



EDITION #01

KSUMSC SCIENTIFIC MAGAZINE

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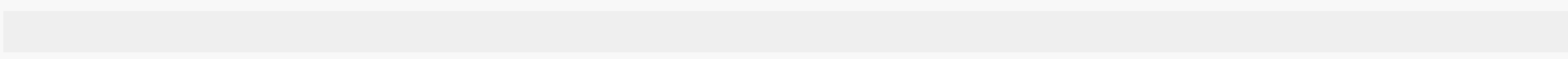
SCIENTIFIC MAGAZINE

Welcome to KSUMSC scientific magazine, you are one-step ahead for diving into the incredible research work of King Saud University students! Here, we are thrilled to share the dedication and innovation of our student researchers while empowering them to share their valuable work with a wider audience.

This journal edition goes beyond simply displaying research. We offer interactive tools and resources to help students develop their research skills. This includes guidance on IRB submission, research methodologies, and reference management in addition to 11 steps to master Systematic review and meta-analysis.

By combining student research exposure with skill development, the journal aims to cultivate a vibrant research culture within KSU. And we believe that fostering a passion for research exploration paves the way for future generations of groundbreaking discoveries.

Stay tuned! As you explore the journal, you'll discover a diverse range of research topics, insightful analysis, and the passionate voices of our aspiring researchers.



Introduction -----	4
--------------------	---

- First Section

KSU students publication -----	4 - 44
--------------------------------	--------

- Second Section

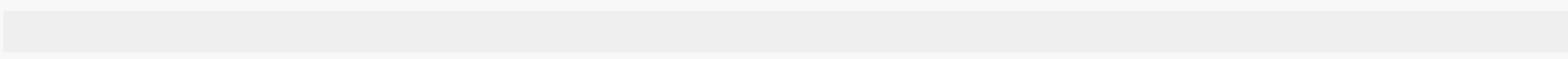
Research Achievements by KSU Students -----	46-49
---	-------

Third Section “Steps to master SR-MA”

Intro to SR-MA -----	51
Systematic review vs Narrative review -----	52
Mindmap for Systematic review -----	53
Research Question -----	54
Preliminary Search -----	55
Search Database -----	56-59
Protocol writing -----	60
Title & Abstract screen -----	61-65
Data extraction & Quality assessment -----	66-67
Manuscript writing & Submission -----	68-77

Fourth Section “IRB Submission”

Introduction & Overview -----	79-81
KSU-IRB Form-019 -----	82-85
Methodology “Sampling Technique” -----	86-87
Reference Management -----	88
KSU-REC file& CV templete -----	89-91
Certificate of Bioethics -----	92-93
Document Overview Table -----	94
Data retrieval-----	95-97



SECTION #01

KSUMC STUDENT PUBLICATIONS

Embark on a journey of discovery within this section. you will explore a diverse range of research topics, delve into insightful ideas with different perspectives, to aspire you for your next project



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First Author	Hatan Mortada
Co-Authors	Hatan Mortada, Abdulaziz Alsuham, Faisal Almutairi, Talal A. Albalawi, Ibrahim S. Albalawi, Dana Alkuwaity, Feryal Alali, Haya AlMosained, Raghad Shosho, Zainab Almanasef, Hussain Alobaidi, Khalid Arab
Journal	Journal of the British Association of Oral and Maxillofacial Surgeons

IS TRANEXAMIC ACID EFFECTIVE IN MINIMIZING BLOOD LOSS IN CLEFT PALATE REPAIR? A RIGOROUS ASSESSMENT THROUGH A COMPREHENSIVE SYSTEMATIC REVIEW AND META-ANALYSIS

Hatan Mortada, Abdulaziz Alsuham, Faisal Almutairi, Talal A. Albalawi, Ibrahim S. Albalawi, Dana Alkuwaity, Feryal Alali, Haya AlMosained, Raghad Shosho, Zainab Almanasef, Hussain Alobaidi, Khalid Arab

Introduction

Cleft palate repair is a common reconstructive procedure that can involve significant blood loss. Tranexamic Acid (TXA) has been proposed to minimize blood loss during various surgical procedures. However, its effectiveness for cleft palate repair remains unclear. This systematic review and meta-analysis aims to assess the effectiveness of TXA in reducing postoperative blood loss based on available research.

Methods

Adhering to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, we conducted a comprehensive search across multiple databases, including PubMed, Cochrane, and Web of Science, to identify relevant studies published up to September 2023. Only randomized controlled trials (RCTs) were included in this review. The primary outcomes measured were total blood loss, transfusion rates, and postoperative complications.

Results

We identified four relevant RCTs. Involved 275 cleft palate patients, with a mean age of 28.7 months. The pooled analysis found no significant difference in the duration of surgery (MD -18.40 mins, $p=0.09$), preoperative hemoglobin (MD 0.46 g/dL, $p=0.27$), or postoperative hemoglobin (MD 0.07 g/dL, $p=0.86$) between TXA and control groups. Intraoperative blood loss was lower with TXA but with TXA, the difference was not statistically significant (MD -16.63 mL, $p=0.15$). TXA significantly improved surgical field visibility ($p=0.004$). No adverse events occurred with the use of TXA.

Conclusion

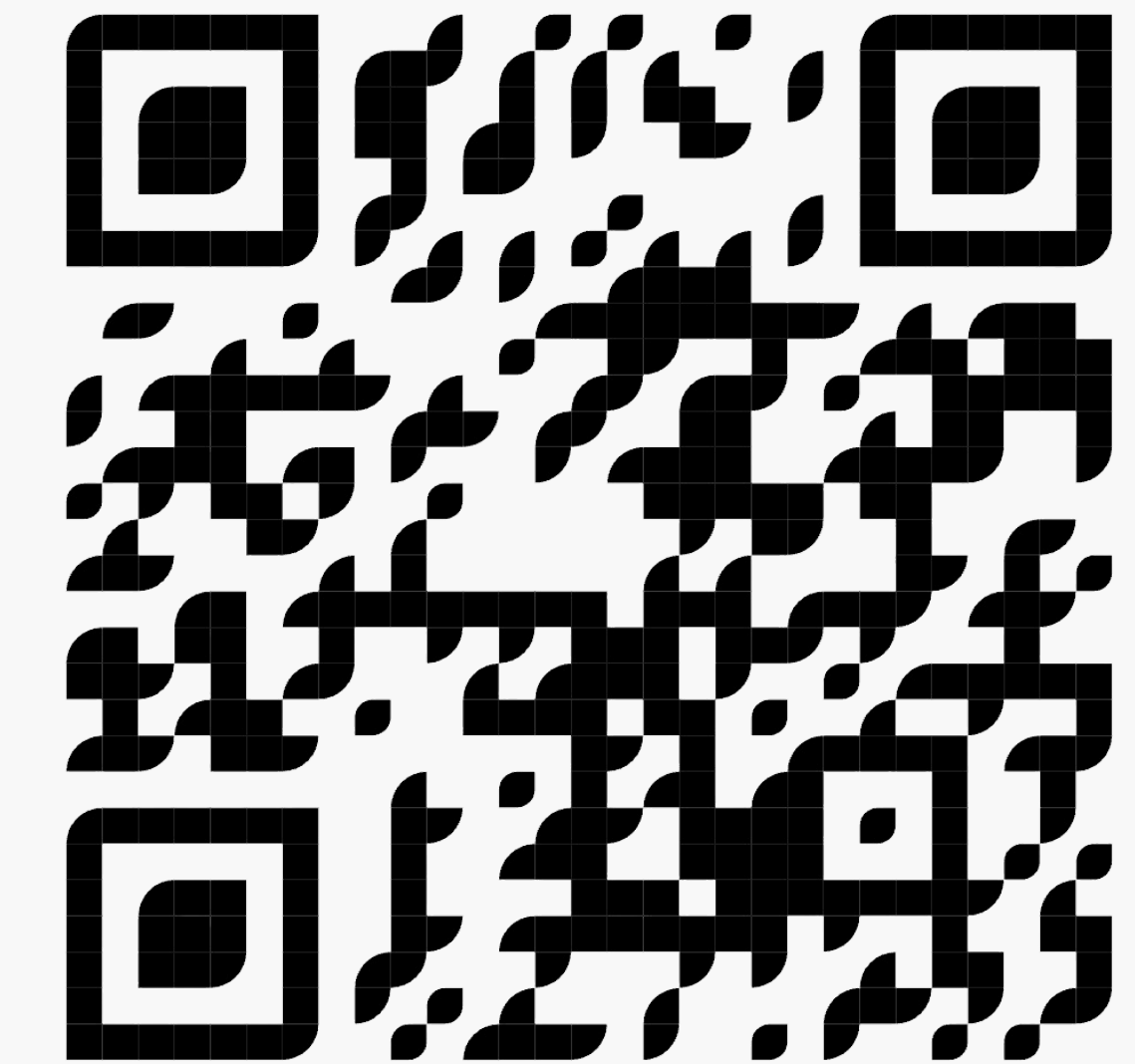
While no significant differences were found in surgical outcomes with TXA, surgical field visibility significantly improved. TXA showed a promising safety profile. Larger and higher-quality RCTs are still needed to validate these preliminary findings before considering TXA as a standard treatment.



Journal of Orthopaedic Surgery and Research

Scan for the Full Article

First Author	Abdulaziz Almaawi
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Journal	journal of orthopedic surgery and research



FOOT HEALTH AND QUALITY OF LIFE AMONG ADULTS IN RIYADH, SAUDI ARABIA: A CROSS-SECTIONAL STUDY

Abdulaziz Almaawi, Hashim Alqarni, Ahmed K Thallaj, Mohammed Alhuqbani, Zyad Aldosari, Omar Aldosari, Naif Alsaber.

Background

Foot conditions are frequent among the Saudi population. However, little is known regarding the effects of foot health on quality of life among the general Saudi population. This study aimed to assess foot health status, general health, and quality of life among the population of Riyadh using the Foot Health Status Questionnaire (FHSQ).

Methods

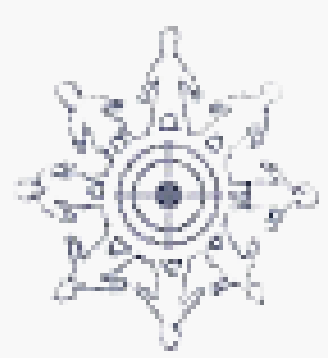
In this cross-sectional study, out of the total number of participants approached, using a preset questionnaire, by trained medical students to participate in this study, 398 met the inclusion criteria. The questionnaire started with an informed consent followed by a set of questions regarding the sociodemographic and past medical characteristics of the participants. Foot health and overall health were assessed using a FHSQ.

Results

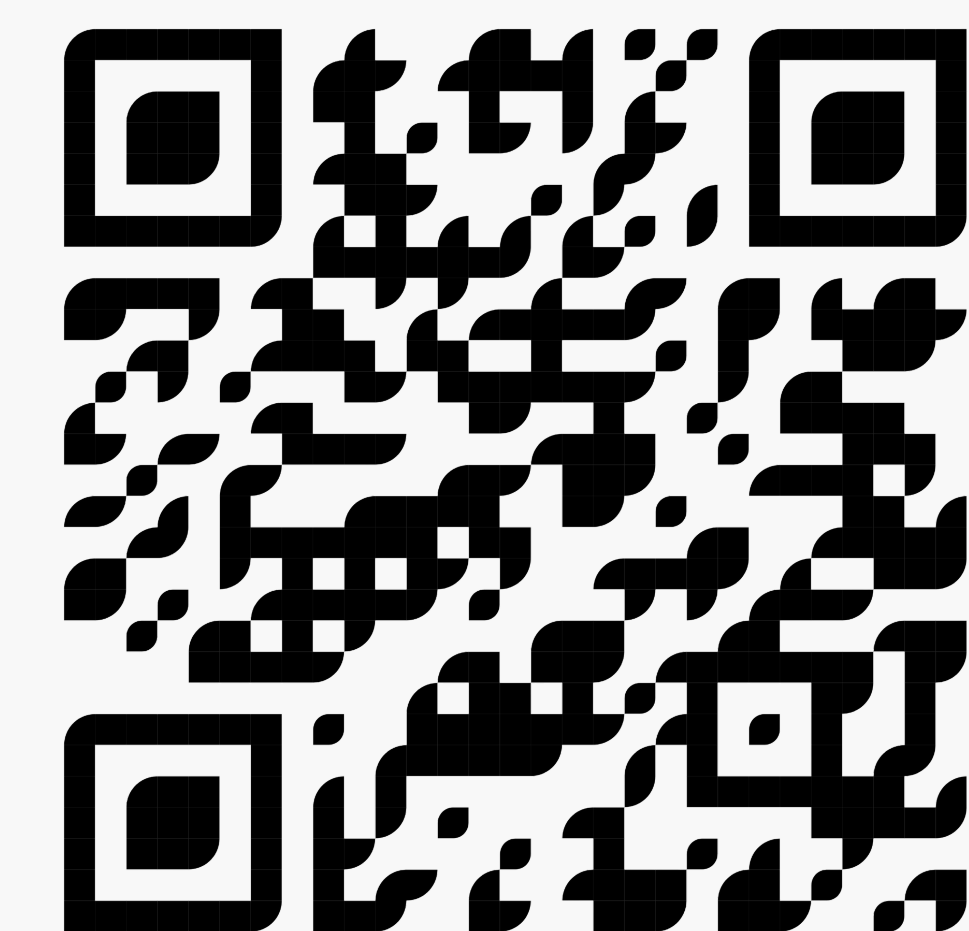
A statistically significant positive correlation was observed between all the FHSQ domains, except for footwear. The strongest correlation was observed between foot pain and foot function, foot pain and general foot health, and foot function and general foot health. A statistically significant positive correlation was observed between general foot health and general health, vitality, social function. Our results also showed that foot pain, general foot health, vitality, and social function scores were significantly lower in women as compared to men.

Conclusions

Significant positive correlation was observed between poor foot health and declining quality of life; thus, it is crucial to increase society's awareness of the importance of medical foot care and continuous follow-up and consequences if left unrecognized and untreated. This is a major domain that can improve the well-being and quality of life of a population.



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First Author	Mansour Aljabry
Co-Authors	Aljoud Algazlan, Nouf Alsubaie, Shatha Bin Dher, Hassan Semar Aljabri & Ghazi S. Alotaibi
Journal	Journal of Medical Case Reports

HOMOZYGOUS MISSENSE VARIANT F12 (GLY506ASP) ASSOCIATED WITH SEVERE FACTOR XII DEFICIENCY: A CASE REPORT

Mansour Aljabry, Aljoud Algazlan, Nouf Alsubaie, Shatha Bin Dher, Hassan Semar Aljabri & Ghazi S. Alotaibi

Background

Factor XII deficiency can be related to either homozygous or compound heterozygous pathogenic variants in the F12 gene. The disease is commonly known as Hageman trait and is inherited in both autosomal recessive or dominant patterns. Clinically, factor XII deficiency is not associated with bleeding but conversely has been linked to thrombotic events, recurrent pregnancy loss, and hereditary angioedema. Molecular data of F12 deficiency are scarce and have revealed varying results between cases. However, most of the reported variants are missense mutations, gross deletions, or small insertion. Factor XII deficiency has been reported in the Saudi population in several studies, either as isolated case reports or included within the studies of rare bleeding factors deficiency. However, molecular data are lacking as no case report of genetic studies related to factor XII deficiency has been published in our local population, to the best of our knowledge.

Case report

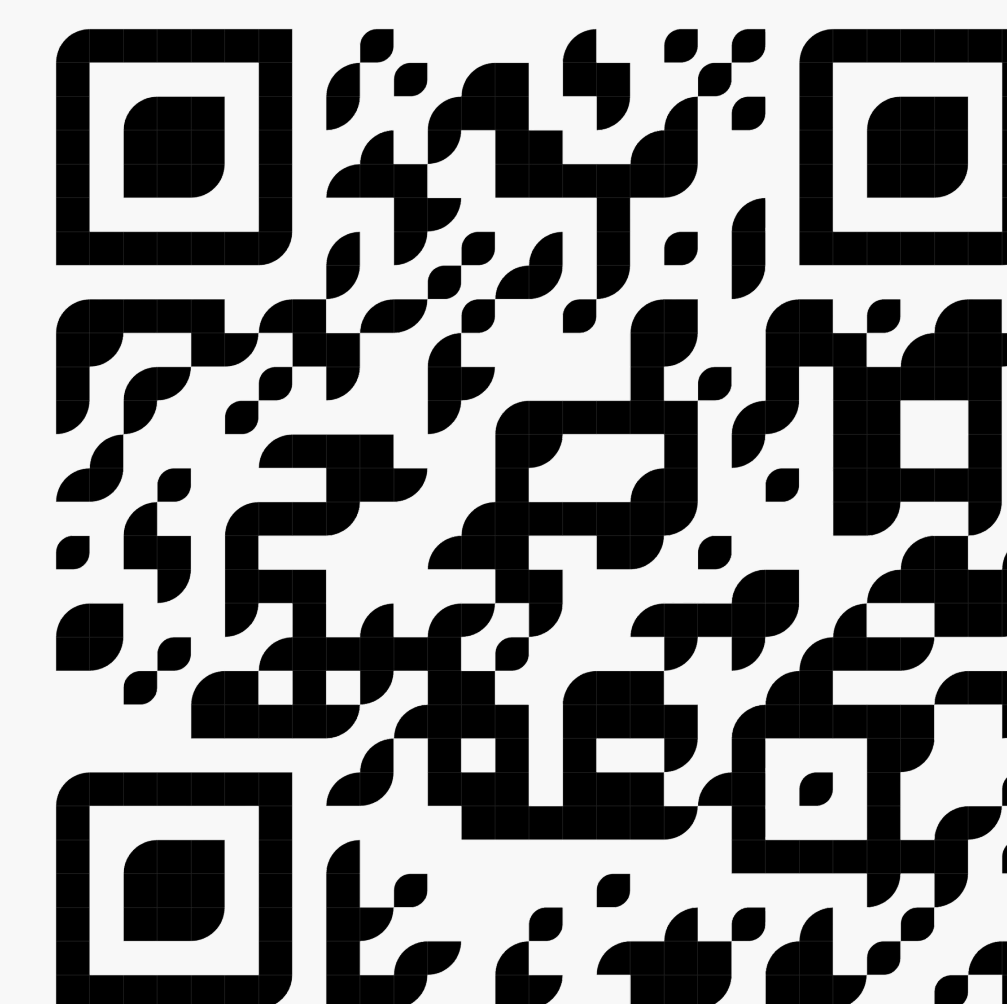
Herein we describe a homozygous missense variant involving exon 12 within F12 gene (5:176,830,269 G>A; p.Gly506Asp) in a 36-year-old Saudi multiparous female referred from the surgical clinic with significantly high activated partial thromboplastin time during preoperative assessment for sleeve gastrectomy. The patient had no history of bleeding episodes during the previous deliveries nor any tooth extractions. She had single event of spontaneous abortion during the 15th week of gestation without any bleeding complication. There was no history of thrombosis or skin manifestations, and she was not taking any medicines. There was no family history of bleeding or thrombosis. Family history revealed consanguinity as the parents are first-degree cousins. Physical examination was unremarkable. Upon investigation, the prolonged activated partial thromboplastin time was fully corrected by a 1:1 mixing study with normal pool plasma while lupus anticoagulant tests were negative. Factor assays and von Willebrand factor tests are all within normal ranges except for factor XII, which was severely deficient. A homozygous missense variant involving exon 12 within F12 gene (5:176,830,269 G>A; p.Gly506Asp) was identified.

Conclusion

F12 (5:176,830,269 G>A; p.Gly506Asp) variant is likely to be a pathogenic variant among homozygous factor XII-deficient patients. Genetic counseling and management of the patients and families should be based on clinical evaluation.

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Journal	Cureus

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ANALYSIS OF GREMLIN 1 LEVELS FOLLOWING SLEEVE GASTRECTOMY

Khalid A Alregaiey, Assim A Alfadda, Naif S Alsaber, Abdulrahman M Bedaiwi, Faris R Almubarak, Abdullah F Bin Muammar, Rakan A Alfaifi, Mohammed N Alquwayfili, Rahma M Alyami,¹ and Muhammad Iqbal

Introduction

In the current study, we aimed to assess the levels of Gremlin 1, an adipokine with a rich repertoire of metabolic effects, in association with the glycemic and lipid parameters after sleeve gastrectomy.

Methods

This study was conducted on 31 males with obesity aged 25 to 50 years who underwent sleeve gastrectomy. Plasma Gremlin 1 levels were evaluated using enzyme-linked immunosorbent assay (ELISA) at baseline and 6-12 months after the operation, along with body mass index, insulin, glucose, and lipid profile.

Results

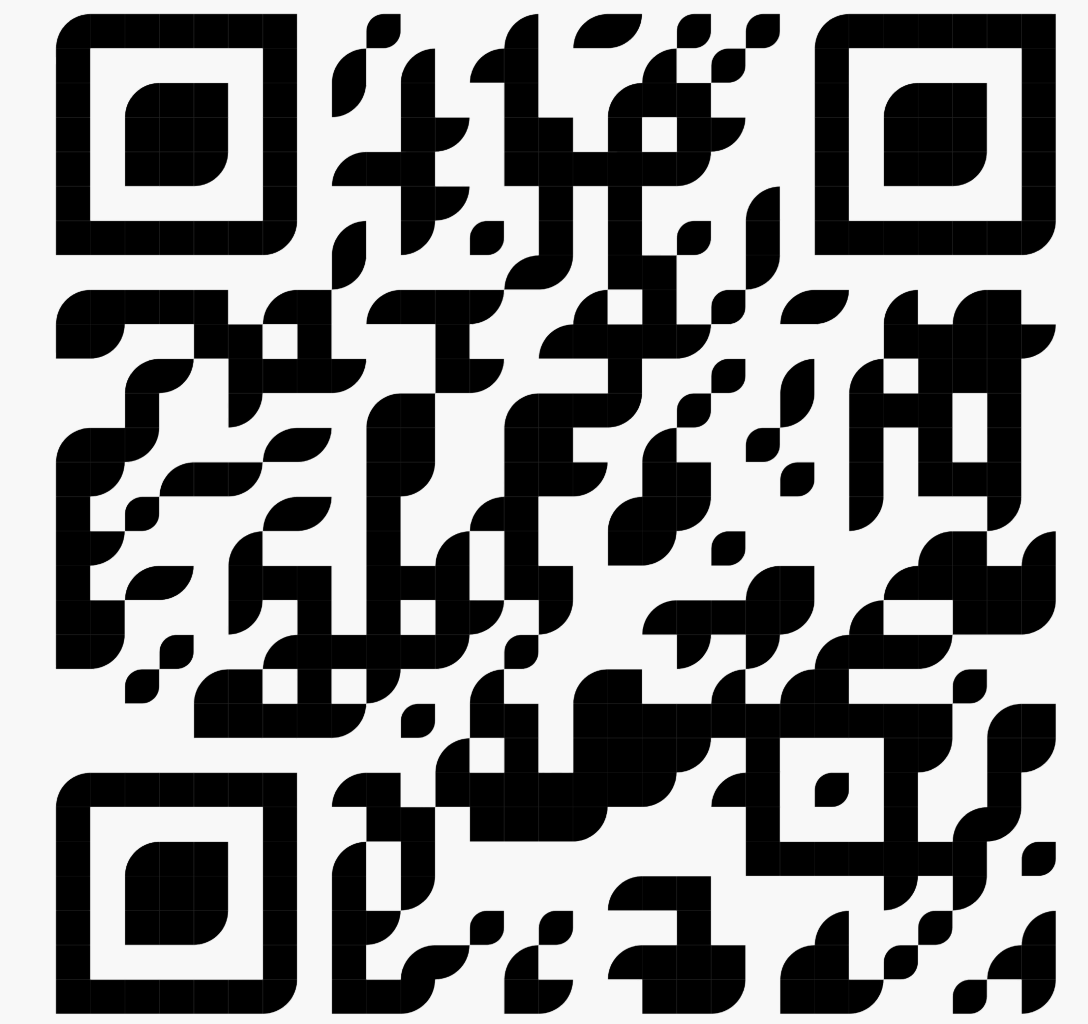
Plasma Gremlin 1 levels were elevated (148.19 ± 17.43 vs. 193.29 ± 19.82 ng/mL, $p < 0.05$) after sleeve gastrectomy. This was accompanied by a decrease in body mass index (from 51.47 ± 1.71 to 39.23 ± 1.56 kg/m², $p < 0.05$). Insulin and Homeostatic Model Assessment for Insulin Resistance (HOMA-IR) also exhibited a significant decrease (19.69 ± 1.81 vs. 8.98 ± 1.09 mIU/L and 6.52 ± 0.98 vs. 2.57 ± 0.036 $p < 0.05$, respectively) in the postoperative period. Total cholesterol levels were significantly increased after surgery (4.29 ± 0.16 to 5.10 ± 0.16 , $p < 0.05$). Pearson correlation analysis showed that Gremlin 1 was positively correlated with insulin before surgery, but there was no significant correlation after surgery.

Conclusion

The circulating Gremlin 1 levels were elevated postoperatively among our participants. The improvement in insulin sensitivity appears to be independent of the reported antagonistic effects of Gremlin 1.

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Journal	Plastic and Reconstructive Surgery



NATIONWIDE STUDY: PUBLIC ADULTS' PERCEPTION OF COSMETIC SURGERY IN SAUDI ARABIA

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Introduction

Knowing what influences people to pursue cosmetic surgery can aid current and aspiring cosmetic surgeons as they develop their techniques and enhance their market practice. This study aimed to evaluate Saudi adults' perceptions of cosmetic surgery using the three subscales of the Acceptance of Cosmetic Surgery Scale, namely Social, Consider, and Intrapersonal.

Methods

This cross-sectional, nationwide study involved members of the public from all provinces of Saudi Arabia. The inclusion criteria were being a Saudi resident over 18 years old and consenting to participate; those who did not meet the criteria were excluded. The study was implemented between October 25 and December 16, 2022. The electronic survey was composed of a demographic characteristics section and a previously constructed questionnaire modified for Arabic speakers to assess the population's perceptions of cosmetic surgery. Statistical analysis was conducted using the SPSS 22 statistical package.

Results

Of the 8006 Saudi adults who participated in the study, 5551 (69.3%) were women, and 2245 (30.7%) were men. We found that intrapersonal factors were the primary motivator, followed by factors addressed by the Consider and Social subscales. However, attitudes differed by gender, age, and other demographic characteristics: men and younger individuals (18–29) showed the lowest score for likelihood to pursue cosmetic surgery, whereas women and older individuals (40–50) ranked the highest on total scale scores. Overall, the Saudi adult population showed diminished perceptions of cosmetic surgery nationwide.

Conclusion

The results confirmed the authors' hypothesis that there is a diminished perception of cosmetic surgery among adults in Saudi Arabia.

