arabia without prior IRB approval
- Participant incentives:** No financial compensation or gifts to be given to participants without prior IRB approval.
- Storage of biological samples:** All biological samples collected for the purpose of this research must be stored in the KAIMRC related repository.
- You will need to resubmit the proposal to the IRB for review and re-approval before implementing any changes to the approved proposal.
- It is possible that the IRB may decide that the proposed new changes may exclude the proposal from being accepted for exempt review.
- It is your responsibility to safely store the data collected.

05 MAY 2020

Prof. Abdullah Al Sayyari
Chairman, Institutional Review Board (IRB)
Ministry of National Guard - Health Affairs

AA/AQ/Areej

2. Copy of consent form (Arabic)

<p>Kingdom of Saudi Arabia Ministry of National Guard - Health Affairs</p>   <p>المملكة العربية السعودية وزارة الحرس الوطني - الشؤون الصحية</p>	
Informed Consent for Cross Sectional Surveys إقرار موافقة للمشاركة بدراسة مقطعية	
Study Title:	Evaluating the Awareness of Preoperative Fasting among Adult Patients for Elective Surgery in National Guard Health Affairs (NGHA), Riyadh, Saudi Arabia.
Study No.:	
Principal Investigator:	Dr. Nancy Hassan
	
<p>You are requested to participate in research that will be supervised by Dr. Nancy Hassan in KSAU-HS.</p> <p>This study aims to assess the patients' awareness toward preoperative fasting</p> <p>Your participation is voluntary and you have the right to not complete this survey without giving any reason and this will not affect your current or future medical care in MNG-HA.</p> <p>You do not have to sign this information sheet only you can choose to agree/disagree; your acceptance to complete the survey will be interpreted as your informed consent to participate.</p> <p>Your responses will be kept anonymous. However, whenever one works with email/the internet there is always the risk of compromising privacy, confidentiality, and/or anonymity. Despite this possibility, the risks to your physical, emotional, social, professional, or financial well-being are considered to be 'less than minimal'.</p> <p>If you have any questions about the research, please contact Dr. Nancy Hassan: hassanmassoudna@ngha.med.sa</p> <p>In case you have any enquiries related to your rights as a research subject you can contact the Institutional Review Board on Tel 8011111 Ext. 14572.</p>	<p>أنت مدعو للانضمام طواعية لدراسة بحثية تحت إشراف د. نانسي حسن في جامعة الملك سعود بن عبدالعزيز للعلوم الصحية.</p> <p>تهدف هذه الدراسة إلى قياس مدى وعي المرضى اتجاه الصيام ما قبل العملية</p> <p>إن مشاركتك في هذه الدراسة اختياري ولك الحق التام في عدم قبول تعبئة الاستمارة أو الانسحاب في أي وقت تشاء بدون إبداء الأسباب ولن يؤثر ذلك على العناية الطبية المقدمة لك حالياً أو في المستقبل في الشؤون الصحية بوزارة الحرس الوطني.</p> <p>لا يجب عليك التوقيع على ورقة المعلومات هذه، فقط عليك الاختيار موافق / غير موافق فمجرد قبولك تعبئة هذا الاستبيان يعتبر بمثابة إقرارك بالموافقة على المشاركة في هذا البحث.</p> <p>ستبقى الردود على الأسئلة سرية ومع ذلك، فإن العمل عن طريق البريد الإلكتروني والانترنت يبقى هناك احتمال اختراق خصوصية البيانات وسرية المعلومات ولكن بالرغم من هذه الاحتمالية تبقى الأخطار البدنية والعاطفية والاجتماعية والمهنية والمالية المترتبة عليك ضمن الحد الأدنى من الخطورة.</p> <p>إذا كان لديك أي أسئلة حول هذا البحث، يرجى التواصل مع د. نانسي حسن hassanmassoudna@ngha.med.sa</p> <p>في حال كان لديك الاستفسارات المتعلقة بحقوقك كموضوع بحث يمكنك الاتصال بمجلس المراجعة المؤسسية على هاتف 8011111 تحويلة 14572</p>
<input type="checkbox"/> Agree to participate <input type="checkbox"/> Disagree to participate	<input type="checkbox"/> <input type="checkbox"/>
Version No. :	Version Date:

3. Copy of questionnaire (English)



Survey	
Personal information:	
1- Gender:	- Male - Female
2- Age:	- (18 - 30) - (30 - 50) - (+50)
3- Highest education:	- (Tertiary) - (Secondary) - (Primary) - (Nil)
1- Have you undergone anaesthesia or surgery before?	- Yes - No
2- Do you know that you must fast before surgery?	- Yes - No
3- Who informed you of the need to fast?	- Doctor - Nurse - Both the doctor and nurse - Unable to recall
4- Were the instructions clear?	- Yes - No
5- What is your understanding of the reason for fasting before surgery?	- Avoid vomiting during surgery. - to reduce bleeding - to prevent the reaction with anesthesia medication - Don't know
6- Do you think that following preoperative fasting instructions is necessary to avoid life-threatening problems?	- Yes - No
7- Did you fast before your surgery today?	- Yes - No
8- What is the duration of fasting for liquids?	- (1 - 2) hr - (2 - 4) hr - (4 - 6) hr - (6 - 8) hr
9- what is the duration of fasting for food?	- (1 - 2) hr

	- (2 - 4) hr - (4 - 6) hr - (6 - 8) hr
10- Do you believe fasting before surgery is important?	- Yes - No
11- Do you think that not fasting before the surgery will affect the success of the anaesthesia?	- Yes - No
12- If you did not follow fasting instructions, and knew that your surgery will be delayed or postponed because of this, would you lie about fasting to your doctors and nurses?	- Yes - No