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Journal	Cureus



THE PREVALENCE AND CORRELATION OF SUICIDAL IDEATION AMONG NURSES IN KING SAUD UNIVERSITY MEDICAL CITY

• Khaleel I. Alyahya • Rand M. Alrefaei • Leen F. Almadhyani • Sarah S. AlQuwayz • Mona I. AlOmairini • Farah A. Alsayed • Yara S. Alasmari

Objectives

The aim of the study is to measure the prevalence of suicidal ideation among nurses at King Saud University Medical City, compare its prevalence between male and female nurses, and identify the potential risk factors.

Methods

We conducted a cross-sectional study. The questionnaire was distributed to nurses via email. It consisted of demographics, Depression, Anxiety and Stress Scale (DASS21), and Suicidal Ideation Scale (SIS). We used the Statistical Package for the Social Sciences (SPSS) statistical software for analysis.

Results

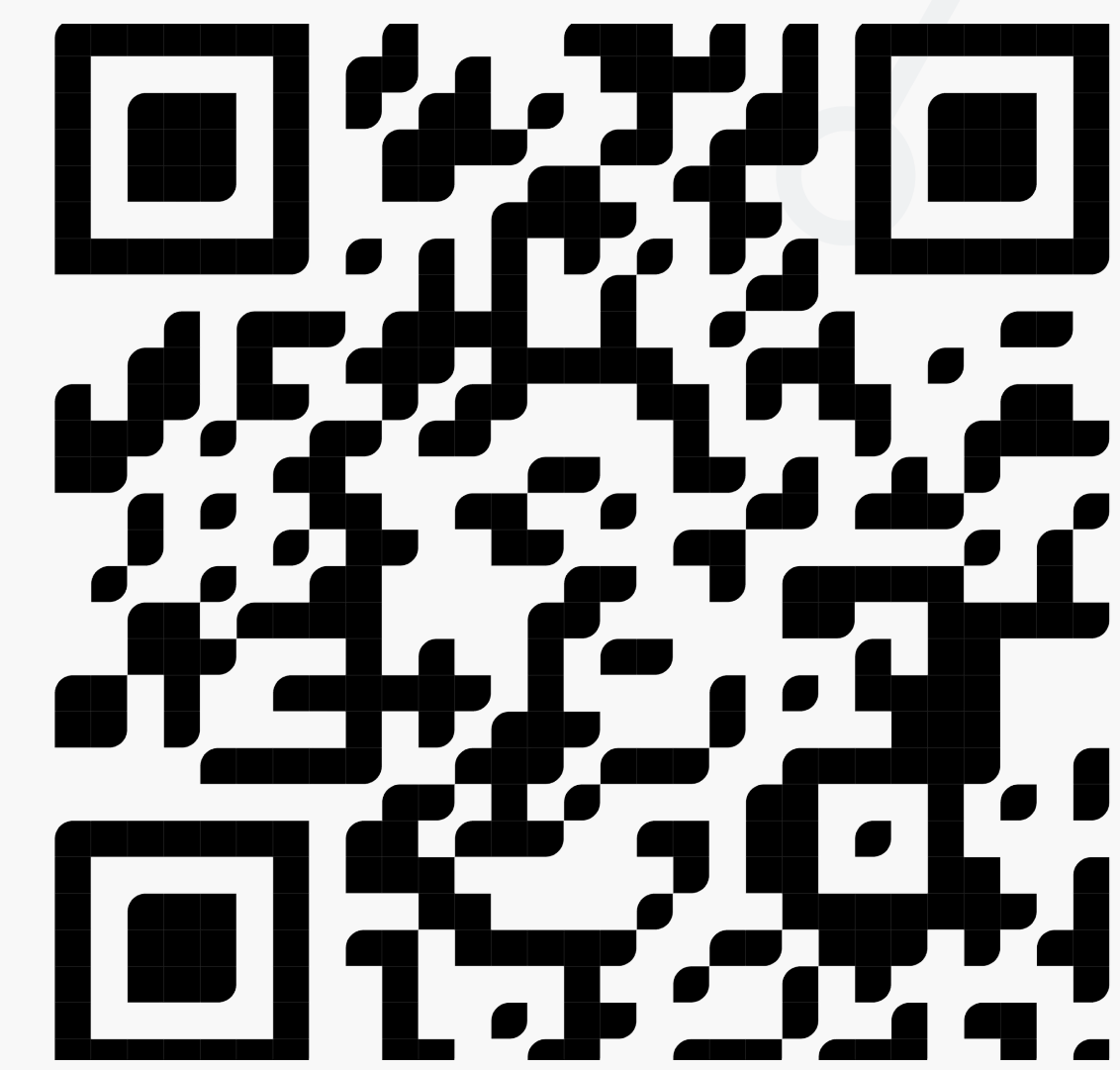
The total number of participants was 419. The estimated prevalence of suicidal ideation among nurses was 24.58%. The prevalence among female and male nurses was 24.67% and 23.68%, respectively. Moreover, we found that nurses who are non-Muslim, single, and living by themselves are highly correlated with suicidal ideation. Depression, stress, and anxiety are also significantly associated with suicidality, with depression being the most significantly related to suicidal ideation.

Conclusion

Nurses who experienced depression, anxiety, and stress had an increased likelihood of suicidal ideation. This study demonstrates the need to raise awareness of depression, anxiety, and stress in order to prevent suicidal ideation among nurses. Further research is needed to develop measures of successful monitoring and prevention.

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Journal	Translational Pediatrics



EFFECT OF A KETOGENIC DIET ON DECREASE OF SEIZURES IN REFRACTORY EPILEPSY AMONG CHILDREN (INFANCY TO 14 YEARS OLD) IN SAUDI ARABIA: A CROSS-SECTIONAL STUDY

Leena R. Baghdadi, Renad A. Alhomaidi, Fatimah S. Alhelal, Arwa A. Alqahtani, Shatha A. Aldosary, Samar M. Almohammedi, Rania A. Almutairi, Lamyaa A. Jad, Hasna H. AlShammari

Background

Refractory (intractable/pharmaco-resistant) epilepsy in children is considered if disabling seizures continue despite appropriate trials of two anti-seizure drugs, either alone or in combination. Ketogenic diets are used as a treatment option in many countries for children with refractory seizures; however, few patients have tried it in Saudi Arabia. Therefore, we examined the relationship between the exposure to a ketogenic diet and its effect in decreasing seizure frequency in infants and children up to 14 years who had refractory epilepsy and assessed factors that could improve the outcome of seizures.

Methods

This cross-sectional study was conducted at King Fahad Medical City, Riyadh, Saudi Arabia. Data were collected by reviewing medical records of eligible children (infants and children up to 14 years old) with refractory epilepsy who were on ketogenic diets. Socioeconomic data of the parents (guardians) were collected via phone interviews after verbal consent from the parents (guardians).

Results

We recruited 95 children (aged 10 months to 14 years) with refractory epilepsy and on Ketogenic diets. Up to 44% of patients on 3:1 and 4.5:1 ratio ketogenic diets had decreased seizure frequency while patients on 1:1 and 2:1 ratio ketogenic diets showed no decrease in seizures. Patients with generalized epilepsy who were on ketogenic diets had the most improvement in seizure outcomes (56.1%) and patients on ketogenic diets who were ambulatory indoors and outdoors (66.7%) showed a high level of improvement in seizure outcomes compared to patients with who were non-ambulatory (21.9%). Lower improvements in seizure frequency in epileptic patients on ketogenic diets were associated with low education levels of parents (33.3% high school vs. 50% undergraduate school), low incomes [$<11,400 \pm 7,560.864$ Saudi riyal (SR)], and diagnosis of seizures in patients >8 years old.

Conclusion

Ketogenic diets are a promising approach for treatment of refractory epilepsy among children. The improvement in seizure outcomes was associated with higher ratios of ketogenic diets (3:1 and 4.5:1), and higher physical activity. Sociodemographic factors, including parents' (guardians') education levels and income influenced the improvement of seizures.

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First Author	Syed Habib
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Journal	Cureus



BARRIERS AND FACILITATORS OF TELEMEDICINE AMONG PHYSICIANS AT A UNIVERSITY HOSPITAL

Syed Habib • Khaled B. Alsulaim • Osama A. Mobeirek • Abdullah M. Alsaeed • Fahad A. Albawardi • Yazeed K. Alqahtani • Abdulrhman A. Alsuhaibany

Background and aims

This study explored the perceived barriers and facilitators to the implementation of telemedicine among physicians and estimated and compared the prevalence of telemedicine use among physicians before and during coronavirus disease 2019 (COVID-19).

Methods

This cross-sectional study was conducted at King Saud University in Riyadh. A convenience sample of 163 physicians working at King Khalid University Hospital (KKUH) completed an online survey. Demographic data, patterns of use, and perceived barriers and facilitators of telemedicine were collected using a 5-point Likert scale.

Results

Our research showed that 61.3% (n = 100) of the physicians surveyed had used telemedicine in their careers. The prevalence of telemedicine before the onset of COVID-19 was 18.4%, whereas during COVID-19, it increased to 59.5%, which is an increase of 330% (P < .001). Most of the respondents (50.9%; n = 83) used it weekly (27%) or occasionally (23.9%). The most prevalent perceived barrier was technical difficulties (68.7%; n = 112), and the most prevalent perceived facilitator was that telemedicine can reduce unnecessary face-to-face appointments (86.5%; n = 141).

Conclusion

The use of telemedicine to provide health care is on the rise, especially in the case of emergencies. Different specialties face different facilitators and barriers, and the potential of telemedicine implementation depends on the work environment and the needs of the specialty. Several obstacles need to be overcome before telemedicine becomes a consistently used method for providing health care.



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Journal	Genes MDPI

CLINICAL, RADIOLOGICAL, AND GENETIC CHARACTERIZATION OF A PATIENT WITH A NOVEL HOMOALLELIC LOSS-OF-FUNCTION VARIANT IN DNM1

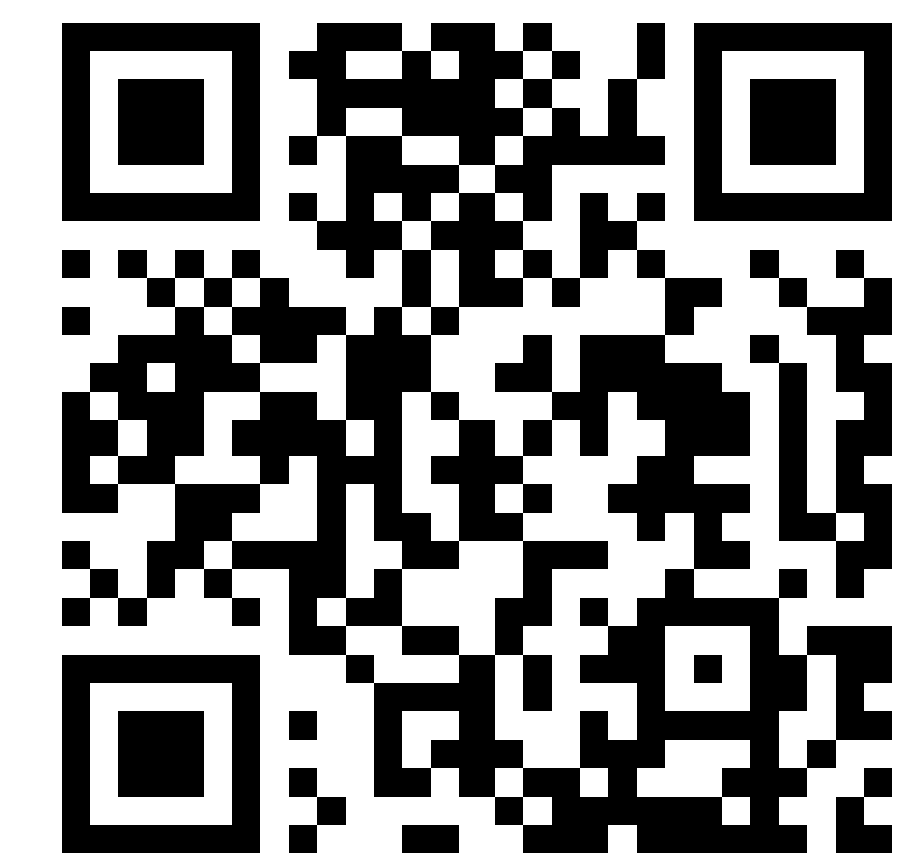
Ruqaiyah AlTassan, Hanan AlQudairy, Rakan Alromayan, Abdullah Alfalah, Omar A. AlHarbi, Ana C. González-Álvarez, Stefan T. Arold, Namik Kaya.

Abstract

Heterozygous pathogenic variants in DNM1 are linked to an autosomal dominant form of epileptic encephalopathy. Recently, homozygous loss-of-function variants in DNM1 were reported to cause an autosomal recessive form of developmental and epileptic encephalopathy in unrelated patients. Here, we investigated a singleton from a first-degree cousin marriage who presented with facial dysmorphism, global developmental delay, seizure disorder, and nystagmus. To identify the involvement of any likely genetic cause, diagnostic clinical exome sequencing was performed. Comprehensive filtering revealed a single plausible candidate variant in DNM1. Sanger sequencing of the trio, the patient, and her parents, confirmed the full segregation of the variant. The variant is a deletion leading to a premature stop codon and is predicted to cause a protein truncation. Structural modeling implicated a complete loss of function of the Dynamin 1 (DNM1). Such mutation is predicted to impair the nucleotide binding, dimer formation, and GTPase activity of DNM1. Our study expands the phenotypic spectrum of pathogenic homozygous loss-of-function variants in DNM1.



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First Author	Ambreen Kazi
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Journal	Healthcare MDPI

HEALTH-SEEKING BEHAVIORS AND MISCONCEPTIONS ABOUT OSTEOARTHRITIS IN PATIENTS AND THE GENERAL POPULATION IN SAUDI ARABIA

Ambreen Kazi, Hamad F. Alrabiah, Khalid Fawaz Alosaimi, Naif Ahmed Alshehri, Omar Mohammad Bassam Alhalabi, Abdulelah Saad Alshamrani, Aljohara M AlQuaiz, Bushra Hamid.

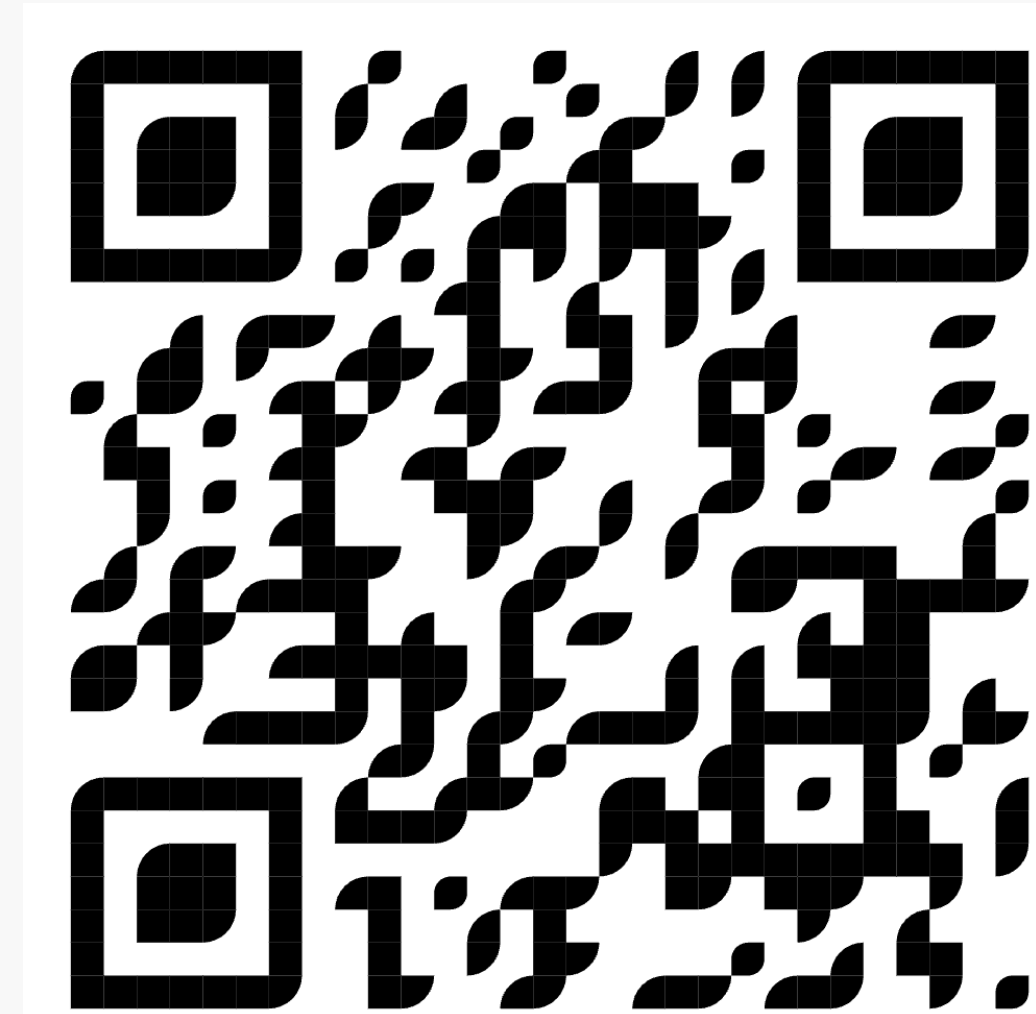
Abstract

Osteoarthritis (OA) is a public health disease that causes decreased mobility and leads to poor quality of life. A person's health-seeking behavior can influence their understanding of a disease, which in turn can alter its course. The objectives of this study were to measure the misconceptions about osteoarthritis and to identify the associated health-seeking behaviors. An online, self-administered, questionnaire-based study was conducted with 872 Arabic-speaking participants divided into three strata, group 1 comprising of patients with OA, group 2 participants with joint pain (without OA) and group 3 comprised of general population. Multivariate logistic regression analysis found that seeking care from general practitioners [3.29 (1.19, 9.16)], taking advice from friends [2.83 (1.08, 7.42)], seeking care from chiropractors [3.67 (1.02, 13.60)] and podiatrist [4.64 (1.31, 16.51)] were significantly associated with misconceptions, whereas, the odds were lower for those using social media [0.16 (0.06, 0.46)] and expert websites [0.63 (0.40, 0.99)]. The findings of this study imply that the level of misconceptions is high amongst all three strata.. Expert websites and social media have a positive effect on the management of osteoarthritis. However, general practitioners and allied health workers should regularly update their knowledge using refresher courses.



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Journal	Healthcare MDPI

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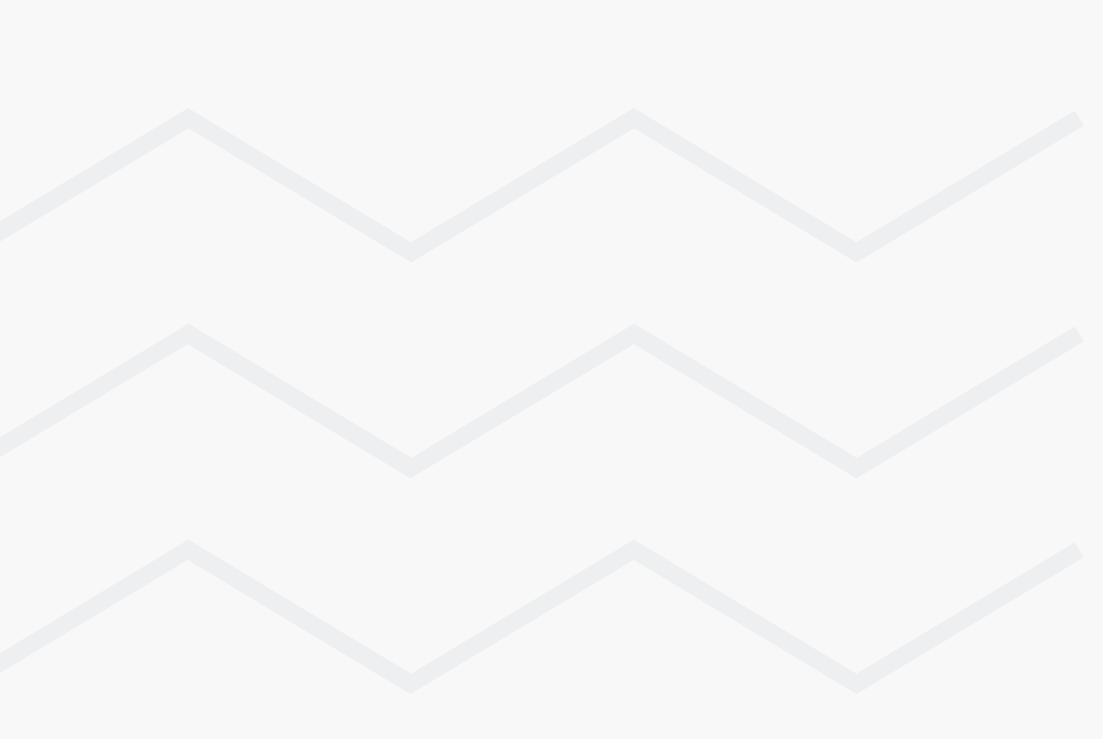


HEALTH-SEEKING BEHAVIORS AND MISCONCEPTIONS ABOUT OSTEOARTHRITIS IN PATIENTS AND THE GENERAL POPULATION IN SAUDI ARABIA

Mohamad-Hani Temsah, Fadi Aljamaan, Khalid H. Malki, Khalid Alhasan, Ibraheem Altamimi, Razan Aljarbou, Faisal Bazuhair, Abdulmajeed Alsubaihin, Naif Abdulmajeed, Fatimah S. Alshahrani, Reem Temsah, Turki Alshahrani, Lama Al-Eyadhy, Serin Mohammed Alkhateeb, Basema Saddik, Rabih Halwani, Amr Jamal, Jaffar A. Al-Tawfiq, Ayman Al-Eyadhy

Abstract

This study aimed to assess the knowledge, attitudes, and intended practices of healthcare workers (HCWs) in Saudi Arabia towards ChatGPT, an artificial intelligence (AI) Chatbot, within the first three months after its launch. We also aimed to identify potential barriers to AI Chatbot adoption among healthcare professionals. A cross-sectional survey was conducted among 1057 HCWs in Saudi Arabia, distributed electronically via social media channels from 21 February to 6 March 2023. The survey evaluated HCWs' familiarity with ChatGPT-3.5, their satisfaction, intended future use, and perceived usefulness in healthcare practice. Of the respondents, 18.4% had used ChatGPT for healthcare purposes, while 84.1% of non-users expressed interest in utilizing AI Chatbots in the future. Most participants (75.1%) were comfortable with incorporating ChatGPT into their healthcare practice. HCWs perceived the Chatbot to be useful in various aspects of healthcare, such as medical decision-making (39.5%), patient and family support (44.7%), medical literature appraisal (48.5%), and medical research assistance (65.9%). A majority (76.7%) believed ChatGPT could positively impact the future of healthcare systems. Nevertheless, concerns about credibility and the source of information provided by AI Chatbots (46.9%) were identified as the main barriers. Although HCWs recognize ChatGPT as a valuable addition to digital health in the early stages of adoption, addressing concerns regarding accuracy, reliability, and medicolegal implications is crucial. Therefore, due to their unreliability, the current forms of ChatGPT and other Chatbots should not be used for diagnostic or treatment purposes without human expert oversight. Ensuring the trustworthiness and dependability of AI Chatbots is essential for successful implementation in healthcare settings. Future research should focus on evaluating the clinical outcomes of ChatGPT and benchmarking its performance against other AI Chatbots.



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Journal	Clinical Epidemiology and Global Health



ASSOCIATION BETWEEN ACADEMIC STRESS DURING EXAM PERIOD, DIETARY BEHAVIOR AND BOWEL SYMPTOMS AMONG MEDICAL STUDENTS IN SAUDI ARABIA

Shatha Alduraywish, Abdullah Alburikan, Majed Alotaibi, Abdulaziz Alhamoudi, Abdullah Aldosari, Mohammed Alturki, Ahmed Alotaibi, Shabana Tharkar

Background

The study evaluated the levels of academic stress in medical students and investigated its association with eating habits and bowel symptoms.

Methods

Two hundred and ninety seven medical students participated in the study. Medical students from all five years of study were recruited using a stratified random sampling technique. A well-structured questionnaire containing three sections on stress levels, eating habits, and bowel symptoms was self-administered. Student t-test and ANOVA were used to quantify the association between variables.

Results

The medical students showed high levels of stress accounting for low (2%), moderate (72%), and high-stress levels (26%) during exams. Men showed higher stress levels than women. The levels of stress were similar in distribution across all years of study. Poor dietary habits were noted among the medical students. Around 66% reported skipping breakfast, and 69% consumed frequent unhealthy snacks. Reduced consumption of fruits less than three times per week (61.5%) and drinking water less than 2 L per day (82.3%) was noted. Mean dietary scores worsened as the stress levels increased ($p = 0.007$). Similarly, higher PAC-SYM scores were associated with higher stress levels ($p < 0.001$). Women showed more severe constipation symptoms than men (8.83 ± 8.02 ; 5.68 ± 5.87 ; $p < 0.001$).

Conclusions

Alarming levels of academic stress were noted during the exam period. There is an urgent need to frame multidisciplinary strategies involving behavior modification, nutrition education and a special focus on stress reduction programs for the medical students

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First Author	Ibraheem Altamimi
Co-Authors	Abdullah Altamimi • Abdullah S. Alhumimidi • Abdulaziz Altamimi • Mohamad-Hani Temsah
Journal	Cureus



SNAKEBITE ADVICE AND COUNSELING FROM ARTIFICIAL INTELLIGENCE: AN ACUTE VENOMOUS SNAKEBITE CONSULTATION WITH CHATGPT

Ibraheem Altamimi • Abdullah Altamimi • Abdullah S. Alhumimidi • Abdulaziz Altamimi • Mohamad-Hani Temsah

Background

Snakebites, particularly from venomous species, present a significant global public health challenge. Access to accurate and timely information regarding snakebite prevention, recognition, and management is crucial for minimizing morbidity and mortality. Artificial intelligence (AI) language models, such as ChatGPT (Chat Generative Pre-trained Transformer), have the potential to revolutionize the dissemination of medical information and improve patient education and satisfaction.

Methods

This study aimed to explore the utility of ChatGPT, an advanced language model, in simulating acute venomous snakebite consultations. Nine hypothetical questions based on comprehensive snakebite management guidelines were posed to ChatGPT, and the responses were evaluated by clinical toxicologists and emergency medicine physicians.

Results

ChatGPT provided accurate and informative responses related to the immediate management of snakebites, the urgency of seeking medical attention, symptoms, and health issues following venomous snakebites, the role of antivenom, misconceptions about snakebites, recovery, pain management, and prevention strategies. The model highlighted the importance of seeking professional medical care and adhering to healthcare practitioners' advice. However, some limitations were identified, including outdated knowledge, lack of personalization, and inability to consider regional variations and individual characteristics.

Conclusions

ChatGPT demonstrated proficiency in generating intelligible and well-informed responses related to venomous snakebites. It offers accessible and real-time advice, making it a valuable resource for preliminary information, education, and triage support in remote or underserved areas. While acknowledging its limitations, such as the need for up-to-date information and personalized advice, ChatGPT can serve as a supplementary source of information to complement professional medical consultation and enhance patient education. Future research should focus on addressing the identified limitations and establishing region-specific guidelines for snakebite management.

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First Author	Ibraheem Altamimi
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Journal	Cureus



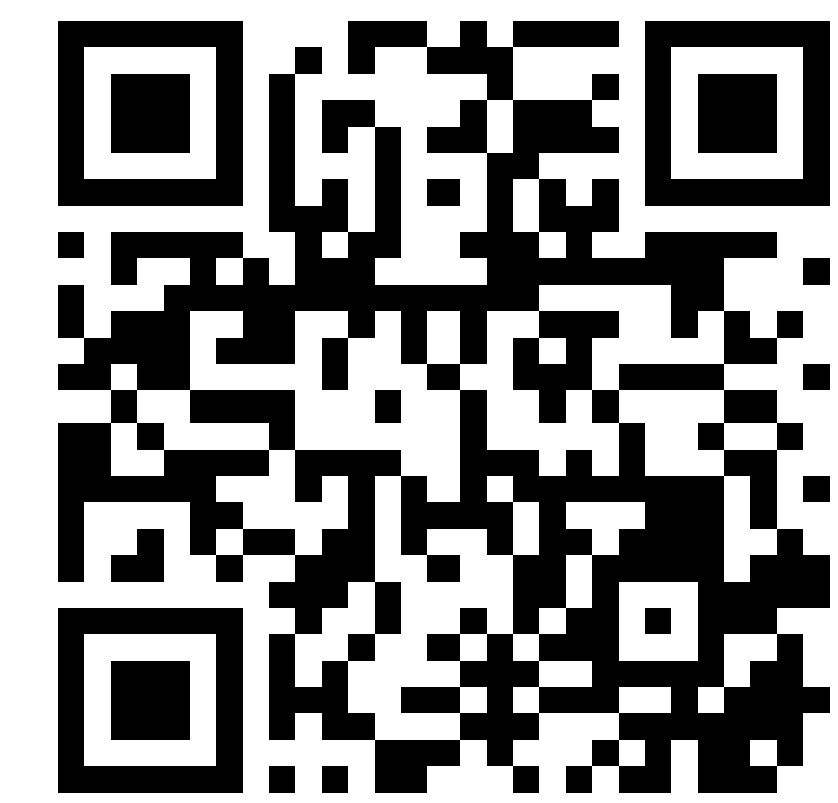
ARTIFICIAL INTELLIGENCE (AI) CHATBOTS IN MEDICINE: A SUPPLEMENT, NOT A SUBSTITUTE

Ibraheem Altamimi • Abdullah Altamimi • Abdullah S. Alhumimidi • Abdulaziz Altamimi • Mohamad-Hani Temsah

Abstract

This editorial discusses the role of artificial intelligence (AI) chatbots in the healthcare sector, emphasizing their potential as supplements rather than substitutes for medical professionals. While AI chatbots have demonstrated significant potential in managing routine tasks, processing vast amounts of data, and aiding in patient education, they still lack the empathy, intuition, and experience intrinsic to human healthcare providers. Furthermore, the deployment of AI in medicine brings forth ethical and legal considerations that require robust regulatory measures. As we move towards the future, the editorial underscores the importance of a collaborative model, wherein AI chatbots and medical professionals work together to optimize patient outcomes. Despite the potential for AI advancements, the likelihood of chatbots completely replacing medical professionals remains low, as the complexity of healthcare necessitates human involvement. The ultimate aim should be to use technology like AI chatbots to enhance patient care and outcomes, not to replace the irreplaceable human elements of healthcare.

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First Author	Khalifa Binkhamis,
Co-Authors	Alanoud S. Alhaider, Ayah K. Sayed, Yara K. Almufleh, Ghadah A. Alarify, Norah Y. Alawlah
Journal	Annals of Saudi Medicine (ASM)

PREVALENCE OF SECONDARY INFECTIONS AND ASSOCIATION WITH MORTALITY RATES OF HOSPITALIZED COVID-19 PATIENTS

Khalifa Binkhamis, Alanoud S. Alhaider, Ayah K. Sayed, Yara K. Almufleh, Ghadah A. Alarify, Norah Y. Alawlah

Background

ICU and other patients hospitalized with corona-virus disease 2019 (COVID-19) are more susceptible to secondary infections. Undetected secondary infections tend to have a severe clinical impact, associated with prolonged hospitalization and higher rates of inpatient mortality.

Objective

Estimate the prevalence of secondary infections, determine the frequency of microbial species detected at different body sites, and measure the association between secondary infections and outcomes among hospitalized COVID-19 patients.

Patients and method

Cross-sectional analytical study in Tertiary care center in Riyadh. Data were collected through retrospective chart review of hospitalized COVID-19 patients >18 years old from March 2020 until May 2022 at King Saud University Medical City (27 months). Rates of secondary infections among hospitalized COVID-19 patients were described and data on clinical outcomes (intensive care admission, invasive management procedures and mortality) was collected.

Main outcome measures: Features and rates of infection and mortality.

Sample Size: 260

Results

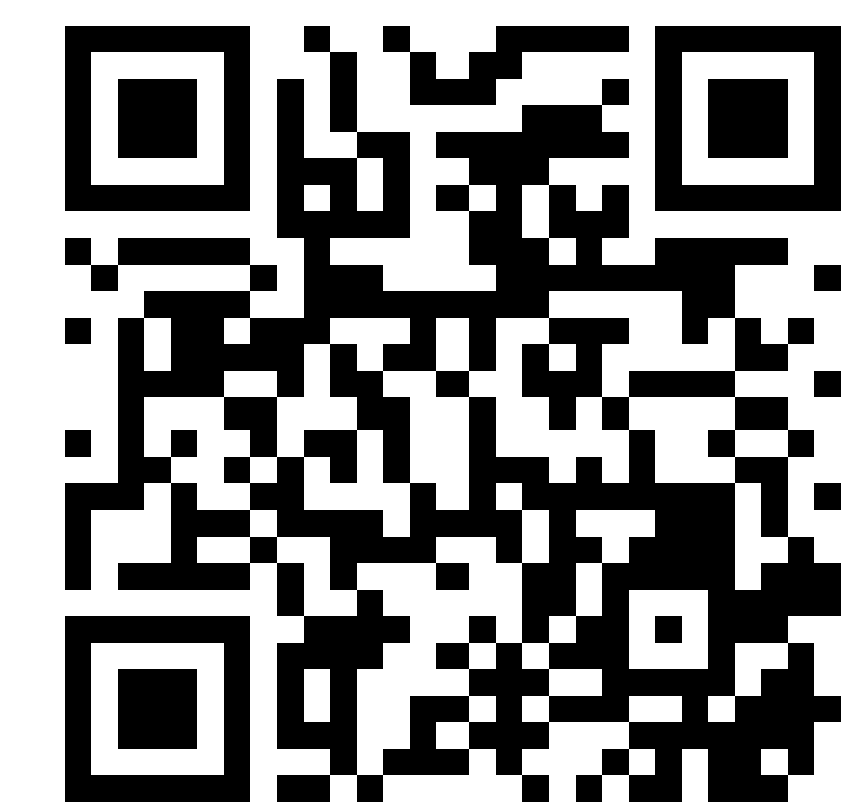
In total, 24.2% of the study population had secondary infections. However, only 68.8% of patients had secondary infection testing, from which 35.2% had a confirmed secondary infection. These patients had a significantly higher prevalence of diabetes mellitus ($P<.0001$) and cardiovascular diseases ($P=.001$). The odds of ICU admissions (63.3%) among secondarily infected patients was 8.4 times higher compared to patients with only COVID-19 infection (17.3%). Secondarily infected patients were more likely to receive invasive procedures ($OR=5.068$) and had a longer duration of hospital stay compared to COVID-19 only patients. Overall mortality was 16.2%, with a predominantly higher proportion among those secondarily infected (47.6% vs 6.1%) ($OR=14.015$). Bacteria were the most commonly isolated organisms, primarily from blood (23.3%), followed by fungal isolates, which were mostly detected in urine (17.2%). The most detected organism was *Candida albicans* (17.2%), followed by *Escherichia coli* (9.2%), *Klebsiella pneumoniae* (9.2%) and *Pseudomonas aeruginosa* (9.2%).

Conclusion

Secondary infections were prevalent among hospitalized COVID-19 patients. Secondarily infected patients had longer hospital stay, higher odds of ICU admission, mortality, and invasive procedures.



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First Author	Waleed Albishi
Co-Authors	Nasser M AbuDujain, Orfan Arafah, Ibrahim S Alshaygy, Zyad A Aldosari, Mohammed N Alhuqbani, Saad M Alangari
Journal	Knee Surgery, Sports Traumatology, Arthroscopy

CROSS-CULTURAL ADAPTATION, VALIDITY AND RELIABILITY OF THE ARABIC VERSION OF THE FORGOTTEN JOINT SCORE FOR KNEE ARTHROPLASTY

Waleed Albishi, Nasser M AbuDujain, Orfan Arafah, Ibrahim S Alshaygy, Zyad A Aldosari, Mohammed N Alhuqbani, Saad M Alangari

Background

To evaluate the validity and reliability of the Arabic version of this questionnaire in Arabic patients who underwent total knee arthroplasty (TKA).

Methods

The Arabic version of the English FJS (Ar-FJS) was modified according to cross-cultural adaptation best practices. The study included 111 patients who underwent TKA 1-5 years ago and completed the Ar-FJS. The reduced Western Ontario and McMaster Universities Osteoarthritis Index (rWOMAC) and 36-Item Short Form (SF-36) were used to assess the construct validity of the study. Fifty-two individuals took the Ar-FJS test twice to evaluate the test-retest reliability.

Results

The reliability of the Ar-FJS demonstrated a Cronbach's α value of 0.940 and an intraclass correlation coefficient of 0.951. The ceiling effect of the Ar-FJS was 5.4% ($n = 6$), whereas the floor effect was 1.8% ($n = 2$). Additionally, the Ar-FJS showed correlation coefficients of 0.753 and 0.992 for the rWOMAC and SF-36, respectively.

Conclusions

The Ar-FJS-12 demonstrated excellent internal consistency, repeatability, construct validity, and content validity and can be recommended for patients in Arabic-speaking communities who have undergone knee arthroplasty.

Journal of Family Medicine and Primary Care

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First Author	Alshammari, Sulaiman
Co-Authors	Alojayri, Raed; AlJehani, Muaath; Almuhid, Faisal; Alotaibi, Omar; Alqahtani, Mohammed; AlGhamdi, Abdulaziz
Journal	Journal of Family Medicine and Primary Care

THE ASSOCIATION BETWEEN THE KNOWLEDGE ON PROSTATE CANCER SCREENING WITH THE BELIEFS AND BEHAVIORS OF SAUDI MEN ATTENDING KING KHALID UNIVERSITY HOSPITAL

Alshammari, Sulaiman,; Alojayri, Raed; AlJehani, Muaath; Almuhid, Faisal; Alotaibi, Omar; Alqahtani, Mohammed; AlGhamdi, Abdulaziz

Background

The evidence showed that prostate cancer (PC) is the second most common malignancy in men globally. Unfortunately, it rarely produces symptoms, and the diagnosis is delayed until the tumor is advanced.

Objectives

To determine the participants' uptake of prostate cancer screening (PCS). Also, to assess their perceptions regarding PCS. Furthermore, to evaluate the association between patients' knowledge of PC and their beliefs and behaviors towards PCS.

Methods

This cross-sectional study recruited men aged older than 40 attending the King Khalid University Hospital (KKUH) between October 2020 and March 2021. SMS messages were sent to a random sample of 228 participants, inviting them to participate in an online self-administered questionnaire. The questionnaire consisted of 1- demography and history of PCS; 2- the knowledge questionnaire about PC; 3- the Champion's Health Belief Model (HBM).

Results

Out of the 228 participants, 45.2% were men aged 60 years and above, 54.4% with college degrees and postgraduate studies, and 92.5% were married. The median knowledge score was 5, and the range was 12. Most men (72.4%) had a low knowledge score, and 79.4% of them did not have a previous PCS. Men aged 60 + were more likely to undergo the screening than their counterparts, with P values of 0.005. Higher knowledge scores were associated with the perceived benefits of prostate-specific antigen (PSA), digital rectal examination (DRE), and health motivation, P values of 0.0001, 0.0001, and 0.02, respectively. PSA and DRE[Single Right-Pointing Angle Quotation Mark]s perceived barriers were associated with low knowledge scores, P values of 0.0001 and 0.003, respectively. A higher probability of PCS participation was associated with the older age group, a P value of 0.001. Low participation was associated with perceived barriers of DRE, a P value of 0.031.

Conclusions

The majority of the participants had poor knowledge regarding PC and PCS. Only a fifth of the men did PCS. High knowledge was associated with PSA and DRE perceived benefits and health motivation.



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First Author	Abdulmajeed A. Alzakri
Co-Authors	Omar A. Alsultan, Mohammed N. Alhuqbani, Ziad A. Aldosari, Omar M. Alghadir, Omar A. Aldosari, Badr F. Alshehri and Khalid A. Alsaleh
Journal	Saudi Medical Journal



THE RELEVANCE OF FOOD CONSTITUENTS TO THE IRRITABLE BOWEL SYNDROME: A ROME IV-BASED PREVALENCE STUDY AMONG MEDICAL STUDENTS

Abdulmajeed A. Alzakri, Omar A. Alsultan, Mohammed N. Alhuqbani, Ziad A. Aldosari, Omar M. Alghadir, Omar A. Aldosari, Badr F. Alshehri and Khalid A. Alsaleh

Background

To identify barriers and facilitators to physiotherapy adherence in adult patients who attended an orthopaedic clinic and underwent physical therapy at King Khalid University Hospital (KKUH), Riyadh, Saudi Arabia.

Methods

This cross-sectional study was performed at KKUH between September 2022 and January 2023. After conducting a literature review, a survey questionnaire was created, and a pilot study was conducted to evaluate its validity and clarity. Patients were approached in the waiting areas of the outpatient clinics and provided with a consent form to participate in the study.

Results

Ongoing pain, travel distance, and lack of transportation were common barriers while being given a choice in rehabilitation activities, regular assessments of progress and function, and regular goal setting with the physician were common facilitators. Living in rural areas and the belief that rehabilitation is important were associated with both higher barrier and facilitator scores.

Conclusions

A patient-centred approach to physical therapy, effective pain management, and regular evaluation of functional progress can increase adherence to physiotherapy. These findings have implications for physiotherapy providers, policymakers, and patients in promoting adherence to treatment for improved functional outcomes, reduced pain, and increased patient satisfaction.

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First Author	Faisal Alsaif
Co-Authors	Lamia Alkuwaiz, Mohammed Alhumud, Reem Bin Idris, Lina Neel, Mansour Aljabry, Mona Soliman
Journal	Advances in Medical Education and Practice

EVALUATION OF THE EXPERIENCE OF PEER-LED MOCK OBJECTIVE STRUCTURED PRACTICAL EXAMINATION FOR FIRST- AND SECOND-YEAR MEDICAL STUDENTS

Faisal Alsaif, Lamia Alkuwaiz, Mohammed Alhumud, Reem Bin Idris, Lina Neel, Mansour Aljabry, Mona Soliman

Background

The objective structured practical examination (OSPE) is used as an assessment tool of laboratory practical sessions. This study described the design and implementation of peer-led mock OSPE for first- and second-year medical students, investigated the perception of the students of the peer-led mock OSPE and the impact of attending the mock OSPE on the performance.

Methods

This is a cross-sectional study. Two mock OSPEs were designed and conducted by third-, fourth- and fifth- year medical students for year one and two. Each mock OSPE involved six stations. Thirty-three medical students facilitated the OSPE. The OSPEs were conducted prior to the summative end of block exams. Following the mock OSPEs, an online survey was sent to the participants to assess their satisfaction, quality and benefits of the mock OSPE. The study also evaluated the impact of the mock OSPE on students' performance.

Results

Out of 313 first-year students, 279 (89.1%) attended the mock OSPE and out of 298 second-year students, 213 (71.5%) attended. A total of 192 (68.8%) first-year medical students and 102 (47.9%) second-year medical students completed the questionnaire. There was no significant difference between attending and non-attending the mock OSPE in the students' performance in the summative OSPE. The majority of students felt more confident, less anxious, and lowered the levels of stress after attending the mock OSPE. More than half of the students felt that attending the mock OSPE helped in easing the steps, better preparation, provided sufficient orientation, well explained the materials and helped them to learn the concept of the final OSPE. The majority of students found the mock OSPE stimulating.

Conclusions

Attending the mock OSPE did not affect the students' performance in the summative OSPE. However, the peer-assessed mock OSPE improved the medical students' confidence and lowered the anxiety associated with OSPE.

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First Author	Ahmed H. Mujamammi
Co-Authors	Rasha Al-Hamdan, Essa M. Sabi, Ziad A. Aldosari, Abdullah M. Shadid, Abdulrahman Shadid, Salman Alagla, Hameed S. Humaid, Talal Abozaid, Nahla Azzam.
Journal	Turkish journal of Gastroenterology

THE RELEVANCE OF FOOD CONSTITUENTS TO THE IRRITABLE BOWEL SYNDROME: A ROME IV-BASED PREVALENCE STUDY AMONG MEDICAL STUDENTS

Ahmed H. Mujamammi, Rasha Al-Hamdan, Essa M. Sabi, Ziad A. Aldosari, Abdullah M. Shadid, Abdulrahman Shadid, Salman Alagla, Hameed S. Humaid, Talal Abozaid, Nahla Azzam.

Background

Irritable bowel syndrome is prevalent in the general population. This study investigates the association between dietary intake and irritable bowel syndrome in medical college students at King Saud University besides its prevalence.

Methods

This is an analytical cross-sectional study of 426 students (271 males and 155 females, age 21.21 ± 1.58 years) from 5 academic levels of King Saud University Medical College. A self-reported questionnaire for Rome IV criteria was completed by each participant. They also filled out a food frequency questionnaire to assess their nutritional intake.

Results

The overall prevalence of irritable bowel syndrome was 17.8% without correlation to age and academic year in Medical School. However, the prevalence was higher in females than in males (40/115 vs. 36/235, $P = .001$). The irritable bowel syndrome group consumed significantly more energy, carbohydrates, and saturated fatty acids, while the non-irritable bowel syndrome group consumed significantly more fibers and niacin ($P < .001$ and $P = .005$, respectively).

Conclusions

About 17.8% of medical students had irritable bowel syndrome with a greater prevalence in females. The irritable bowel syndrome group consumed significantly more energy, carbohydrates, and saturated fatty acids, while the non-irritable bowel syndrome group consumed significantly more fibers and niacin. Our results did not show any significant association between irritable bowel syndrome and fermentable oligosaccharide, disaccharide, monosaccharide, and polyol intake. Overall, both groups were not adhering to the Saudi dietary recommended intake.

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First Author	Asem Shadid
Co-Authors	Abdullah M. Shadid • Abdulrahman Shadid • Faisal E. Almutairi • Khalid E. Almotairi • Talal Aldarwish • Omar Alzamil • Feras Alkholaiwi • Salah-Ud-Din Khan
Journal	Cureus

STRESS, BURNOUT, AND ASSOCIATED RISK FACTORS IN MEDICAL STUDENTS

Asem Shadid • Abdullah M. Shadid • Abdulrahman Shadid • Faisal E. Almutairi • Khalid E. Almotairi • Talal Aldarwish • Omar Alzamil • Feras Alkholaiwi • Salah-Ud-Din Khan

Objective

To determine the prevalence of and the risk factors associated with burnout and stress for medical students in Saudi Arabia.

Methods

A cross-sectional, survey-based study was distributed between January and February 2018 among all 500 medical students from the first to fifth years in a medical college; 356 of the students responded (71.2% response rate). Burnout was measured using the Maslach Burnout Inventory-Student Survey (MBI-SS) while the stress level was measured using the 12-item General Health Questionnaire (GHQ-12). Socio-demographics, professional characteristics, and participation in extracurricular activities were also included as possible predictors of burnout and stress.

Results

The study revealed that the stress level was (51.7%, n= 184) and the rate of high burnout was (38.2%, n= 136), expressing high exhaustion (77.8%, n=277), high cynicism (65.7%, n=234), and low academic efficiency (45.5%, n=162). Half of the students (50%, n=178) participated in extracurricular activities and were involved in one or more activities such as organizing activities and medical volunteering (n = 52, 14.6%), research (n = 59, 16.6%), and physical exercise (n = 71, 10.4%). There was a statistically significant positive correlation between overall burnout and a lower grade point average (GPA) (OR = 0.581, p 0.004, 95% CI = 0.400 to 0.843). A statistically significant positive correlation was found between stress and students with a lower GPA (OR = 0.737, P = 0.023, 95% CI = 0.566 to 0.959); stress was also higher in students who were not involved in any extracurricular activities (OR 1.893, P = 0.004, 95% CI = 1.22 to 2.918).

Conclusions

Our study shows high burnout rates among medical students. Low GPA students in this study showed a higher overall burnout. Stress was high in our study participants and was higher in students with a low GPA and in students who were not involved in any extracurricular activities.

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First Author	Khaleel Alyahya
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Journal	International journal of advanced and applied sciences



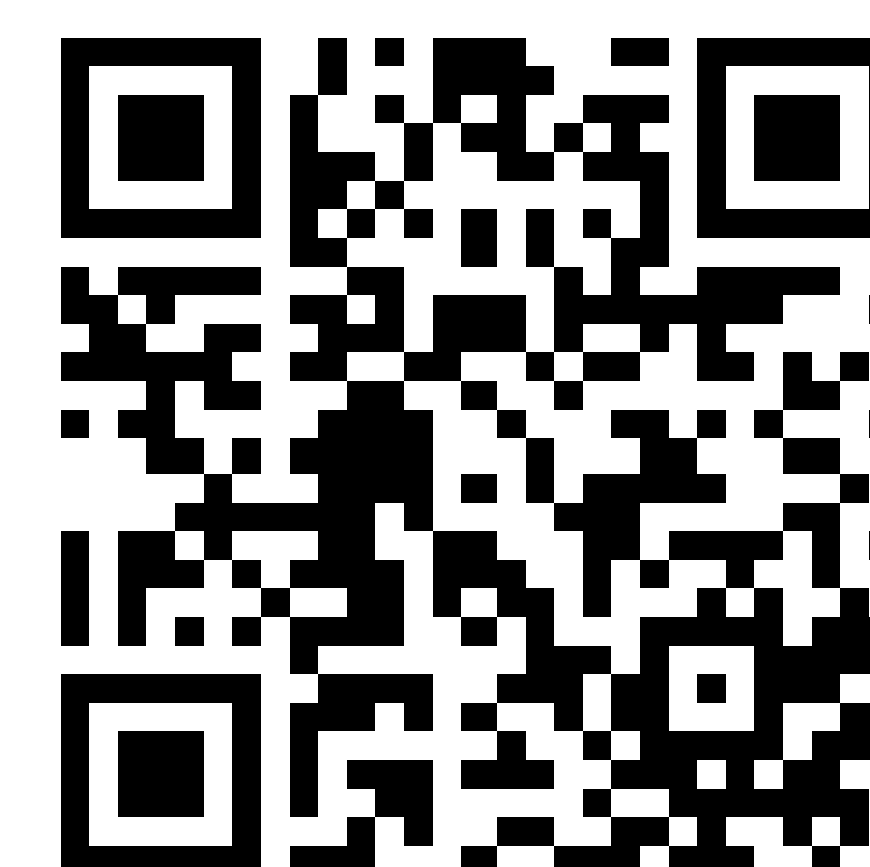
ASSESSING THE LEVEL OF AWARENESS OF OSTEOARTHRITIS AMONG SAUDI CITIZENS AND RESIDENTS IN RIYADH

Khaleel Alyahya, Raghad Alasiri, Ghada Alabdi, Sarah Almuqati, Hend Elmutawi, Reem Alqahtani, Budoor Almubarak

Background

Osteoarthritis (OA) is a degenerative joint disease characterized by cartilage deterioration, and it represents the most prevalent articular condition in developed countries. This study aimed to assess the prevalence of OA awareness and explore the association between awareness levels and sociodemographic characteristics (age, gender, and educational level) among Saudi citizens and residents of Riyadh. A quantitative observational cross-sectional study was conducted using an online questionnaire distributed through various social media platforms from June 2021 to December 2021. Data analysis was performed using SPSS statistical software, encompassing descriptive analysis and independent t-tests. The total number of participants was 921 Saudi citizens and residents of Riyadh, aged 18 years and older, excluding illiterate individuals and those unable to access the online survey. Among the respondents, 69.9% were female, 97.6% were Saudi nationals, 35.3% were aged 18-29 years, and 64.2% held a bachelor's degree. The overall mean knowledge score was 11 ± 3 (57.9%). A statistically significant difference was observed in the mean scores between female and male subgroups ($p=0.033$). However, no significant differences were found with respect to age or educational level. Recognizing the level of awareness is crucial for developing strategies to mitigate the impact of OA. This study indicates that 68.5% of participants exhibited a good level of knowledge regarding OA, underscoring the importance of increasing public awareness and encouraging preventive measures among healthy individuals from an early age.

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First Author	Mohammed A. Aljaffer,
Co-Authors	Ahmad H. Almadani, Saleh A. Alghamdi, Ibrahim M. Alabdulkarim, Mohammed A. Albabtain, Rayed M. Altameem, Abdulrahman A. Almugren, Abdulaziz F. Alomairy and Abdulaziz A. Alghofaily
Journal	Neurosciences Journal

PREVALENCE AND ASSOCIATED FACTORS OF ALEXITHYMIA AMONG MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY FROM SAUDI ARABIA

Mohammed A. Aljaffer, Ahmad H. Almadani, Saleh A. Alghamdi, Ibrahim M. Alabdulkarim, Mohammed A. Albabtain, Rayed M. Altameem, Abdulrahman A. Almugren, Abdulaziz F. Alomairy and Abdulaziz A. Alghofaily

Objectives

To assess the prevalence of alexithymia and its associated factors among medical students at King Saud University (KSU), Riyadh, Kingdom of Saudi Arabia.

Methods

A cross-sectional study was conducted at KSU, including 420 medical students from all years of medical college (i.e., first to the fifth year), by using an electronic questionnaire distributed during August 2021. The questionnaire consisted of sociodemographic-related questions and the 20-item Toronto alexithymia scale (a validated scale in the literature).

Results

The prevalence of alexithymia among the participants was found to be 26.9%. A statistically significant association between alexithymia and gender ($p=0.013$) was found. A diagnosis with any psychiatric condition ($p=0.026$), history of abuse during childhood ($p=0.006$), and lack of physical activity were associated with alexithymia.

Conclusions

The prevalence of alexithymia among medical students at KSU was significantly higher than general population in literatures. It was indicated in the results that being female, having a psychiatric condition or history of childhood abuse, and lack of physical activity were all associated with alexithymia. We recommend increasing awareness of and screening for alexithymia and its associated factors among medical students.

Scan for the Full Article

First Author	Meshari A Alzahrani,
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Journal	Cureus

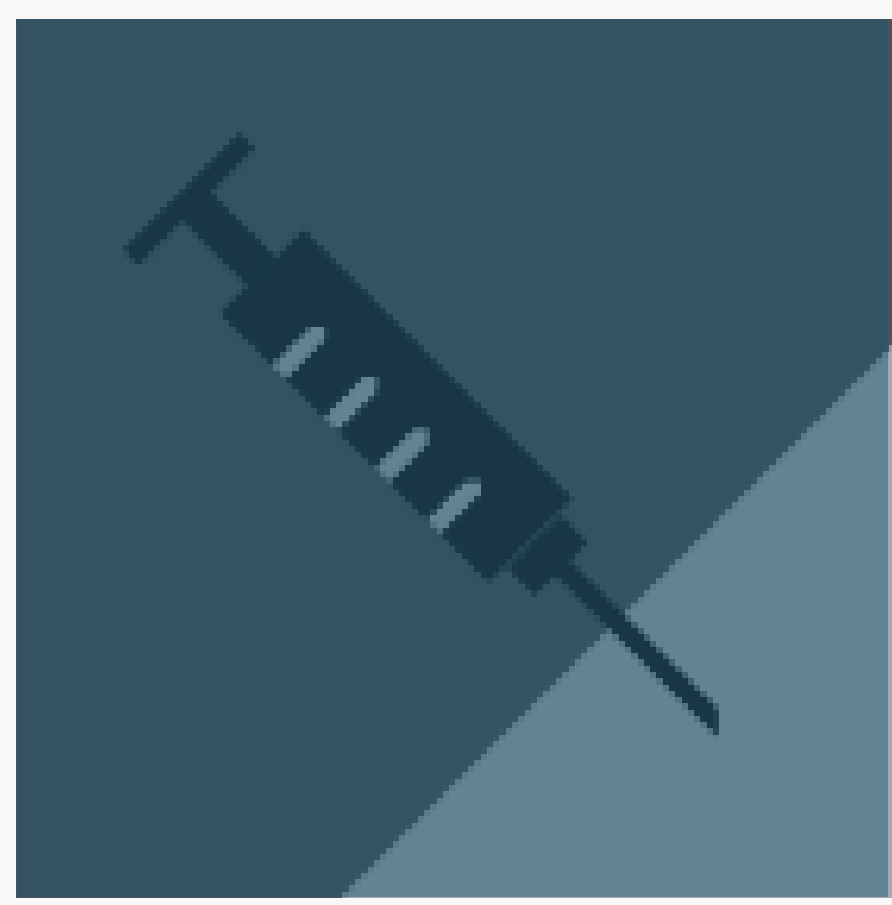


EFFECT OF BLACKCURRANT CONSUMPTION ON THE GENITOURINARY SYSTEM: A LITERATURE REVIEW

Meshari A Alzahrani, Faisal M Binnshwan, Khaled B Alsulaim, Osama A Mobeirek, Nasser M Albakran, Fahad A Albawardi, Abdulrahman I Almezaini, Yazeed K Alqahtani, Waleed Khalid Z Alghuyaythat, Ibrahim Abunohaiah, Raed AlAsmi, Raed Almannie

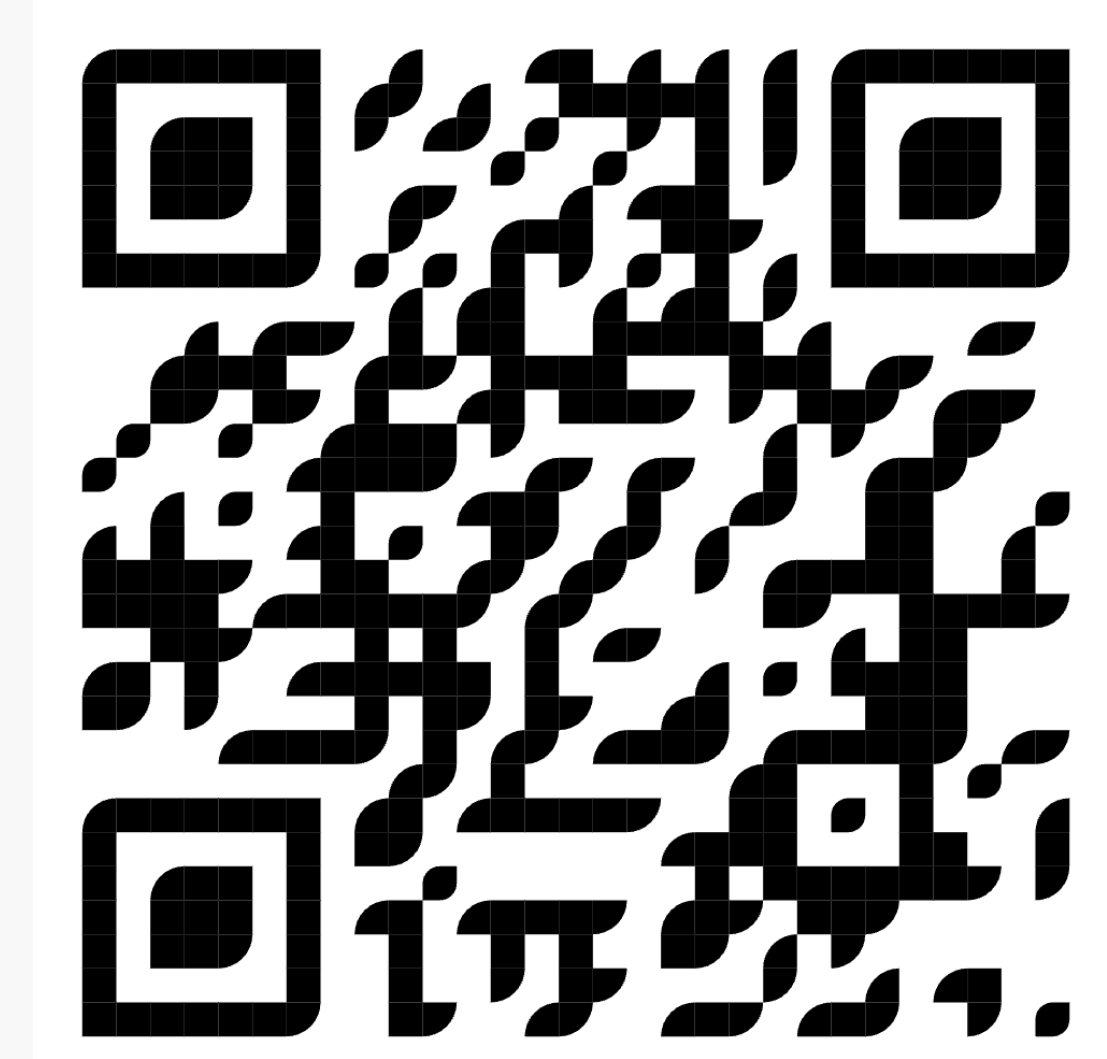
Abstract

Both in vivo and in vitro studies have shown that functional plant-based food such as fruits, vegetables, and berries can enhance health, have preventive effects, and reduce the risk of several chronic diseases. This review discusses blackcurrant fruit usage in humans and experimental animals and its effect on the genitourinary system (GUS). This comprehensive review demonstrates that blackcurrants and their bioactive compounds possess medicinal and therapeutic properties related to the GUS. Emphasis in the literature has been placed on the bioavailability of the active blackcurrant components. Nonetheless, future clinical trials are needed to investigate and improve the bioavailability of blackcurrant phenolic compounds, such as anthocyanins, and to expand the evidence that active blackcurrant compounds can treat various genitourinary diseases.



vaccines

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First Author	Joud Mohammed AlKhalifah
Co-Authors	Waleed Seddiq, Mohammed Abdullah Alshehri, Abdulkarim Alhetheel, Ahmed Albarrag, Sultan Ayoub Meo, Jaffar A. Al-Tawfiq, Mazin Barry.
Journal	Journal of Family Medicine and Primary Care

IMPACT OF MERS-COV AND SARS-COV-2 VIRAL INFECTION ON IMMUNOGLOBULIN-IGG CROSS-REACTIVITY

Joud Mohammed AlKhalifah, Waleed Seddiq, Mohammed Abdullah Alshehri, Abdulkarim Alhetheel, Ahmed Albarrag, Sultan Ayoub Meo, Jaffar A. Al-Tawfiq, Mazin Barry.

Background

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has posed a considerable threat to public health and global economies. SARS-CoV-2 has largely affected a vast world population and was declared a COVID-19 pandemic outbreak, with a substantial surge of SARS-CoV-2 infection affecting all aspects of the virus' natural course of infection and immunity. The cross-reactivity between the different coronaviruses is still a knowledge gap in the understanding of the SARS-CoV-2 virus

Objectives

This study aimed to investigate the impact of MERS-CoV and SARS-CoV-2 viral infections on immunoglobulin-IgG cross-reactivity. Our retrospective cohort study hypothesized the possible reactivation of immunity in individuals with a history of infection to Middle East Respiratory Syndrome coronavirus (MERS-CoV) when infected with SARS-CoV-2.

Methods

The total number of participants included was 34; among them, 22 (64.7%) were males, and 12 (35.29%) were females. The mean age of the participants was 40.3 ± 12.9 years. This study compared immunoglobulin (IgG) levels against SARS-CoV-2 and MERS-CoV across various groups with various histories of infection.

Results

The results showed that a reactive borderline IgG against both MERS-CoV and SARS-CoV-2 in participants with past infection to both viruses was 40% compared with 37.5% among those with past infection with MERS-CoV alone. Our study results establish that individuals infected with both SARS-CoV-2 and MERS-CoV showed higher MERS-CoV IgG levels compared with those of individuals infected previously with MERS-CoV alone and compared with those of individuals in the control. The results further highlight cross-adaptive immunity between MERS-CoV and SARS-CoV.

Conclusions

Our study concludes that individuals with previous infections with both MERS-CoV and SARS-CoV-2 showed significantly higher MERS-CoV IgG levels compared with those of individuals infected only with MERS-CoV and compared with those of individuals in the control, suggesting cross-adaptive immunity between MERS-CoV and SARS-CoV.

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First Author	Anas Khan
Co-Authors	Raed M Alojyri, Naif Alhoseini, Faisal AlZahrani, Saad S Dammas, Mohammed Alothmani, Mohammad Almanjomi.
Journal	Cureus



THE PREVALENCE AND UTILIZATION OF PREHOSPITAL IV ACCESS IN CRITICALLY ILL PATIENTS IN THE EMERGENCY DEPARTMENT

Anas Khan, Raed M Alojyri, Naif Alhoseini, Faisal AlZahrani, Saad S Dammas, Mohammed Alothmani, Mohammad Almanjomi.

Background

Despite the pivotality of emergency medical services (EMS) in prehospital care for patient stabilization, prehospital intravenous (IV) access, a standard practice, remains an ambiguity in Saudi Arabia in terms of its prevalence of placement, justification, and utilization.

Objectives

In this study, we aim to estimate the prevalence and utilization rate of prehospital IV access placement in patients transported to King Khalid University Hospital (KKUH) Emergency Medicine Department in Riyadh by EMS and determine the relationship between the prevalence and utilization rate of prehospital IV access in Canadian Triage and Acuity Scale (CTAS) levels 1 and 2 in trauma and non-trauma patients.

Methods

This observational cross-sectional study was conducted over six months. A total of 181 cases of CTAS levels 1 and 2 adult patients were included. Data were collected by trained nurses using convenient sampling through an author-developed questionnaire.

Results

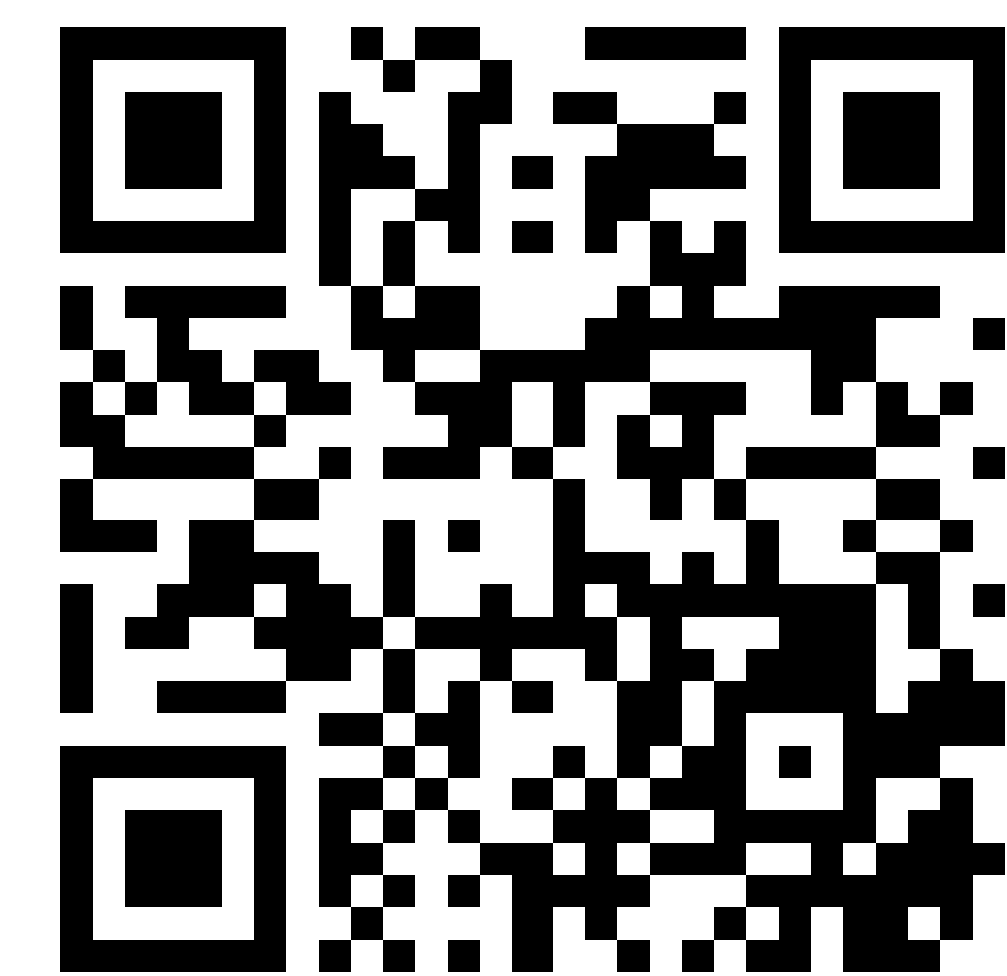
The prevalence of prehospital IV line placement was 28.7%, with a utilization rate of 50%, and was notably higher among CTAS level 1 cases (69.2%). Additionally, trauma cases had a higher prevalence of prehospital IV access (53.5%) compared to medical cases (odds ratio (OR): 4.73, 95% confidence interval (CI): 4.73, 4.73, $p < 0.05$). Among patients with prehospital IV lines, the majority (92.3%) were patent and functional. Upon arrival, 73.1% of patients had their prehospital IV line replaced, with hospital protocol being the most common reason for the replacement (73.7%).

Conclusions

A minority of the patients had prehospital vascular access, and of those, half remained unused. Trauma cases and CTAS level 1 patients had a higher prevalence and utilization of prehospital IV access. Furthermore, trauma cases were more associated with prehospital IV access establishment and utilization.

Scan for the Full Article

First Author	Sultan Ayoub Meo
Co-Authors	A A Al-Masri, H T M Alkhliwi, J M Alkhalifah
Journal	European review for medical and pharmacological sciences.



IMPACT OF ENVIRONMENTAL POLLUTANTS PARTICULATE MATTER PM_{2.5}, CARBON MONOXIDE, NITROGEN DIOXIDE AND OZONE ON THE INCIDENCE OF MONKEYPOX CASES

[S A Meo](#), [A A Al-Masri](#), [H T M Alkhliwi](#), [J M Alkhalifah](#)

Objective

The human monkeypox disease (MPXD), is an emerging zoonotic disease caused by the monkeypox virus. The rapid spread of human monkeypox cases has developed an alarming situation worldwide. This study evaluated the impact of day-to-day air pollutants, particulate matter PM_{2.5}, Carbon monoxide (CO), Nitrogen dioxide (NO₂), and Ozone (O₃) on the daily incidence of monkeypox cases in New York City, United States of America.

Methods

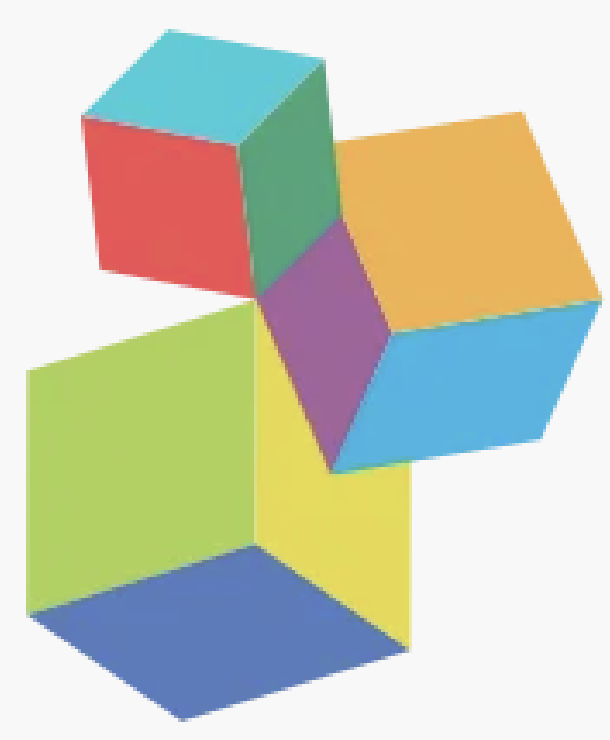
The daily data on air pollutants and monkeypox cases were recorded from May 1, 2022, to August 16, 2022. The everyday concentrations of "PM_{2.5}, CO, NO₂, and O₃ were recorded from the metrological website "Real-Time Air Quality Index-AQI" and human monkeypox cases were documented from the official website of "NVC Health". The mean values along with correlations were performed to investigate the impact of environmental pollutants on the occurrence of monkeypox cases in New York, city USA.

Results

The mean value for the concentration of CO in the air was 25.61 ppm, NO₂ 38.16 ppm, O₃ 9.46 µg/m³ and PM_{2.5} was 1.82 ppm. The air pollutants, CO, and NO₂ have a positive association (p=0.001) with daily monkeypox cases in New York, USA. The correlation analysis showed significant relationships between CO and NO₂ and the number of monkeypox cases (r=0.298, p<0.002), (r=0.513, p<0.001), respectively. The linear regression analysis also showed that CO has a positive impact on monkeypox cases (β=0.298, p<0.001). With one unit increase in the CO levels in the air, the number of monkeypox cases increased by 0.298 units, and adjusted R-square shows a 0.08 or 8% variation in the number of monkeypox cases due to an increase in CO in the environment. Moreover, NO₂ has a significant positive impact on monkeypox cases (β=0.513, p<0.001), with a one-unit increase in NO₂ concentration in the air, the monkeypox cases increased by 0.513. The adjusted R-square shows that NO₂ causes a 25.7% variation in the increase in monkeypox cases. However, Ozone (β=0.018, p>0.05) and PM_{2.5} (β=-0.122, p>0.05) does not have a significant correlation with monkeypox cases in the city of New York.

Conclusions

Environmental pollutants NO₂ and CO have a positive relationship with the number of daily monkeypox cases in New York City, USA. The air pollutants which have a high concentration in the environment have a strong relationship with the occurrence of monkeypox cases. Environmental pollution may be a risk factor for the increasing occurrence of monkeypox cases. Health officials must take priority preventive measures to curtail environmental pollution to combat the monkeypox disease.



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First Author	Joud AlKhalifah
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Journal	Frontiers in public health.



PATTERN OF SELF-REPORTED ADVERSE EVENTS RELATED TO COVID-19 VACCINES IN SAUDI ARABIA: A NATIONWIDE STUDY

Joud Mohammed Alkhalifah, Ahad Al Seraihi, Jaffar A Al-Tawfiq, Badr Fadhel Alshehri, Alhanouf Hani Alhaluli, Naif Mansour Alsulais, Mohammed Mesfer Alessa, Waleed Seddiq, Thamer Aljeri, Mohammad Hassan Qahtani, Mazin Barry, Maram Al-Otaiby

Background

Vaccination against coronavirus disease 2019 (COVID-19) is the most effective way to end the pandemic. Any development of adverse events (AEs) from various vaccines should be reported. We therefore aimed to explore major and minor AEs among vaccinated individuals in Saudi Arabia.

Methods

This is a nationwide report based on the Saudi Arabian Ministry of Health (MOH) registry. It included those who received COVID-19 vaccines from 17th December 2020 to 31st December 2021. The study included spontaneous self-reported adverse effects to COVID-19 vaccines where the study participants used a governmental mobile app (Sehhaty) to report their AEs following vaccination using a checklist option that included a selection of side-effects. The primary outcome was to determine AEs reported within 14 days of vaccination which included injection site itching, pain, reaction, redness, swelling, anxiety, dizziness, fever, headache, hoarseness, itchiness, loss of consciousness, nausea, heartburn, sleep disruption, fatigue, seizures, anaphylaxis, shortness of breath, wheezing, swelling of lips, face, and throat, loss of consciousness, and admissions into the intensive care unit (ICU).

Results

The study included a total number of 28,031 individuals who reported 71,480 adverse events (AEs); which were further classified into minor and major adverse events including ICU admissions post vaccination. Of the reported AEs, 38,309 (53.6%) side-effects were reported following Pfizer-BioNTech, 32,223 (45%) following Oxford-AstraZeneca, and 948 (1.3%) following Moderna. The following reported AEs were statistically significant between the different vaccine types: shortness of breath\difficulty of breathing, dizziness, fever above 39°C, headache, hoarseness, injection site reactions, itchiness, nausea, sleep disruption, fatigue, wheezing, swelling of lips/face and\or throat, and loss of consciousness (p-value < 0.05). Fever and seizure were the only statistically significant AEs amongst the number of vaccine doses received (p-value < 0.05). Ten ICU admissions were reported in the 14 days observation period post-COVID-19 vaccination with the following diagnoses: acute myocardial infarction, pneumonia, atherosclerosis, acute respiratory failure, intracranial hemorrhage, grand mal seizure, Guillain-Barré syndrome, abnormal blood gas levels, and septic shock.

Conclusions

This study demonstrated that the most prevalent SARS-CoV-2 vaccine side-effects among adults in Saudi Arabia were mild in nature. This information will help reduce vaccine hesitancy and encourage further mass vaccination to combat the COVID-19 pandemic, especially as booster doses are now available. Further studies are warranted to obtain a better understanding of the association between risk factors and the experiencing of side-effects post vaccination.



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First Author	Sultan Ayoub Meo
Co-Authors	Joud Mohammed Alkhalifah, Nouf Faisal Alshammari, Wejdan Saud Alnufaie.
Journal	International journal of environmental research and public health.

COMPARISON OF GENERALIZED ANXIETY AND SLEEP DISTURBANCE AMONG FRONTLINE AND SECOND-LINE HEALTHCARE WORKERS DURING THE COVID-19 PANDEMIC

Sultan Ayoub Meo, Joud Mohammed Alkhalifah, Nouf Faisal Alshammari, Wejdan Saud Alnufaie.

Background

Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) infection, also known as COVID-19, has developed into an alarming situation around the world. Healthcare workers are playing the role of frontline defense to safeguard the lives of everyone during the COVID-19 pandemic. The present study aimed to investigate the anxiety levels and sleep quality among frontline and second-line healthcare workers during the COVID-19 pandemic.

Methods

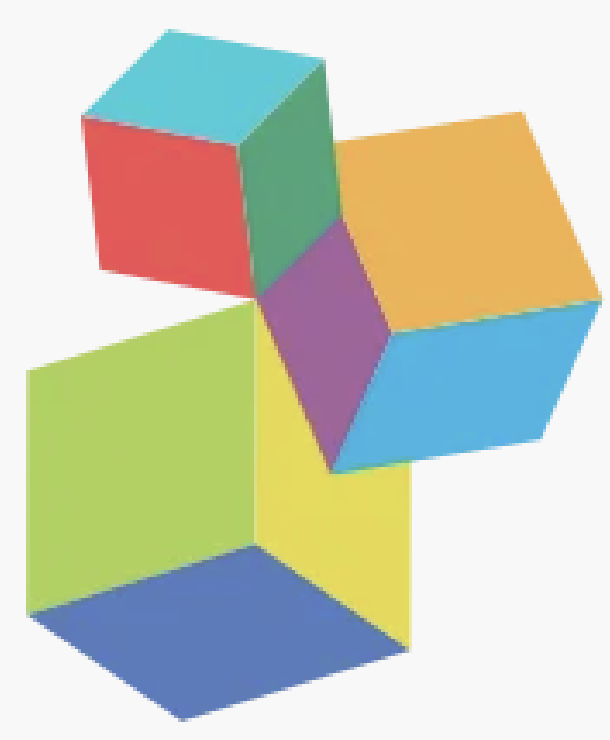
In this cross-sectional study, a validated, self-administered, electronic questionnaire was distributed through email to healthcare workers. The selection of 1678 healthcare workers was based on a convenience sampling technique. The General Anxiety Disorder-7 (GAD-7) and Pittsburgh Sleep Quality Index (PSQI) instrument scales were used to assess healthcare workers' anxiety levels and sleep quality during the COVID-19 pandemic.

Results

Out of 1678 respondents, 1200 (71.5%) were frontline healthcare workers, while 478 (28.5%) were second-line healthcare workers. Among all the healthcare workers, 435 (25.92%) were experiencing moderate to severe anxiety. Among them, 713 (59.4%) frontline healthcare workers were experiencing anxiety in comparison with 277 (57.9%) second-line healthcare workers. Severe anxiety symptoms were seen in 137 (11.41%) frontline healthcare workers compared to 44 (9.20%) second-line healthcare workers. In total, 1376 (82.0%) healthcare workers were found to have poor sleep quality; 975 (58.10%) were frontline, and 407 (23.89%) were second-line healthcare workers. The highest poor sleep quality levels were found among 642 (84.6%) of the healthcare workers who work in frontline areas (emergency departments, intensive care units, and wards) compared to 734 (79.9%) of the healthcare workers who work in second-line areas. These findings provide a substantial contribution to the consolidation of evidence concerning the negative impact of the pandemic on the mental health of healthcare workers (HCWs).

Conclusions

These results have established an association that the COVID-19 pandemic causes larger negative psychological symptoms in frontline healthcare workers, such as severe anxiety and poor sleep quality. Preventive measures to minimize anxiety levels and maintain sleep quality, addressing this issue nationally and globally, are essential to support the healthcare workers who are sacrificing their mental health for the future of our nations.



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First Author	Albandary AlBakheet
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Journal	Frontiers in public health.



DETAILED GENETIC AND CLINICAL ANALYSIS OF A NOVEL DE NOVO VARIANT IN HPRT1: CASE REPORT OF A FEMALE PATIENT FROM SAUDI ARABIA WITH LESCH–NYHAN SYNDROME

Albandary AlBakheet, Hanan AlQudairy, Joud Alkhalifah, Sheikah Almoaily, Namik Kaya, Zuhair Rahbeeni

Background

Hypoxanthine-guanine phosphoribosyltransferase (HPRT1) deficiency is an inborn error of purine metabolism responsible for Lesch–Nyhan syndrome (LNS). The disease is inherited in an X-linked recessive manner and predominantly affects male individuals. Female individuals can carry a mutation as heterozygotes, but typically, they are asymptomatic because of the random inactivation of the affected allele. Nevertheless, although rare, heterozygote female individuals may manifest LNS with full characteristics. Herein, we describe a female patient from Saudi Arabia with LNS.

Results

The patient (a 4-year-old girl) presented with typical characteristics of the disease, which include global developmental delay, self-mutilation, hyperuricemia, hypotonia, speech delay, spasticity, and seizures. Her general biochemical laboratory results were normal except for high levels of uric acid. The abdominal MRI\MRS, mostly unremarkable, showed bilateral echogenic foci within the renal collecting system. Genetic testing (whole-exome sequencing, iterative variant filtering, segregation analysis, and Sanger sequencing) pointed a novel de novoframeshift variant in HPRT1. X-inactivation assay using Hpall showed the presence of a 100% skewed X chromosome carrying the affected allele. RT-PCR of the cDNA indicated complete loss of the expression of the normal allele.

Conclusions

Our study presents a female patient who has a severe case of LNS and found to be the 15th female patient with the disease in the world. The study emphasizes the need for a streamlined protocol that will help an early and accurate diagnosis of female LNS patients to avoid unnecessary interventions that lead to costly patient care.

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First Author	T. Al-khlaiwi,
Co-Authors	S.S. Habib, H. Al-khliwi, A. Alsomali, A. Almushawah, M. Alhumud, J. Alorainy, S.M. Habib
Journal	European review for medical and pharmacological sciences.

RELATIONSHIP OF SERUM INDUCIBLE AND ENDOTHELIAL NITRIC OXIDE SYNTHASE WITH EXERCISE IN HEALTHY ADULT MALES AND PATIENTS WITH TYPE 2 DIABETES MELLITUS

T. Al-khlaiwi, S.S. Habib, H. Al-khliwi, A. Alsomali, A. Almushawah, M. Alhumud, J. Alorainy, S.M. Habib

Objectives

The importance of physical activities in the control of diabetes mellitus disorder is well known but its correlation with endothelial nitric oxide synthase (eNOS) and inducible nitric oxide synthase (iNOS) in diabetic patients needs to be assessed. The aim of the study is to examine inducible and endothelial nitric oxide synthase in healthy adult male patients with type 2 diabetes mellitus (T2DM) in relation to exercise.

Methods

This is a cross-sectional study that has been performed in the Department of Physiology, King Saud University, Riyadh, Saudi Arabia. Subjects were divided into Group 1: control (n=79), and Group 2: T2DM (n=85). Each group was subdivided into three subcategories: sedentary, moderate activity, and active subjects. Serum nitric oxide (NO), iNOS, eNOS, high sensitivity C-reactive protein (hs-CRP), nitrates, and nitrites, were compared between different groups.

Results

We observed significant differences in iNOS in diabetic patients compared to the control [29.1 (2.8) vs. 22.4 (1.4), $p=0.050$] with a significant decrease in eNOS when compared to the control group [79.5 (4.8) vs. 101.8 (5.7), $p=0.003$]. In the control group, eNOS showed significant differences (increase) between subgroups; sedentary, moderate, and active control subjects [77.4 (9.2), 114.7 (9.3), and 105.6 (9.5), $p=0.026$]. It also showed insignificant differences between subgroups in iNOS [23.4 (2.5), 24.2 (2.2), and 20.4 (2.4), $p=0.520$]. In addition, hsCRP showed a decrease with exercise but with no statistically significant difference between the groups [4.0 (0.5), 3.3 (0.3), and 2.9 (0.4), $p=0.271$]. In the diabetic patients' group, a significant difference (decrease) between subgroups in iNOS [43.5 (4.8), 20.8 (3.9), and 19.8 (4.6), $p<0.001$] and hsCRP [5.7 (0.5), 3.8 (0.4), and 3.6 (0.5), $p=0.006$] was detected. In addition, eNOS showed a decrease with exercise but with no statistically significant difference between groups [82.9 (7.8), 74.6 (7.9), and 81.7 (10.2), $p=0.741$].

Conclusions

Patients with T2DM have shown significantly low eNOS and high iNOS levels. Furthermore, regular exercise can significantly decrease iNOS in patients with T2DM. Therefore, the importance of exercise for diabetic patients has to be emphasized to prevent long-term complications related to diabetes mellitus.

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First Author	Joud Mohammed Alkhalifah
Co-Authors	Waleed Seddiq, Badr Fadhel Alshehri, Alhanouf Hani Alhaluli, Mohammed Mesfer Alessa, Naif Mansour Alsulais.
Journal	Informatics in Medicine



THE ROLE OF THE COVID-19 PANDEMIC IN EXPEDITING DIGITAL HEALTH-CARE TRANSFORMATION: SAUDI ARABIA'S EXPERIENCE

Joud Mohammed Alkhalifah, Waleed Seddiq, Badr Fadhel Alshehri, Alhanouf Hani Alhaluli, Mohammed Mesfer Alessa, Naif Mansour Alsulais.

Abstract

A comprehensive literature review of Research engines was conducted up to March 2022 to retrieve the articles. We considered all published data, press briefings, and announcements by the Ministry of Health of Saudi Arabia (MOH). The search included both sources in English and Arabic. Thus, this paper aims to give a comprehensive overview of the evolution and role of telemedicine and E-health represented in multiple informatics mobile applications during the COVID-19 pandemic in Saudi Arabia. As a component of its subjective drives, the MOH has launched and developed a total of 12 mobile applications from 2012 to 2019, three apps of which were developed during the COVID-19 pandemic. My health “Sehhaty” was the cornerstone of telemedicine services provided by the MOH in Saudi Arabia during the COVID-19 pandemic. Virtually booked physician appointments exceeded 3.8 million. Appointment “Mawid” app number of users sprinted from 4 million to 25 million users and the number of appointments booked in the same app went from 8 million to 100 million appointments in pre-COVID-19 compared to the post-COVID-19 period. Furthermore, the Health 937 hotline numbers grew to 24.6 million calls. The Health “Seha” app provided 2 million remote medical consultations with an almost 8-fold increase compared to pre-COVID-19 times.



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First Author	Abdulrazag Ajlan
Co-Authors	Rawan Alwadee, Sarah Basindwah, Badriah Alsabbagh, Mohammed Hamad Alhumud, Abdulaziz M. Alaskar
Journal	Surgical Neurology International

OUTCOMES AND COMPLICATIONS OF MICROSCOPIC TRANSCALLOSAL COLLOID CYST RESECTION: A SINGLE INSTITUTION EXPERIENCE

Abdulrazag Ajlan, Rawan Alwadee, Sarah Basindwah, Badriah Alsabbagh, Mohammed Hamad Alhumud, Abdulaziz M. Alaskar

Background

Colloid cysts have always provoked the interest of neurosurgeons due to their benign histology, wide variety of clinical presentations, and differences in reported surgical outcomes. Although recent studies have reported favorable outcomes with different surgical resection approaches, the transcallosal approach remains the most popular approach to date. In this series, we report the clinical and radiological outcomes of the transcallosal approach for the resection of third ventricle colloid cysts in 12 patients.

Methods

We present a case series of 12 patients who were radiologically diagnosed with a third ventricle colloid cyst who underwent transcallosal resection by a single surgeon in one center over a 6-year period. Clinical, radiological, and surgical data were collected, and surgical outcomes and complications were analyzed.

Results

Of the 12 patients diagnosed with colloid cysts, 10 (83%) presented with headache, and five (41%) presented with memory disturbance. All 12 patients showed improvement or resolution of their symptoms following resection. Nine patients (75%) presented with hydrocephalus on radiology. All the patients required preoperative or intraoperative external ventricular drain insertion. Four patients (33%) experienced transient postoperative complications. None of the patients required long-term cerebrospinal fluids shunting. One (8%) of 12 patients experienced transient memory loss. No mortality was recorded during the follow-up.

Conclusions

Transcallosal resection of colloid cysts has a favorable prognosis. It allows for complete resection of the cyst with minimal transient postoperative complications. Most patients with postoperative complications show complete resolution of symptoms, with no long-term morbidity.

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First Author	S.S. Habib,
Co-Authors	Alorainy, M. Abaalkhail, N. Albuhayjan, A. Alshoumar, M. Alhumud
Journal	European review for medical and pharmacological sciences.



KNOWLEDGE, ATTITUDE AND PRACTICES OF SCHOOLTEACHERS TOWARD EPILEPSY AND STUDENTS WITH EPILEPSY

S.S. Habib, J. Alorainy, M. Abaalkhail, N. Albuhayjan, A. Alshoumar, M. Alhumud

Objective

This study aimed to estimate and evaluate teachers' knowledge, attitudes, and practices toward students with epilepsy and to determine the association between selected demographic factors.

Methods

This cross-sectional study was approved by the ethical committee of King Saud University, Riyadh, Saudi Arabia. The study was conducted at the department of physiology, King Saud University, from October 2020 until October 2021. The data was collected through anonymous online self-administered 44-item questionnaires. The sampling technique used was Snowball sampling from ten randomly selected schools in Riyadh.

Results

The total sample size was 456 participants. The mean age of the respondents was 41.5 ± 8.52 , and a male to female ratio of 1.4:1. The mean years of experience of the respondents is 16.14 ± 8.85 . Almost all teachers knew that epilepsy is a neurological disorder (97.8%). However, females were more likely to know the cause of epilepsy ($p=0.003$). The majority of public-school teachers (80.2%) thought that epileptic students have normal intelligence ($p=0.004$). A considerable proportion of public-school teachers (82.8%) do not mind having a student with epilepsy in their classes ($p=0.012$). The vast majority of schoolteachers (95.4%) have not had any training on how to deal with an epileptic student during a seizure.

Conclusions

This study shows that schoolteachers have very good knowledge about epilepsy but poor practice towards it. Well-directed training programs are needed to qualify teachers in providing first aid to epileptic students during seizures.

Scan for the Full Article

First Author	Shadid, Abdullah M
Co-Authors	Alsaber, Naif; Aldawish, Reema A.; Humaid, Hameed M.; AlMubarak, Faris; Alazwari, Leenah S.; Alosaimi, Nourah S.; Alkhaldi, Danah; Alhumud, Mohammed H.; Shadid, Abdulrahman M.; Al Zahrani, Nourah
Journal	Journal of Family Medicine and Primary Care



DEPRESSION AND ANXIETY AMONG PATIENTS WITH EPILEPSY: A CROSS-SECTIONAL STUDY FROM RIYADH, SAUDI ARABIA

Shadid, Abdullah M.; Alsaber, Naif; Aldawish, Reema A.; Humaid, Hameed M.; AlMubarak, Faris; Alazwari, Leenah S.; Alosaimi, Nourah S.; Alkhaldi, Danah; Alhumud, Mohammed H.; Shadid, Abdulrahman M.; Al Zahrani, Nourah

Background

It is well established that epileptic disorders are associated with a wide range of psychosocial issues that overburden the affected individuals and limit their lifestyle. This study aimed to determine the commonalities between depression and anxiety symptoms among patients with epilepsy (PWE). In addition, we assessed whether depression and anxiety rates varied depending on factors related to the disease.

Methods

A cross-sectional study was conducted between October 2021 and March 2022 among all PWE at Prince Mohammed bin Abdulaziz Hospital, and 147 patients who responded to the questionnaires were included for analysis (65.6% response rate). Depression was measured using the Patient Health Questionnaire depression scale (PHQ-9), while anxiety levels were measured using the Generalized Anxiety Disorder scale (GAD-7). Demographic variables such as sex, age, marital status, and factors related to epilepsy were also recorded.

Results

The results showed that 39.5% and 27.9% of participants had major depressive disorder (MDD) and generalized anxiety disorder (GAD), respectively. The presence of factors that increased susceptibility to seizures was associated with a greater expression of depression ($P = 0.035$) and anxiety ($P = 0.002$) symptoms. The presence of symptoms/signs that precede seizures was associated with a higher risk of moderate and severe depression ($P = 0.001$) and moderate and severe anxiety ($P < 0.001$). Irregular use of medications was associated with a higher risk of moderate and severe depression ($P = 0.037$); however, lamotrigine was associated with lower rates of depression among the participants ($P = 0.023$).

Conclusions

This study found that PWE had a higher prevalence of MDD and GAD than the general population. However, this accepted paradigm has yet to reflect a meaningful change in constructing condition-specific recommendations for PWE. Our study revealed that the presence of subjectively recognized signs of an impending ictal episode was significantly associated with a higher risk of moderate and severe depression and anxiety. Furthermore, factors that increase the susceptibility to seizures were associated with a higher risk of depression and anxiety. Irregular medication use was associated with a higher risk of moderate and severe depression. However, lamotrigine was associated with lower rates of depression among participants.

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First Author	Khaleel Alyahya
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Journal	Cureus



THE SOCIAL ATTITUDES TOWARDS THE BOOSTER DOSE OF THE COVID-19 VACCINE AND THE ASSOCIATED FACTORS AMONG RESIDENTS OF RIYADH, SAUDI ARABIA

Khaleel Alyahya • Wareef Y. Almousa • Lama F. Binsalamh • Ghadeer A. Alturaifi • Lama H. Alabdely • Norah F. Aljulaihim • Layan M. Aldosari

Background

As a result of the Coronavirus (COVID-19) pandemic, global health was significantly affected. Therefore, the booster dose was approved to be administered to people who had completed a primary vaccination series in order to enhance their immunity. This study aims to identify the factors that lead to willingness or hesitancy toward the third/booster dose of the COVID-19 vaccine, to estimate the rate of acceptance and hesitancy toward the third/booster dose of the COVID-19 vaccine, and to measure third/booster dose COVID-19 vaccine literacy among residents of Riyadh.

Methods

This study is a quantitative analytical cross-sectional, questionnaire-based study from March 2022 to December 2022. The data were gathered using a convenience sampling technique from 435 participants in the Riyadh region 16 years old and above by using a validated questionnaire.

Results

Among the participants, 72.6% were females; 53.4% of young participants aged 16-25 years had a good knowledge of the booster dose versus 26.2% of those aged 45 years or above, with reported statistical significance ($P=0.001$). The functional literacy of the COVID-19 vaccine which is defined as the ability to read and write effectively was higher among the non-hesitant group compared to the hesitant group. The interactive/critical literacy of the COVID-19 vaccine, which is defined as the advanced abilities that enable people to make sense of information so they may take decisions that are relevant to their own lives, was higher among the non-hesitant group compared to the hesitant group. 72.2% of the study participants reported that if the booster dose of the COVID-19 vaccine was not mandatory by the government, they would not have taken it. Also, 19.1% thought that taking the booster dose of the COVID-19 vaccine would endanger their lives.

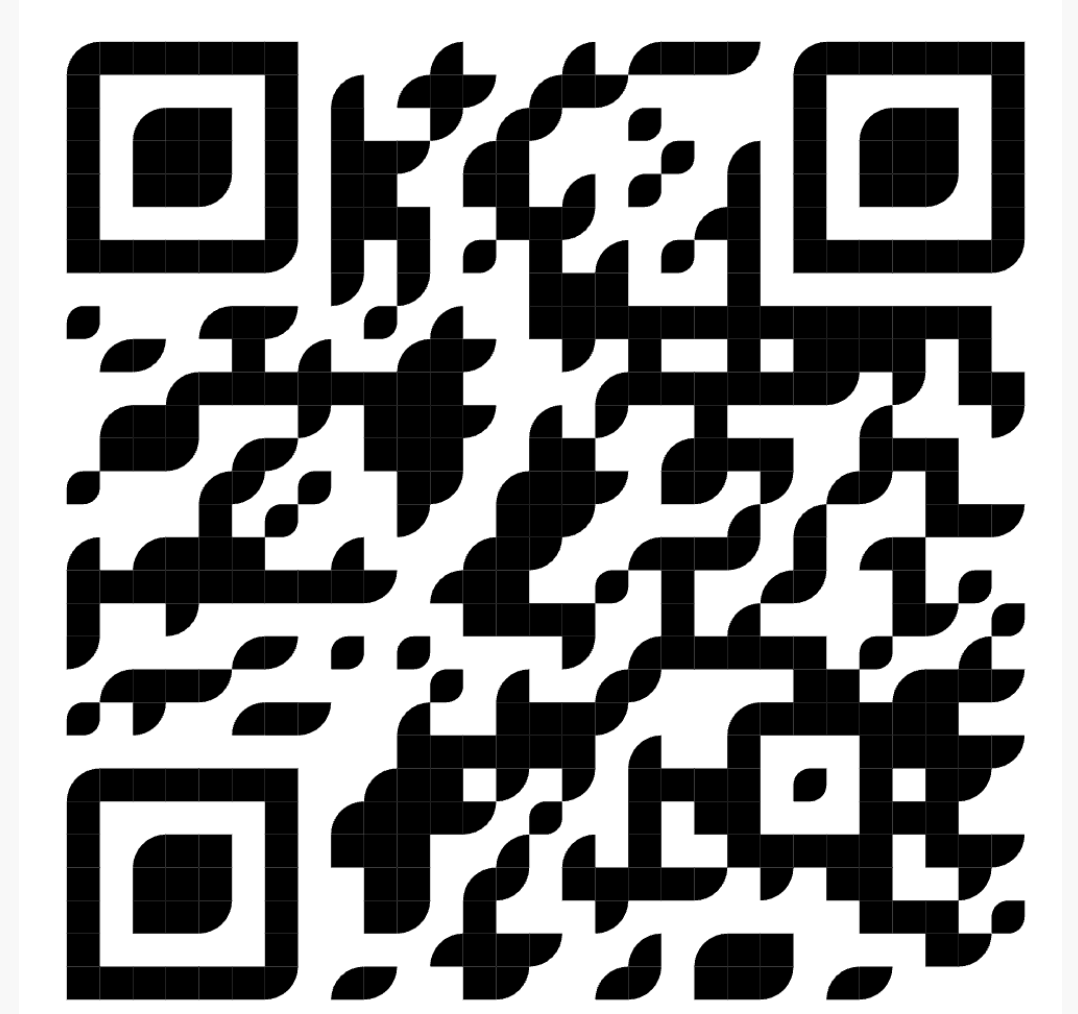
Conclusions

The findings of the current study revealed that the factors leading to the willingness or hesitancy toward the booster dose of the COVID-19 vaccine include age, gender, and side effects. Also, measuring the COVID-19 vaccine literacy revealed that it is higher among the non-hesitant group than the hesitant group although it was statistically insignificant. Meanwhile, further studies should be done to track and measure COVID-19 vaccine literacy over time, and examine the factors associated with the booster dose of COVID-19 vaccine hesitancy for more validation and application.



Journal of Orthopaedic Surgery and Research

Scan for the Full Article



First Author	Abdulaziz Z Alomar
Co-Authors	Shahd Almonaie , Khalid Nabil Nagshabandi , Deema AlGhufaili , Manar Alomar
Journal	Journal of orthopaedic surgery and research.

REPRESENTATION OF WOMEN IN ORTHOPAEDIC SURGERY: PERCEPTION OF BARRIERS AMONG UNDERGRADUATE MEDICAL STUDENTS IN SAUDI ARABIA

- Abdulaziz Z Alomar , Shahd Almonaie , Khalid Nabil Nagshabandi , Deema AlGhufaili , Manar Alomar

Background

While female participation has improved in several surgical specialties over time globally, no such increase has been observed in orthopaedic surgery over the past decades. The potential barriers to female participation are likely present from the beginning of medical education. Therefore, this study assessed the apparent lag in equal representation among men and women in orthopaedic surgery in the Kingdom of Saudi Arabia.

Methods

This cross-sectional study used a questionnaire survey to investigate medical students' and interns' perceptions of women participating in orthopaedic surgery, their subspecialty preferences, and barriers preventing them from pursuing an orthopaedic career. The responses were analysed to understand general perceptions, gender-based differences, impact of clinical experiential learning, and exposure to orthopaedic surgery.

Results

Approximately 565 medical students (49% females, 51% males) participated in the survey. Only 17% of students (11% females, 23% males) considered orthopaedic surgery as their future career option. While 31% of female and 17% of male students disagreed with the concept of female-appropriate orthopaedic subspecialties, most of the remaining male and female students perceived paediatric orthopaedics as a female-appropriate subspecialty. Concerning equal representation of women, gender bias and lack of a strong physique were the most frequently selected barriers by female and male students, respectively. Patient preference for male orthopaedicians, gender discrimination, social and family commitments, and need for physical strength were all perceived as barriers for women in orthopaedics. Overall, clinical experience and orthopaedic exposure did not significantly improve the likelihood of female students in choosing orthopaedic surgery as a career.

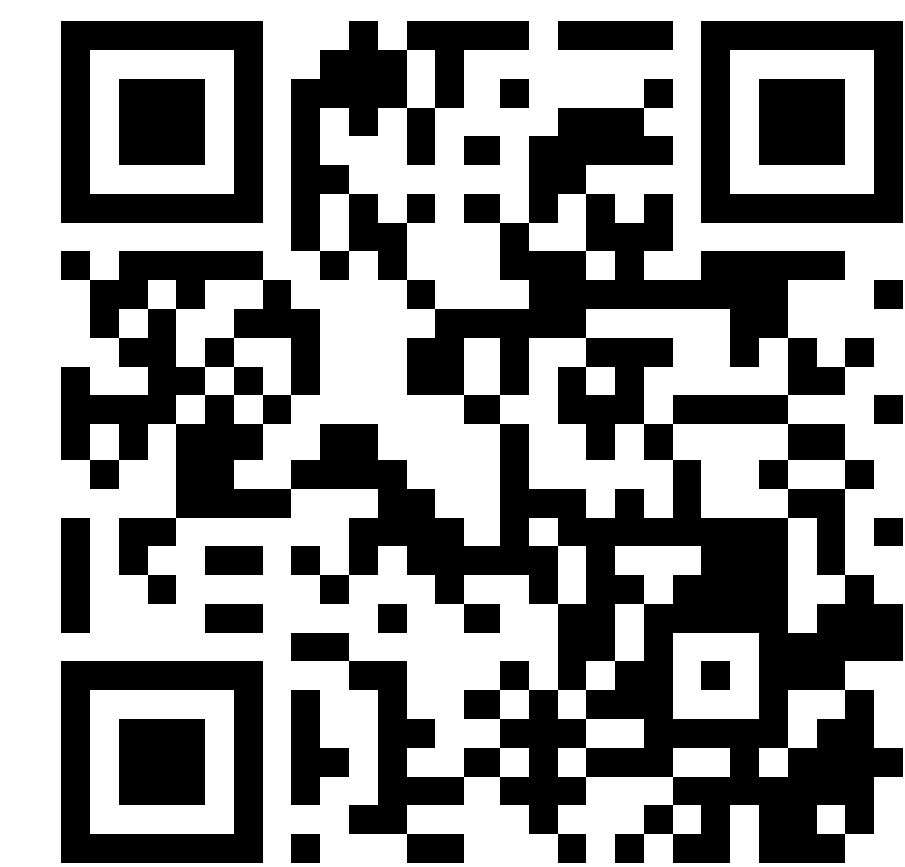
Conclusions

The bias against women in orthopaedic careers is prevalent among medical students early in their academic years. Clinical experience and exposure to orthopaedic surgery should be improved to make a significant impact on female participation in orthopaedic careers. Career building efforts in terms of improved career opportunities, career counselling, flexible working hours, social and family related adjustments and implementation of mentorship/research/fellowship programmes for females are needed to reduce gender discrimination and improve female orthopaedic participation. Furthermore, process improvements may yield greater flexibility for women pursuing the challenging field while accommodating other barriers faced by women in orthopaedic surgery.

Journal of Family Medicine and Primary Care

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First Author	Hussain S Amin
Co-Authors	Alkaseem A Binobaid, Khalid N Nagshabandi, Omar B Alammari, Omar H Alshunaybir, Sultan A Alhammad, Abdulrahman I Almezaini
Journal	Journal of Family Medicine and Primary Care



COMPULSIVE BUYING DISORDER (CBD) AMONG MEDICAL STUDENTS IN COLLEGES OF MEDICINE, DENTISTRY AND PHARMACY AT KING SAUD UNIVERSITY IN RIYADH

Hussain S Amin, Alkaseem A Binobaid, Khalid N Nagshabandi, Omar B Alammari, Omar H Alshunaybir, Sultan A Alhammad, Abdulrahman I Almezaini

Background

Compulsive buying disorder (CBD) is a dysfunctional chronic and extreme consumer attitude that attributes to negative overall impact on psychological and mental wellbeing.

Objective

This study was aimed to examine the prevalence of compulsive buying disorder (CBD) among medical college students, particularly from colleges of medicine, dentistry and pharmacy. Secondary to this, we also examined (i) the association between sociodemographic factors and CBD; and (ii) the association between the five factors of CBD as per (II) Edward's Compulsive Buying Scale (ECBS) and participants' gender.

Methods

This cross-sectional survey was conducted among 263 college students from the colleges of medicine, dentistry and pharmacy of King Saud University from February till March 2021.

Results

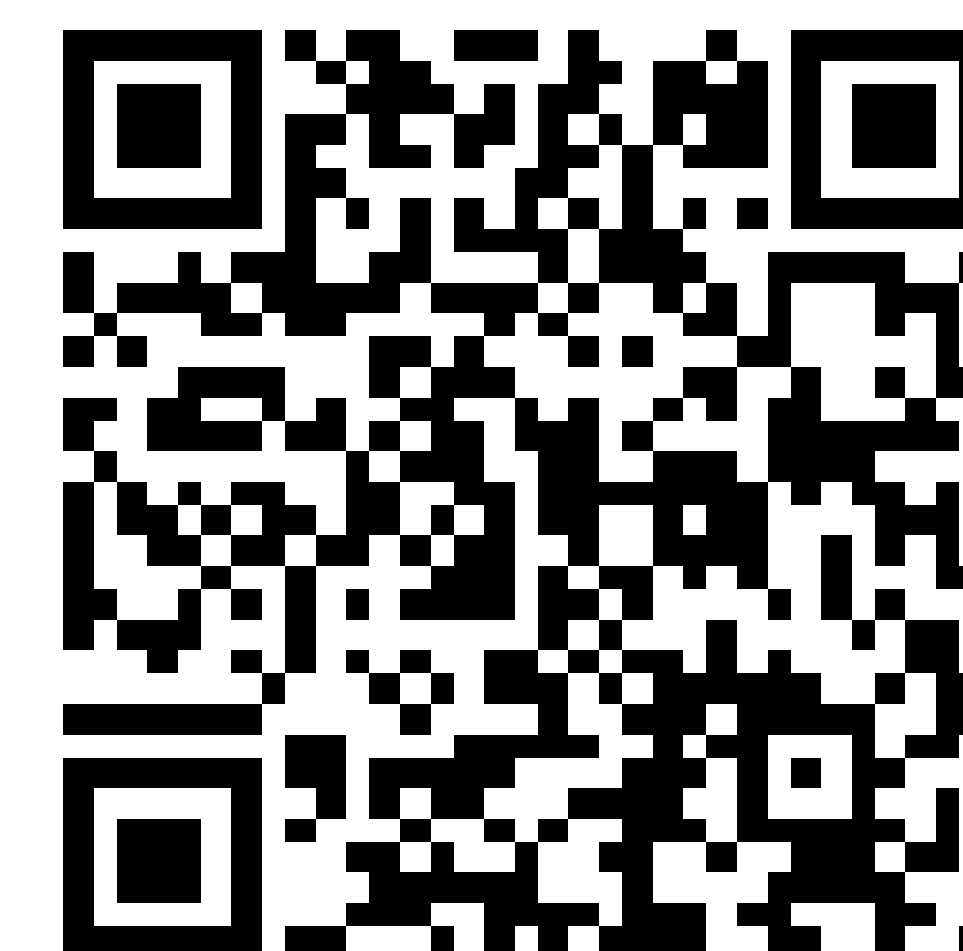
The results showed that the majority of participants were male (144, 54.8%) with mean age 20.1 ± 3.1 (range: 17-23); statistically significant difference was observed in compulsive buying disorder with respect to gender (P -value = 0.02), field of study ($P < 0.0001$) and educational year ($P = 0.03$).

Conclusions

The study concluded that the prevalence of compulsive buying among university students was more frequent among female students in comparison to male students in Riyadh city. This study provided baseline data for the estimation of CBD prevalence among adolescent and youth in KSA, particularly Riyadh city.

Drugs: Education, Prevention and Policy

Scan for the Full Article



First Author	Rufaidah Dabbagh
Co-Authors	Faisal Alhussaini, Alwaleed Binshaya, Mishari Alzoubi, Abdullah Alyamani, Omar Abdulghani, Abdullah Alsalboukh
Journal	Drugs: Education, Prevention and Policy journal

THE RECREATIONAL INHALATION OF N₂O “WHIPPITS” AMONG COLLEGE STUDENTS AT A SAUDI UNIVERSITY: PREVALENCE, PATTERNS, AND PERCEIVED HARM

Rufaidah Dabbagh, Faisal Alhussaini, Alwaleed Binshaya, Mishari Alzoubi, Abdullah Alyamani, Omar Abdulghani, Abdullah Alsalboukh

Background

Recreational nitrous oxide (N₂O) inhalation is a growing trend among young adults, but few studies have explored its prevalence. We aimed to measure the prevalence of recreational N₂O inhalation among Saudi university students, its perceived harm, as well its association with gender, college type and use of tobacco and alcohol.

Methods

A cross-sectional study was conducted among undergraduate students at King Saud University, Riyadh, in September, 2022. Self-administered questionnaires asked about knowing someone who inhaled N₂O, awareness of whippits (cream charger bulbs), its recreational use, and perceived side effects.

Results

A total of 720 students participated (response rate = 82%). About 13.3% of the students heard about N₂O, 15.7% knew someone who inhaled N₂O recreationally, 7.9% ever inhaled it (8.3% women, and 7.5% men), and 36.8% thought it had no negative health effects. Whippits were the most common mode inhaled. Being a health-college student increased the odds for lifetime recreational inhalation by 97% (AOR = 1.97; 95% CI = 1.10, 3.55), while hookah use increased the odds around three-fold (AOR = 3.27; 95% CI = 1.01, 10.63).

Conclusions

Saudi university students have a low perception of harm toward recreational N₂O inhalation and are experimenting with it, with greater odds for use among healthy college students. Raising community awareness about this behavior is needed.

First Author	Nada Alyousefi,
Co-Authors	Joud Alnojaidi, Afnan Almohsen, Shayma Alghanoum, Ghaida Alassiry, Layan Alsanad, Samu Alzeer
Journal	Advances in Medical Education and Practice

Scan for the Full Article



HOW DO MEDICAL STUDENTS PERCEIVE THEIR RESEARCH EXPERIENCES AND ASSOCIATED CHALLENGES

Nada Alyousefi, Joud Alnojaidi, Afnan Almohsen, Shayma Alghanoum, Ghaida Alassiry, Layan Alsanad, Samu Alzeer

Background

Undergraduate medical students' research experience is essential for their career progress. Understanding the perceived challenges undergraduate medical students face in conducting research can improve the research experience in the undergraduate curriculum. This study explores the medical students' perception of medical research and assesses their practices and perceived barriers encountered in carrying out medical research.

Methods

A descriptive cross-sectional study was carried out among medical students of the college of medicine of King Saud University in Riyadh. They were invited to enroll in a web-based survey composed of four sections; demographic data, attitudes toward science and research, perceived barriers to participating in scientific research activities, and medical students' research practice and experience.

Results

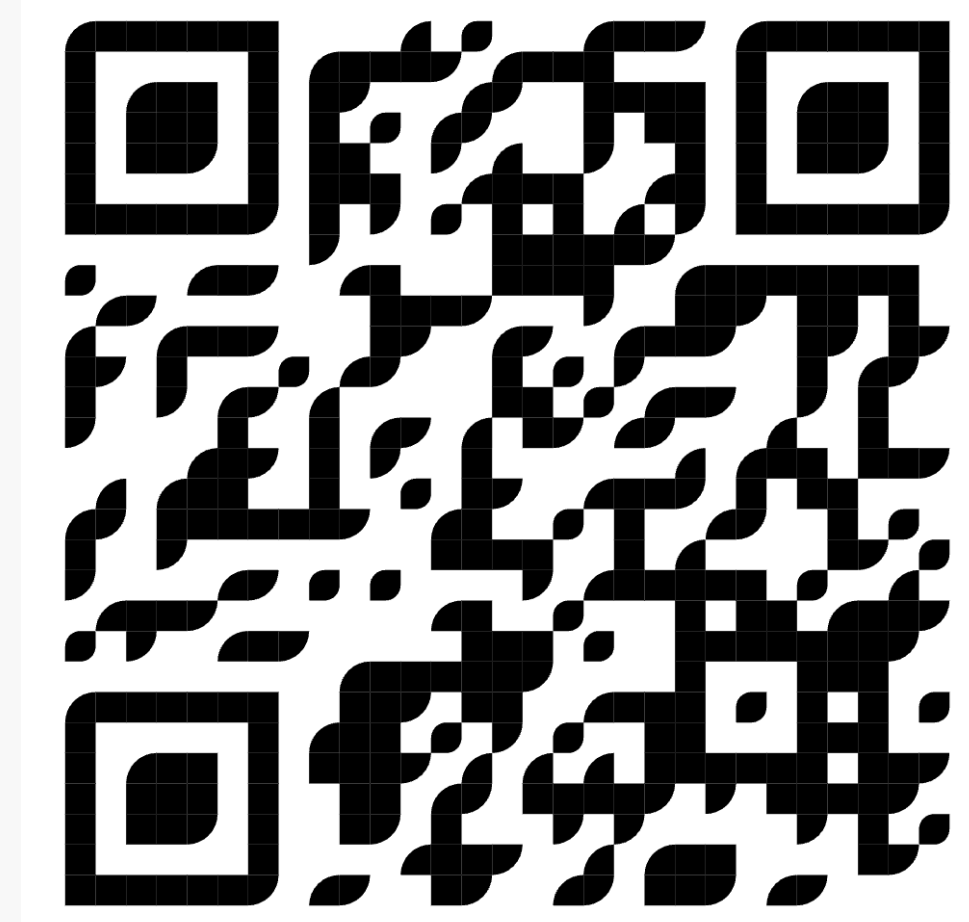
A total of 389 students responded to the survey. The most commonly reported barrier to participation in scientific research was lack of time due to being overburdened with educational activities (74.6%). Gender ($P < 0.008$), age ($P < 0.0001$), academic year ($P < 0.0001$), grade of the research course ($P < 0.0001$), and the rank of supervisor ($P < 0.0001$) were identified as significant contributors to success in publication. The only barrier identified as a significant factor is the inadequate research supervisors' guidance and support ($P 0.015$). Clinical students are more confident in research skills than pre-clinical students.

Conclusions

Although participation in the research was high among medical students, most reported a lack of time and the lack of mentors as significant barriers to conduct research. This required interventions to improve the mentorship and tailor it to the student's needs throughout the curriculum.



Scan for the Full Article



First Author	Ibraheem Altamimi
Co-Authors	Abeer Almazyed, Sami Alshammary, Abdulaziz Altamimi, Abdullah Alhumimidi, Raed Alnutaifi, Mohammed Malhis, Abdullah Altamimi
Journal	Children MDPI

BACTERIAL PATHOGENS AND ANTIMICROBIAL SUSCEPTIBILITY PATTERNS OF URINARY TRACT INFECTIONS IN CHILDREN DURING COVID-19 2019–2020: A LARGE TERTIARY CARE CENTER IN SAUDI ARABIA

Ibraheem Altamimi, Abeer Almazyed, Sami Alshammary, Abdulaziz Altamimi, Abdullah Alhumimidi, Raed Alnutaifi, Mohammed Malhis, Abdullah Altamimi

Background

One of the most prevalent bacterial infections in children is urinary tract infection (UTI), which has become a major concern with increasing resistance of the pathogens to the routinely used antimicrobial agents. The aim of the study is to determine the antimicrobial susceptibility patterns of pediatric UTI-causing pathogens, including ESBL-producing bacteria, in Saudi Arabia.

Methods

This cross-sectional retrospective study was conducted to ascertain the frequency of isolation and the antimicrobial resistance pattern of uropathogens among children aged 0–15 years. The data from the urine cultures was collected during 2019–2020 at the King Fahad Medical City, a major tertiary hospital in Riyadh, Saudi Arabia. A total of 1022 urine samples from patients diagnosed with urinary tract infections (UTIs) were collected for this study. Microbial species present in the samples were cultured and identified using standard biochemical techniques. To assess the resistance of these strains to antimicrobial drugs, an in vitro method was employed, and the criteria set by the Clinical Laboratory Standard Institute (CLSI) were followed. In addition, a double-disc synergy test was conducted to identify strains of *E. coli* that produce extended-spectrum beta-lactamase (ESBL).

Results

The predominant pathogens were *E. coli* (58.6%), followed by *Klebsiella sp.* (23.9%). *E. coli* isolates were more sensitive to meropenem and ertapenem in 99.2% of cases, followed by amikacin (99%). *Klebsiella sp.* were sensitive to amikacin in 97.1% of cases, followed by meropenem and ertapenem (92.2% in both). The highest sensitivities of antimicrobials toward ESBL were for meropenem and ertapenem (100% in both), followed by amikacin (99%).

Conclusions

Our study recommends using local antibiotic sensitivity data for empirical UTI treatment. Amikacin, ertapenem, and meropenem are effective intravenous options. Cephalosporin, cefuroxime, amoxicillin/clavulanic acid, and nitrofurantoin are suitable oral choices. No significant changes in antimicrobial susceptibility were observed during the COVID-19 pandemic. Further research is needed to assess potential pandemic-related alterations.



KSUMSC
SCIENTIFIC MAGAZINE



Where Research Converges!
حيث تلتقي الأبحاث!

SECTION #02

RESEARCH ACHIEVEMENTS BY KSU STUDENTS

Recognizing Excellency: Award-Winning by KSU Students

المنتدى العلمي للطلاب السادس للأبحاث
KSUMSC Research Forum
Sixth Annual



In the Health professions conferences 2024 which held at King Saud bin Abdulaziz university for Health Sciences (KSAU-HS), Riyadh. which is program aims to promote a culture of scientific research targeting all healthcare practitioner from all around the kingdom. we congrats **Hamad Al-Mousa** a 5th year medical students at **King Saud university (KSU)** winning the **3rd place award** for their incredible **poster presentation** for their research project entitled :

Social Determinants of Health and Quality of Life of Children and Families with Chronic Kidney Disease: Insights from Saudi

under supervision of **Dr Omar Alomar** and assistance of his incredible team include **Yossef AlNasser, Arwa Alabdulwahid, Tarfa Alsharidi, Shahad AlSawsan Albatati**

as Chronic kidney disease (CKD) in children presents a significant health challenge, not just for their physical health, but also for their emotional well-being and family life. This research, specifically focused on Saudi Arabia, takes on even greater significance due to a critical gap in knowledge. While the medical management of CKD is crucial, we lack a deep understanding of how social factors like income, access to healthcare, and cultural beliefs uniquely impact these young patients and their families in Saudi Arabia. This research aims to fill this gap by identifying the social determinants of health (SDOH) that most significantly affect quality of life for these families.

Understanding these SDOH is not merely academic. By pinpointing the specific social barriers and challenges faced by Saudi families with children experiencing CKD, this research has the potential to revolutionize their care. Armed with this knowledge, policymakers and healthcare providers can develop targeted interventions that address these challenges directly. This could involve expanding access to social support services, implementing financial assistance programs, and creating culturally sensitive education initiatives specifically designed for children with CKD and their families



During the sixth annual KSUMSC research forum 2024, KSU students incredible work was not limited to the outstanding organizing effort for the forum; it goes beyond that by presenting number of Exceptional and Phenomenal research project, one of them done and presented by **Sarah AlQuwayz** and her Team supervise by **Dr Motaz Alaqeel** as they introduce and **Novel self-reported illustrative assessment toll Evaluating kneeling function in knee osteoarthritis patients**,,deserving the **1st place award** in the Oral presentation section

Knee osteoarthritis (OA) is a debilitating condition that significantly impacts mobility and daily activities, with kneeling being a particularly challenging task and holds deep cultural and religious significance in the Middle East, Current methods for assessing kneeling function often rely on physical examinations or complex equipment, limiting their accessibility and practicality. This research introduces a groundbreaking approach: a novel self-reported illustrative assessment tool. This innovative tool has the potential to transform the way kneeling function is evaluated in knee OA patients as this self-reported tools empower patients to actively participate in their care by providing valuable insights into their own limitations in addition, its Enhanced clinical utility as clinicians can leverage this tool to gain a more comprehensive understanding of a patient's kneeling ability, leading to more informed treatment decisions and improved patient outcomes in conclusion this research has the potential to significantly improve the assessment of kneeling function in knee OA patients. This can ultimately lead to better patient care, management of the condition, and hopefully, improved quality of life for those suffering from knee OA



The 1st KFSH&RC International Neuroimmunology Conference (INIC24) was held on 2024. It aimed to educate professionals and the public about neuroimmunological diseases, with a specific focus on Multiple Sclerosis (MS).

The conference featured presentations from local and international experts, Sara Alsheikh and her dedicated team share their meticulous work and insightful presentation which recognized and deserved the **1st place award!** testament to their remarkable contributions to the field.

Sara Alsheikh Aryam Alenizi, Ahmad Alghamdi, Nada Alhumrani, Manal Alenazi, Ahmad Abulaban presented paper aim to estiamted the Impact of Vitamin D Deficiency on Multiple Sclerosis Patients in Central Saudi Arabia

This research tackles a critical public health concern in Saudi Arabia, where multiple sclerosis (MS) cases are rising. While vitamin D deficiency is a known risk factor for MS globally, limited research has explored its specific impact on this region's population. This study aims to bridge that gap by examining the potential connection between vitamin D levels and MS outcomes in Saudi Arabian patients.

the findings can contribute valuable insights to the global understanding of MS. This knowledge has the potential to inform treatment strategies and improve patient outcomes worldwide.

as this study aim for better and deeper understanding of the link between vitamin D deficiency and MS progression, as simple measures could become a powerful tool for preventing the disease or mitigating its effects, potentially improving the lives of many individuals at risk.



KSU students showcase their presence on a global stage at the 9th Annual MENA International Orthopedic Congress, demonstrating their impact not just nationally but internationally. by wining the 1st place award in the poster competition presented by Omar Aldosari

Foot health is often an overlooked aspect of overall well-being, yet it can significantly impact our daily lives. This research, titled:

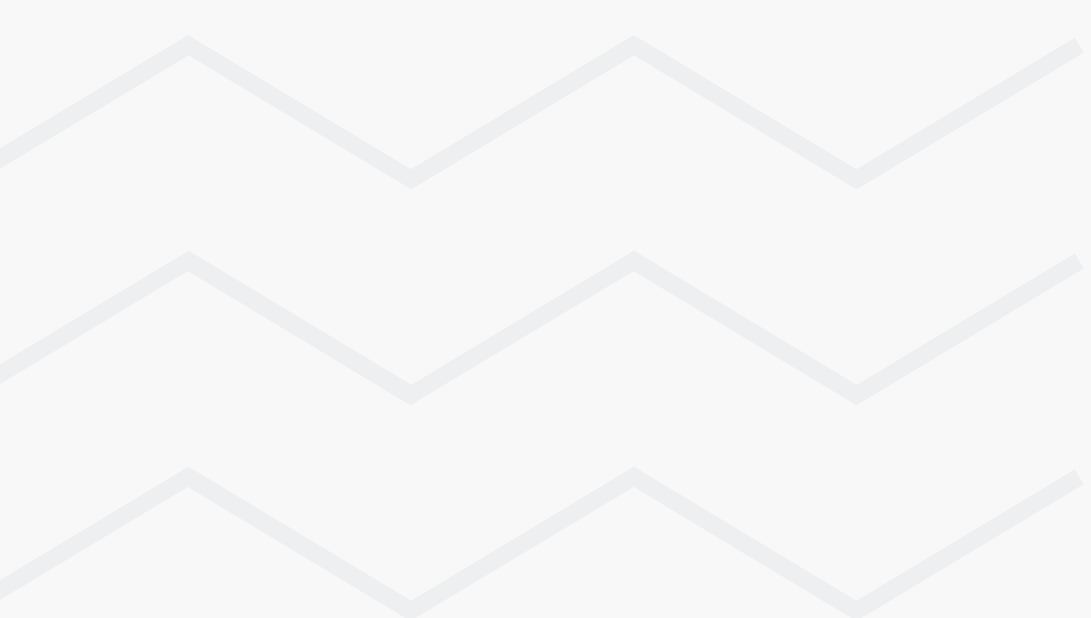
"Foot health and quality of life among adults in Riyadh, Saudi Arabia: a cross-sectional study," delves into this crucial but under-examined topic.

under supervision of Dr Abdulaziz Almaawi and assistance of his incredible team include Hashim Alqarni, Ahmed K Thallaj, Mohammed Alhuqbani, Zyad Aldosari, Omar Aldosari, Naif Alsaber.

Limited research explores the connection between foot health and quality of life, particularly in the Saudi Arabian context. This study aims to bridge this gap by examining a population in Riyadh, additionally Foot pain and limitations can hinder mobility, social interaction, and overall well-being. Understanding this link can inform strategies to improve foot health and ultimately, quality of life for those patients

ultimately this study has the potential to shed light on a critical but often neglected aspect of health. By uncovering the relationship between foot health and quality of life, it can pave the way for improved foot care practices.

You may have a look in the research abstract in the following page [2](#)





SECTION #03

STEPS TO MASTER SR-MA

Step by step Guide to master systematic review and meta-analysis

Content:

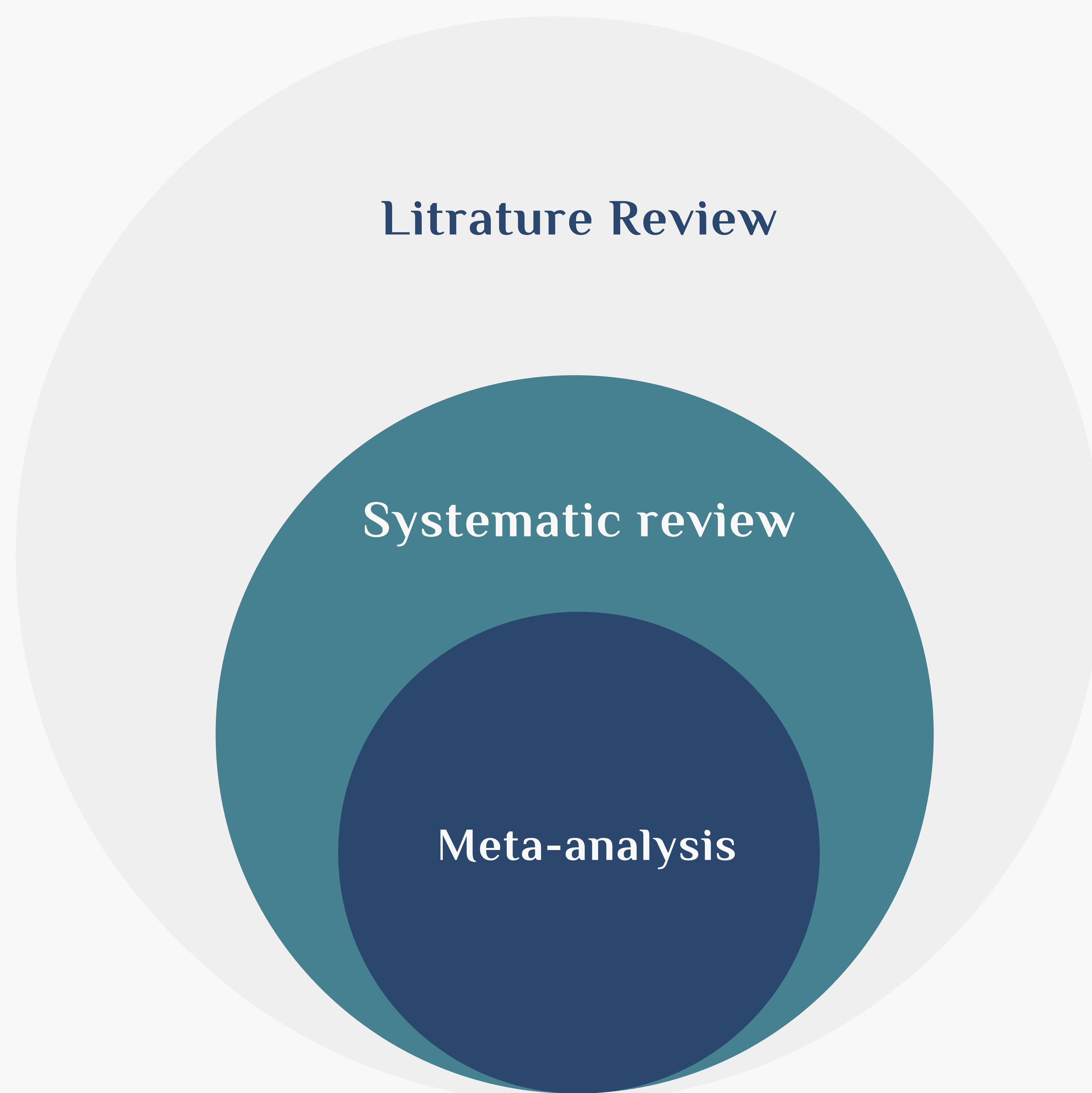
- Intro to SR-MA
- Systematic review vs Narrative review
- Pathway to Systematic review
- Search Database
- Title & Abstract screen
- Journal submission

Intro to SR-MA

Systematic review (SR) is a meticulous and **objective** analysis of **all** existing research on a specific topic. It's essentially a way to sift through a mountain of studies and synthesize the best available evidence **to answer a clearly defined question**

Meta-analysis (MA) is the **statistical part** of a systematic review process that focuses on combining data from multiple studies to get a stronger overall picture

So we can conclude that you can do **Systematic review** without **Meta-analysis** but you are not able to do **Meta-analysis** without **Systematic review**



Systematic review VS Narrative review

Systematic review (SR) may overlap with **Narrative review** or literature review, even though they are quite different design and the table shown below simply explain the difference between these study designs

	Systematic Review	Narrative Review
Goal	Provide a comprehensive and unbiased overview of research on a specific question.	Summarize and interpret existing research on a topic.
Research Question	Clearly defined and focused.	Broad and exploratory.
Literature Search	Systematic and comprehensive using multiple databases and search strategies.	Less rigorous, may rely on personal knowledge and convenience.
Inclusion/Exclusion Criteria	Predefined criteria for selecting studies (e.g., publication date, methodology).	Less structured, selection based on author's judgment.
Data Synthesis	May include meta-analysis to statistically combine data from multiple studies.	Focuses on qualitative synthesis (summarizing and interpreting findings).
Strengths	Provides a reliable and unbiased summary of the evidence.	Offers a broad understanding of the topic and can identify new research directions.
Best Use	When needing a definitive answer to a specific question based on the best available evidence.	When needing a broad overview of a topic or exploring new research areas.
Example	The effectiveness of non-pharmacological interventions for asthma management during pregnancy: a systematic review	Overview on the recent update in asthma management

Mindmap for Systematic review

1 Research Question

Follow PICO format in evidence-based clinical practice and SPICE for qualitative research questions, and SPIDER in mixed-methods research.

2 Preliminary Search

Before digging deep into your research, validation has to take place by reviewing the recent publication for enough article to conduct the study and avoiding previously addressed question.

3

Inclusion and exclusion criteria

formulated based on research question in addition to study, method and exposure characteristics.

4

Searching Strategy

Search strategy built using free text term and try to avoid outcome related term since its not usually mentioned in study title.

5

Search Database

you need at least 2 database and some example (PubMed, Scopus, Web of Science, EMBASE, Cochrane).

8

Full text screen

After recording the number & downloading the selected articles, you will start screen and finalize decision and searching the reference of similar included articles.

7

Title & Abstract screen

include or exclude the article based on your criteria which will be done by 2 Author followed by conflict Resolution.

6

Protocol writing

After retrieve all article, remove duplicate using Endnote or Mendeley and write your protocol.

9

Data extraction & Quality assessment

quality assessment can be done using varying tool based on study design as example The Cochrane Collaboration's tool and the Newcastle–Ottawa Scale.

10

Statistical Analysis

Divided into Qualitative analysis in SR part & Quantitative for MA.

11 Manuscript writing & Submission

introduction, methods, results, discussion and conclusion, in addition to the tables and index, table for studies and patients characteristics and PRISMA flow diagram.

Muka T, Glisic M, Milic J, Verhoog S, Bohlius J, Bramer W, Chowdhury R, Franco OH. A 24-step guide on how to design, conduct, and successfully publish a systematic review and meta-analysis in medical research. *Eur J Epidemiol.* 2020 Jan;35(1):49-60. doi: 10.1007/s10654-019-00576-5. Epub 2019 Nov 13. PMID: 31720912.

Tawfik GM, Dila KAS, Mohamed MYF, Tam DNH, Kien ND, Ahmed AM, Huy NT. A step by step guide for conducting a systematic review and meta-analysis with simulation data. *Trop Med Health.* 2019 Aug 1;47:46. doi: 10.1186/s41182-019-0165-6. PMID: 31388330; PMCID: PMC6670166.

Steps to Systematic review

1

Research Question

Developing a good research question and defining the aim of the study requires scanning the literature to identify gaps in the field, and as any research question it should be feasible, interesting, novel, ethical, and relevant.

Follow **PICO** format in evidence-based clinical practice (Population, Intervention, Comparison, Outcome)

SPICE for qualitative research questions (setting, perspective, intervention/exposure/interest, comparison, and evaluation)

SPIDER in mixed-methods research (Sample, Phenomenon of Interest, Design, Evaluation, Research type).

Steps to Systematic review

2

Preliminary Search

identify relevant articles, **ensure the validity** of the proposed idea, **avoid duplication** of previously addressed questions, and **assure that we have enough articles** for conducting its analysis.

and simply its done by searching the main database search engine as Pubmed or google scholar by searching study keywords

The existence of systematic reviews on similar research questions is not always an obstacle to another systematic review if new analysis will close gaps and add value.

3

Inclusion and exclusion criteria

The **inclusion and exclusion criteria** for studies are determined by the research question. These criteria encompass a **range of study characteristics**, such as **design** (e.g; only RCT or Cohort), **publication date** (study from 2000 to 2024), and geographical location. Additionally, they may consider **characteristics of the study population** (age, sex, presence of disease), the exposure and outcome variables, and the employed methods.

4

Searching Strategy

Steps to Systematic review

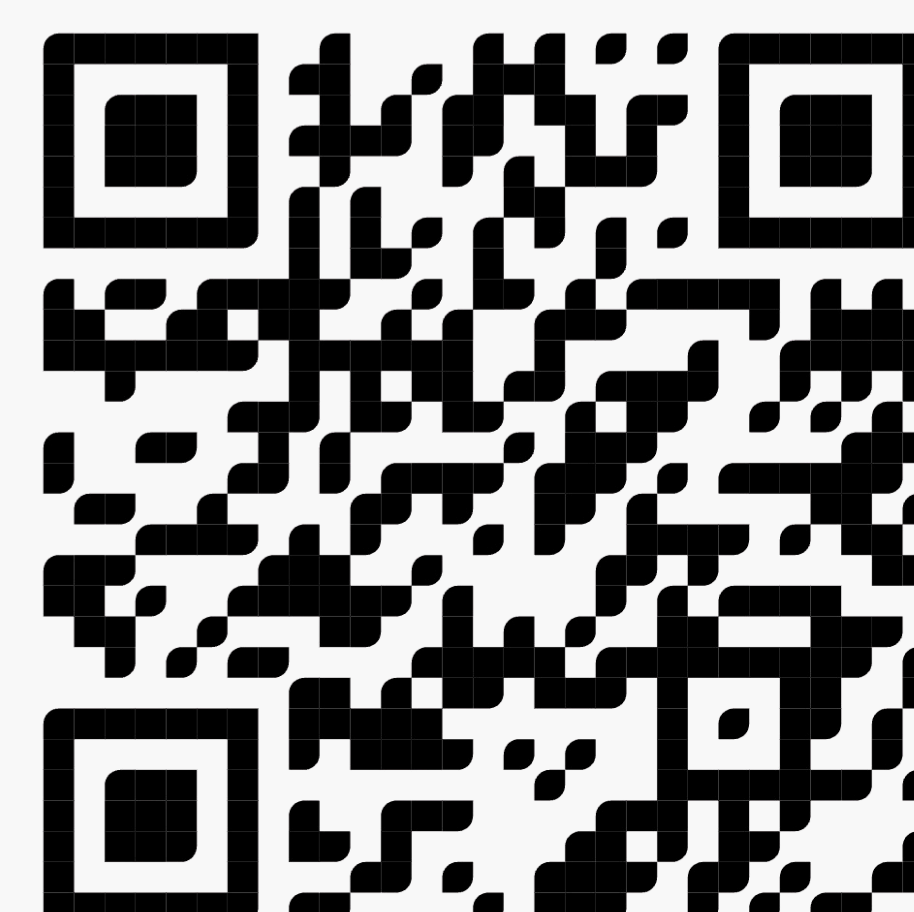
5

Search Database

you need at least 2 database and some example (PubMed, Scopus, Web of Science, EMBASE, Cochrane), and the more Database searched the better it is

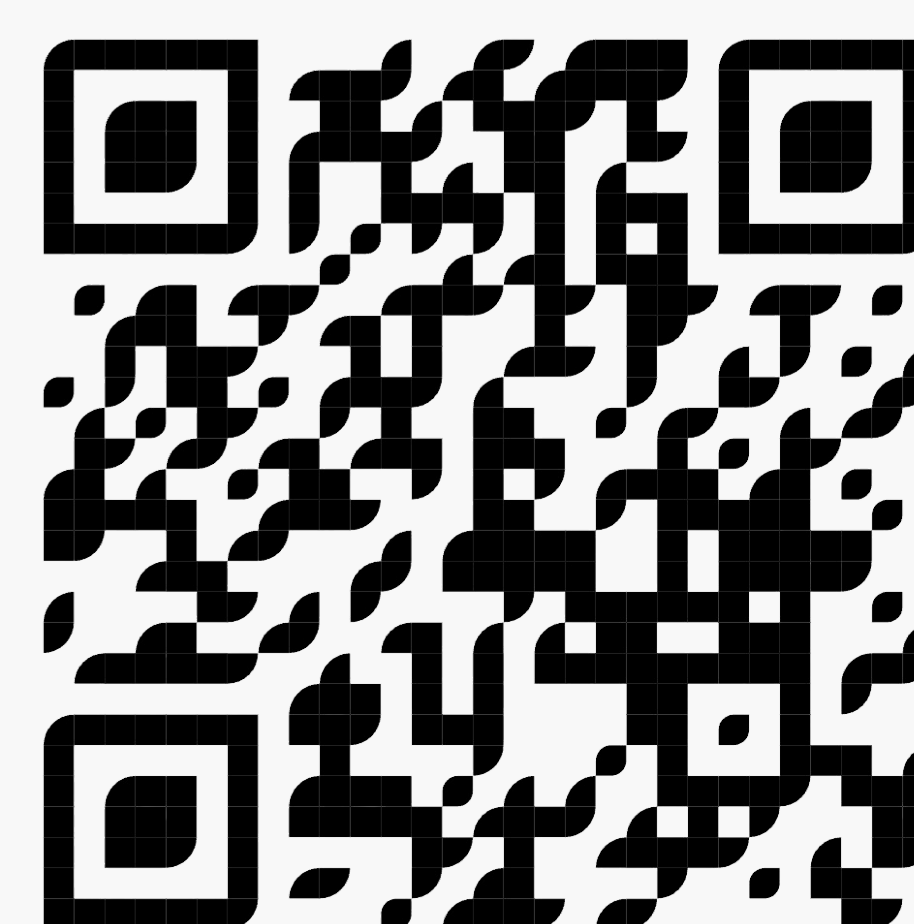
PubMed

PubMed is a **free access** database for biomedical and life sciences literature and easily used with multiple filters option



Cochrane

Cochrane is also a **free access** database for biomedical and life sciences literature slightly complex advance search option and limited feature like exporting search result which require subscription



Steps to Systematic review

5

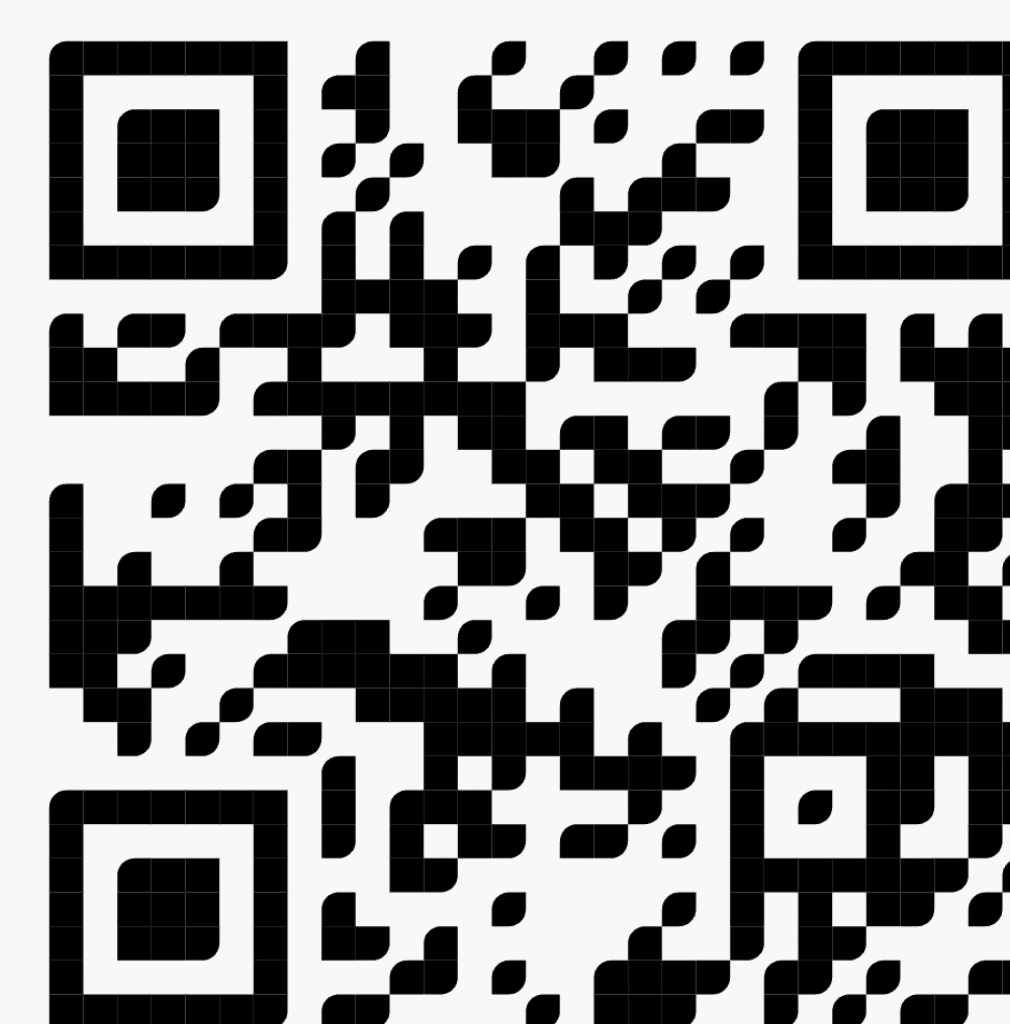
Search Database

Web of science

Web of science is a **paid-access** search engine even-though can be freely access through [Saudi Digital Library \(SDL\)](#) through the link or by scanning the parcode below

Embase

Embase is a comprehensive biomedicine and life sciences database. Unlike PubMed and chochrane, which is free to access, Embase is a **subscription-based resource** which also can be freely access through [Saudi Digital Library \(SDL\)](#)!! through the link or by scanning the parcode



<https://access.library.ksu.edu.sa/access.library.ksu.edu.sa/public/index.php>

Steps to Systematic review

5

Search Database

Web of science

Once you enter the link use your University mail or ID to access SDL then follow the steps shown in figure below to access web of science

The screenshot displays the Saudi Digital Library (SDL) website. At the top, there is a navigation bar with the language set to 'English' and various menu items: 'الرئيسية' (Home), 'عن المكتبة' (About the Library), 'محرك البحث' (Search Engine), 'بوابة المعرفة' (Knowledge Gateway), 'الأخبار' (News), 'التدريب' (Training), 'مساعدة' (Help), and 'دخول' (Login). The main search area includes a search bar with a dropdown menu for 'جميع المصادر' (All Sources) and 'الكلمات الدلالية' (Keywords). A search button labeled 'بحث' (Search) is present, along with a 'بحث متقدم' (Advanced Search) link. Below the search bar, there is a section titled 'مصادر المعرفة' (Knowledge Sources) with a lightbulb icon. It contains five buttons: 'المصادر الحرة' (Open Sources), 'الرسائل الجامعية' (University Journals), 'مصادر المعرفة العربية' (Arabic Knowledge Sources), 'المجلات العلمية السعودية' (Saudi Scientific Journals), and 'مصادر المعرفة الأجنبية' (Foreign Knowledge Sources). A red dashed arrow points from the 'مصادر المعرفة الأجنبية' button to the 'W' in the alphabetical index below. The alphabetical index lists letters from A to W, with 'W' highlighted. Below the index is a search bar with a dropdown menu for 'الكل' (All) and a search button labeled 'البحث عن قاعدة' (Search Database). At the bottom, there are two database descriptions: 'Wiley Online Library' and 'Web of Science'. A red dashed arrow points from the 'Web of Science' link to the 'W' in the alphabetical index.

Steps to Systematic review

5

Search Database

Embase

after accessing SDL you can access Ovid either through **Evidence Based Medicine Reviews** or **Ovid Multimedia - Wolters Kluwer**

A B C D E G I J K L M N O P R S T U W All

الكل البحث عن قاعدة بحث

Oxford Journals Publish over 450 journals in the humanities, social sciences, law, science, and medicine.

Ovid Multimedia - Wolters Kluwer اوفيد هو مقدم حصري على الانترنت لهذه المجموعة لاكثر من 280 مجلة طبية وتمريضية تم نشرها من قبل ليبينكوت ويليام و وولكنيز (إل ديليو ديليو)، وهي مخصصة لتلبية احتياجاتك من المعلومات الطبية عندما لا تكون المجلات الاخرى كافية، وتقدم لك هذه المجموعة مواضيع هامة من مجلات متخصصة وصولاً إلى مصادر معلومات متخصصة في هذه المجالات مثل التمريض والعلوم الحيوية.

A B C D E G I J K L M N O P R S T U W All

الكل البحث عن قاعدة بحث

EBSCO EBSCO is the leading provider of research databases, e-journals, magazine subscriptions, e-books and discovery service to libraries of all kinds.

Emerald "Emerald's biggest and best value multidisciplinary eJournal collection providing you with access to over 249,900 articles from 310 journals across multiple subject disciplines."

Evidence Based Medicine Reviews Ovid's Evidence-Based Medical Reviews (EBMR) platform supports the international trend towards integrating evidence-based medicine practices into clinical practice by extracting the "best of this evidence" from medical research and applying it to patient treatments in hospitals, clinics and the community.

Steps to Systematic review

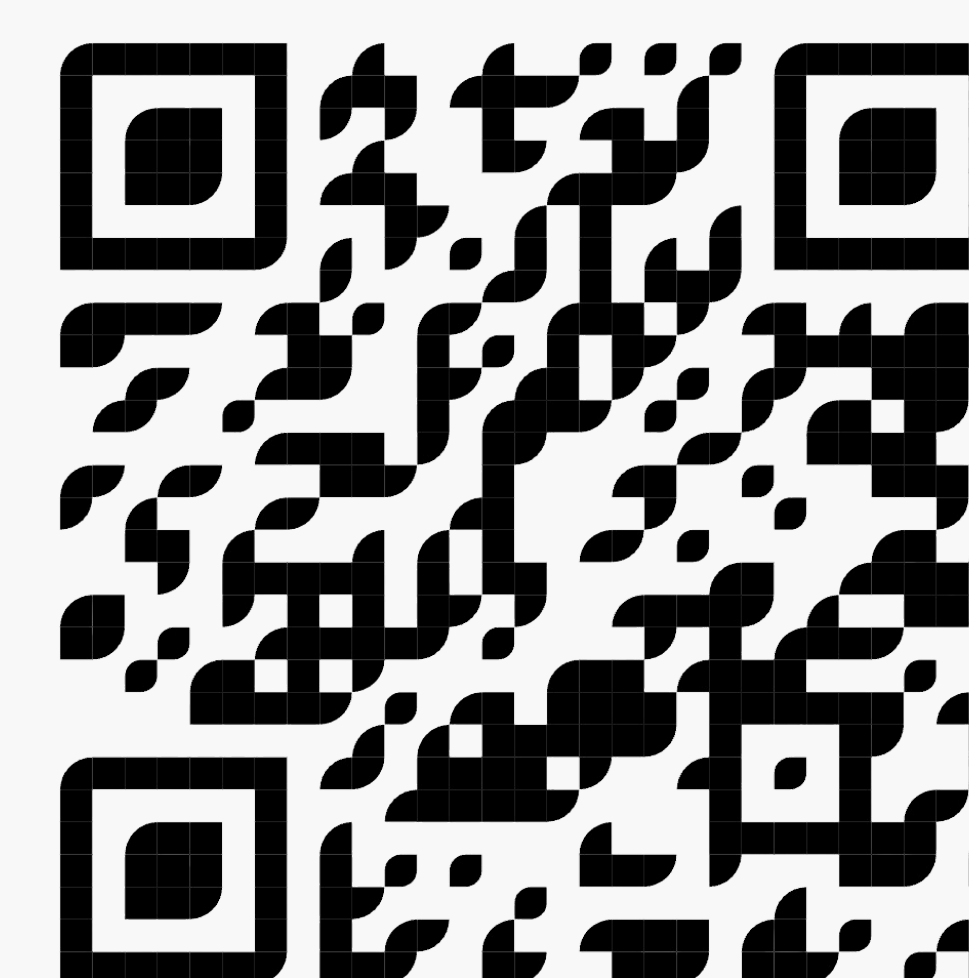
6

Protocol writing

Systematic reviews require a well-defined plan to ensure transparency and **minimize bias**. Protocol writing is the crucial step, outlining the review's methodology. Platforms like [PROSPERO](#) ([International Prospective Register of Systematic Reviews](#)) encourage researchers to register their protocols publicly, as it helps to avoid duplicate reviews and enhance your chances for publication.

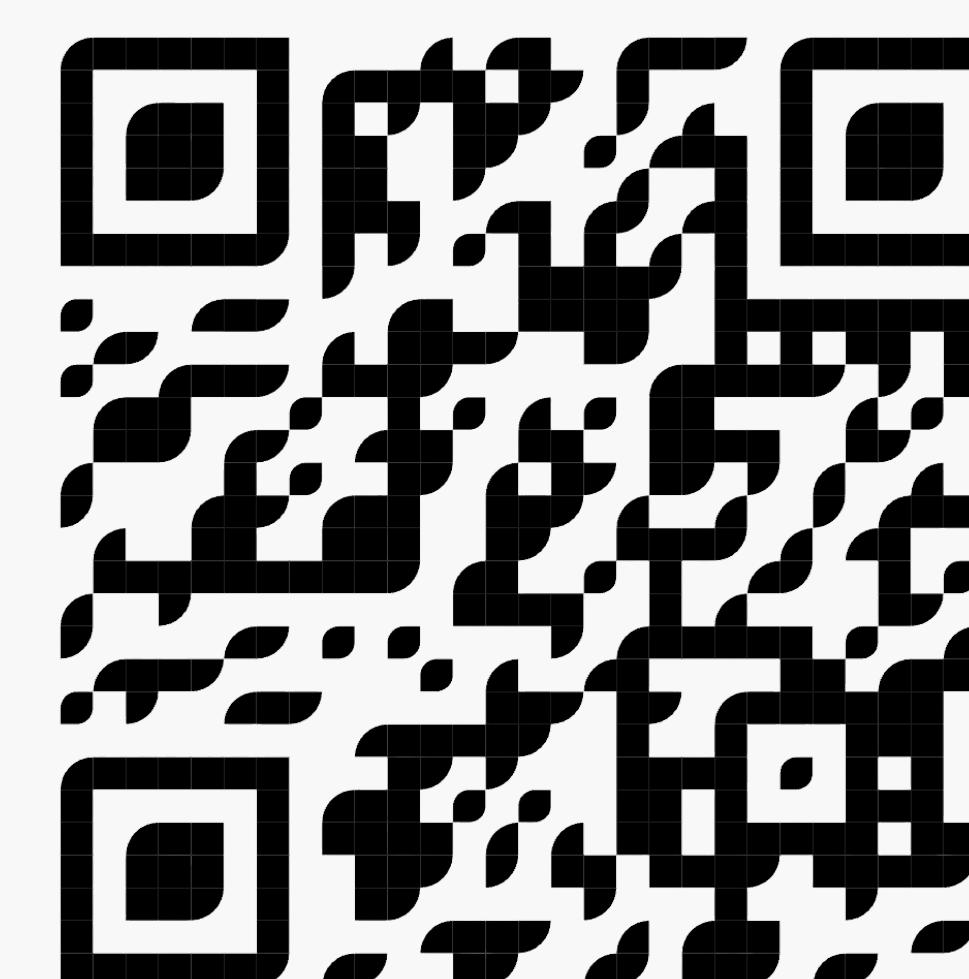
PROSPERO

**International prospective
register of systematic reviews**



Here is an amazing Guidance notes for registering a systematic review protocol with PROSPERO will take through all the steps to register your review.

**Guidance notes for registering
a systematic review protocol
with PROSPERO**



Steps to Systematic review

7 Title & Abstract screen

Title & Abstract screen done to include or exclude the article based on your criteria which will be done by **Two (2) Author or reviewer** followed by conflict Resolution.

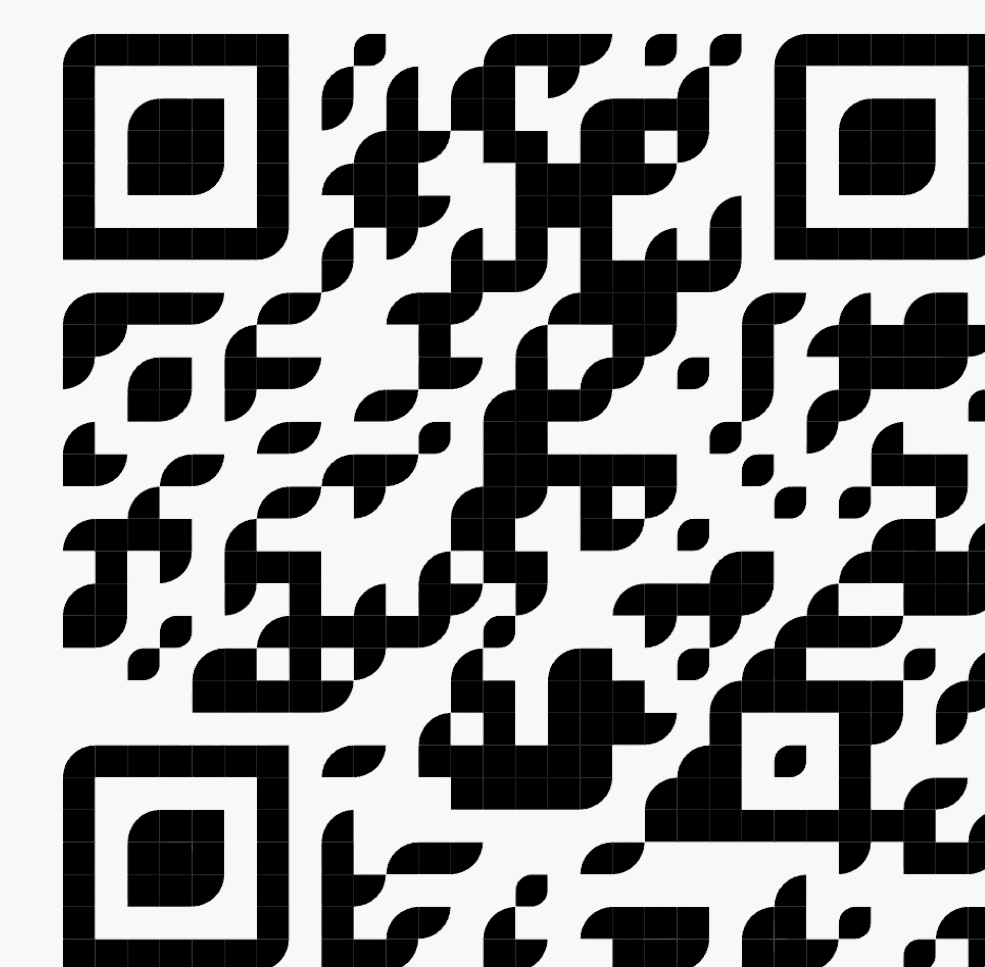
its not required from the the reviewer to screen all the article it can be distributed among 4 reviewer for example at the end the main goal to make sure each article been screened by 2 independent reviewer.

Multibel app or website can be used for Title & Abstract screen as Rayyan, Covidence, and DistillerSR or even endnote

even-though we will focus on **Rayyan** as it one of the most commonly used due to its **simplicity** and **free access**

you may access **Rayyan** through the link or by scanning the parcode and follow the steps in the next pages to know how to utilise this tool
<https://www.rayyan.ai/>

rayyan
INTELLIGENT SYSTEMATIC REVIEW

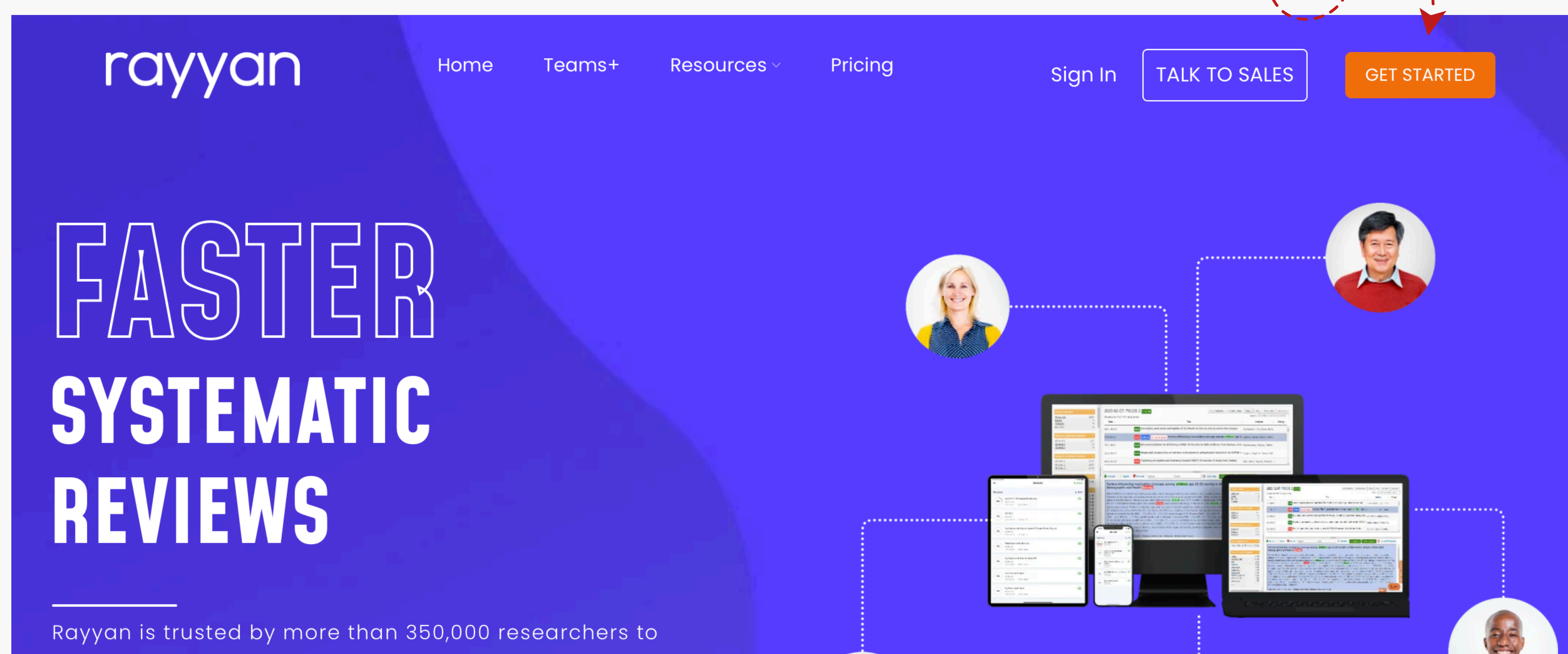


Steps to Systematic review

7 Title & Abstract screen

Rayyan

from the home page click on “Get started” button and register using your E-mail



once you register in Rayyan add your project from “New Review” icon as shown in the following figures and fill the required project information

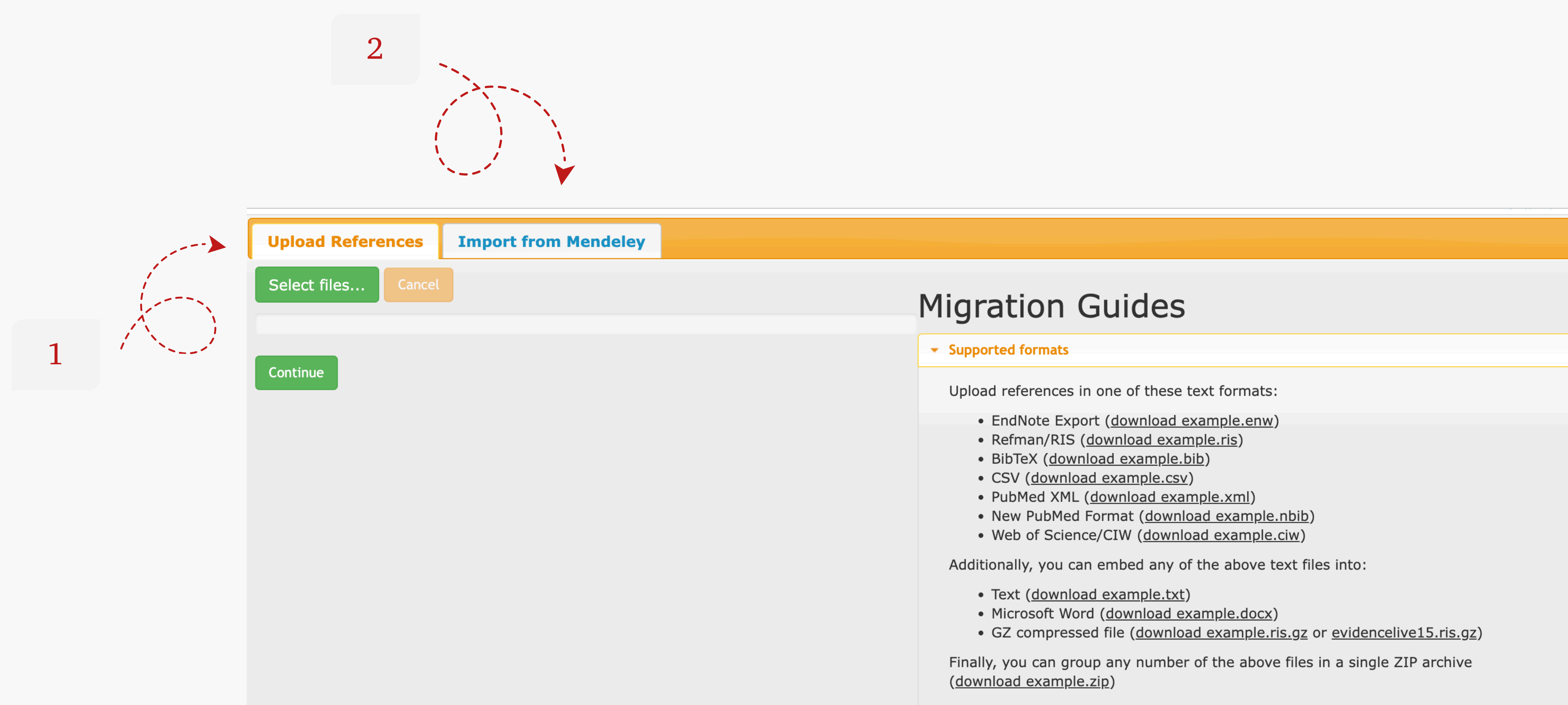
Steps to Systematic review

7 Title & Abstract screen

Rayyan

Then you will be required to import your articles, and you have two option to do so which have quit similar steps

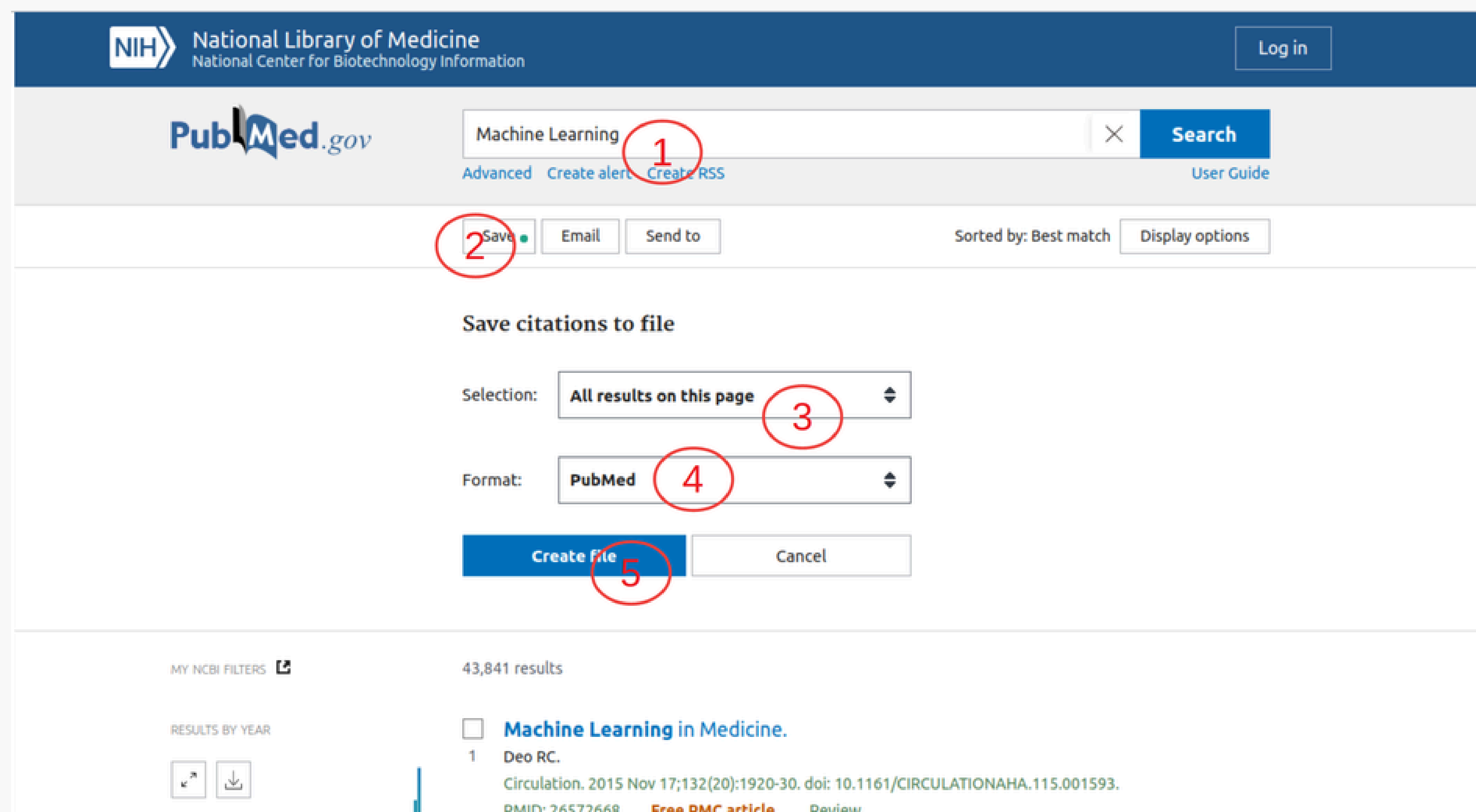
- 1 **First** by selecting the file that contain the articles you already download from the databases (pubmed, web of science,,etc) and import it to Rayyan directly
- 2 **Second** is by import your articles from the databases to **Mendely** and link your mendely account to rayyan which excellent methode and more organized especially if you plan to work on multiple project in the future



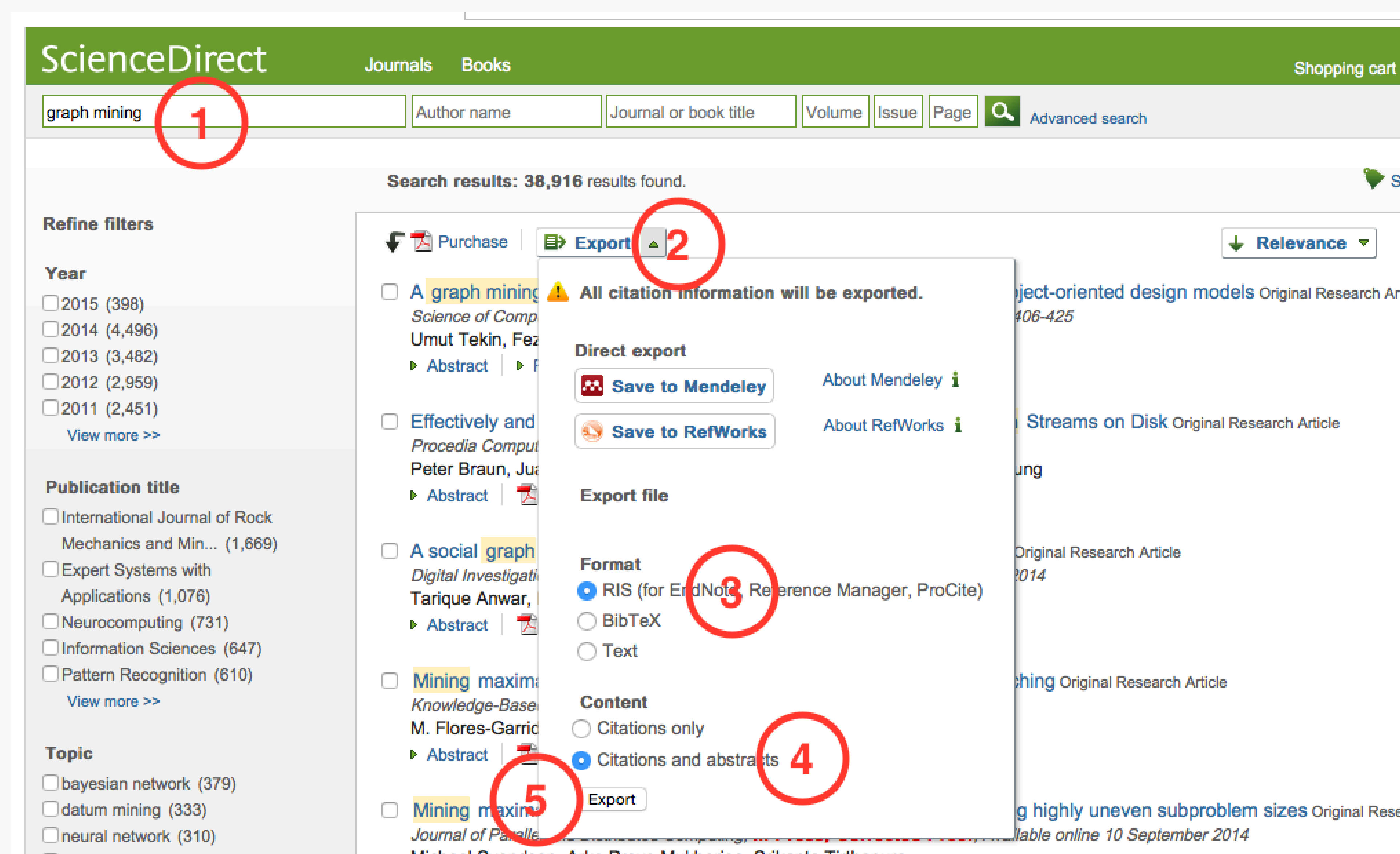
Steps to Systematic review

7 Title & Abstract screen

To easily download the full record to import it to Mendeley or Rayyan directly you follow the following step in the attached pic for each database



5 step to download the article record from Pubmed
you can download all the result or select the included article to download



Another 5 step to download the article record from ScienceDirect
similarly you can download all the result or select the included article to download

Steps to Systematic review

7 Title & Abstract screen

Web of Science™ Search Sign In Register

Search > Results for Diabetes (All Fields)

1,236,925 results from Web of Science Core Collection for: Analyze Results Citation Report Create Alerts

Diabetes (All Fields)

Add Keywords Quick add keywords: + DIABETES + DIABETES MELLITUS + TYPE 2 DIABETES + TYPE 2 DIABETES MELLITUS

Publications You may also like... Copy query link

Refine results

0/1,236,925 Add To Marked List Export Sort by: Relevance 1 of 2,000

Search within results...

Quick Filters

- Highly Cited Papers 7,347
- Hot Papers 162
- Review Article 115,915
- Early Access 6,081

1 The International Diabetes Federation estimates global and national prevalence of diabetes in 2019. *Guariguata, L; Whiting, D; (...); Unwin, N* Dec 2011 | DIABETES RESEARCH AND CLINICAL PRACTICE Introduction: Diabetes is a major cause of disability and mortality worldwide. The global prevalence of diabetes is growing rapidly and is essential for the development of effective prevention and treatment strategies. [Show more](#) 181 Citations 13 References

2 Adolescent type 2 diabetes: Comparing the Pediatric Diabetes Consortium and Germany/Austria/Luxemburg Pediatric Diabetes Prospective registries. 12 Citations

Diabetes (All Fields) Search

Add Keywords Quick add keywords: + DIABETES + DIABETES MELLITUS + TYPE 2 DIABETES + TYPE 2 DIABETES MELLITUS + TYPE

Publications You may also like... Copy query link

Refine results

Search within results...

Quick Filters

- Highly Cited Papers 7,347
- Hot Papers 162
- Review Article 115,915
- Early Access 6,081
- Open Access 533,865
- Enriched Cited References 101,072
- Open publisher-invited reviews 2,455

Export Records to RIS File

Record Options

All records on page

Records from: 1 to 1000

No more than 1000 records at a time

Record Content: Full Record

Export Cancel

Methodology for adults 181 Citations

332 13 References

global prevalence is growing
ites is essential for
e... Show more
[Related records](#)

2 Adolescent type 2 diabetes: Comparing the Pediatric Diabetes Consortium and Germany/Austria/Luxemburg Pediatric Diabetes Prospective registries 12 Citations

5 step to download the article records from Web of science

similarl to previous databases you can download all the result or select the included article to download

Steps to Systematic review

8 Full text screen & Bias assessment

The full-text screen in a systematic review is a critical step that follows the initial screening based on titles and abstracts. Its goal is to ensure the studies identified in the first stage truly meet the review's inclusion criteria and provide the necessary data for analysis.

and from its name you need to access every article manuscript to ensure validity which also done by to independent reviewer.

9 Data extraction & Quality assessment

Evaluating study quality and risk of bias is a fundamental step in a systematic review to report the level of evidence and for any risk of bias.

Depending on the study type (e.g., RCT, observational studies), different tools are recommended. Some popular examples include the:

Randomized Controlled Trials (RCTs):

Cochrane Collaboration's tool for assessing risk of bias in randomized trials (Cochran's ROB tool):

Observational Studies

(including Cohort studies, Case-Control studies):

Newcastle-Ottawa Scale (NOS)

Case Series:

Case Series Studies Quality Appraisal Checklist

Steps to Systematic review

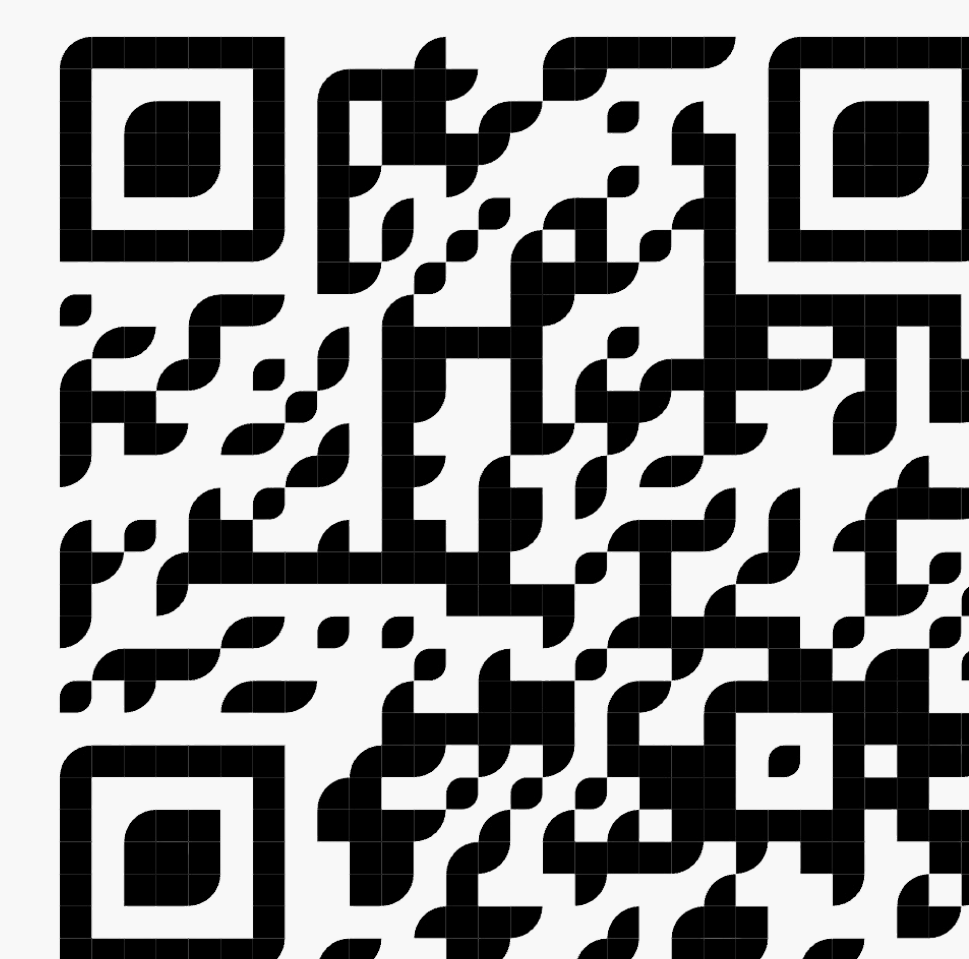
9 Data extraction & Quality assessment

Data extraction in a systematic review is the process of collecting relevant information from the included studies to be used for analysis and synthesis.

so you have to develop your own **Data Extraction Form** and standardized b/w the two reviewer to ensure compatibility and it include

- **Study characteristics** (e.g., author, publication date, study design)
- **Participant demographics** (e.g., age, sex, inclusion/exclusion criteria)
- **Intervention/exposure details** (e.g., type, dose, duration)
- **Outcome measures** (e.g., primary & secondary outcomes, measurement tools)
- **Results** (e.g., data for each outcome measure, subgroup analyses)

or you could use copy of this pre-formed Datasheet and build on it to suit your review or research project :



10 Statistical Analysis

Until this point, **systematic review** and **meta analysis** share the same steps, and when this step reached the collected data had to be asses if meta analysis applicable or not

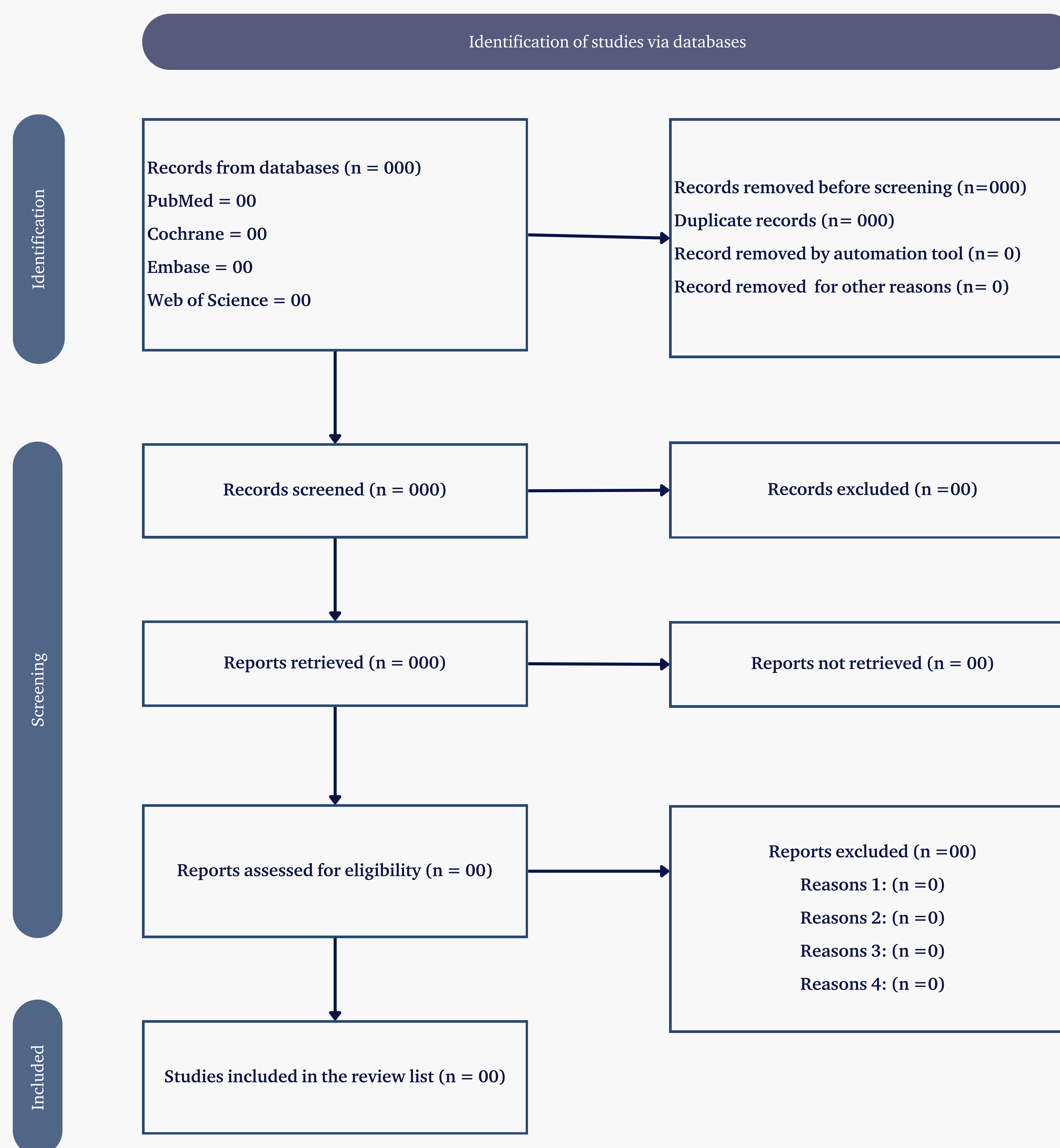
Steps to Systematic review

11 Manuscript writing & Submission

we won't be able to go into the entire manuscript writing process. However, let's explore some key differences between systematic reviews and observational study.

one of them is **PRISMA chart** which is a flow diagram that visually depicts the process of selecting studies for a systematic review or meta-analysis. It offers a transparent and standardized way to illustrate the search strategy, selection criteria, and number of studies included or excluded at each stage of the review process.

PRISMA chart



Steps to Systematic review

11 Manuscript writing & Submission

Lastly we will take you briefly through journal submission process, for more detailed guid you may check our earliest journal edition entitled “**Your journey to Research Publication**”.

Starting by understanding the access to research which takes two contrasting paths: **open access** and **closed access**. Understanding these models is crucial for researchers and reader and anyone seeking knowledge

Open access journals: operate like unlocked doors. Their research articles are freely available online to anyone, anywhere, without paywalls or subscriptions. This model financially sustains the journal through **Researcher payments**. And promotes wider readership, increased citation rates.

Closed access journals: on the other hand, function like gated communities. Access to their articles requires subscriptions or individual article fees. This model financially sustains the journal through **reader payments**, but it also creates barriers to knowledge.

	Open Access	Closed Access
Accessibility	Free online access for everyone	Restricted access, requires subscriptions or fees
Cost for readers	Zero cost	Requires subscriptions or individual article fees
Cost for Researcher or publisher	Author-paid through article processing charges (APCs) or grants	“No cost” its paid by Reader through subscriptions or article fees
Visibility and reach	Potentially higher readership and citation rates	May have limited readership

Steps to Systematic review

11 Manuscript writing & Submission

In the realm of academic research, publishing your work in the right journal is essential. and some **terms** are widely used in this field we will discuss and explain that could help and Guide you toward the ideal journal

1. **Impact Factor:** This measures the average number of times articles published in a journal are cited by other publications. It reflects the influence and reach of the journal's research.

2. **CiteScore:** Similar to Impact Factor, CiteScore measures citations but uses a four-year window and normalizes it for the journal's field. This can offer a fairer comparison across different disciplines with varying citation practices.

3. **Acceptance Rate:** This metric shows the percentage of submitted manuscripts that are accepted for publication. A low acceptance rate indicates a highly selective journal with potentially higher prestige, while a high acceptance rate might suggest quicker publication but potentially lower editorial scrutiny.

4. **Time to 1st Decision:** This reveals the average time it takes for a journal to make an initial decision on a submitted manuscript. It can be helpful for authors planning their research timeline.

5. **Time to Publication:** This metric indicates the average time between manuscript acceptance and publication, which impacts how quickly your work will be available to the public.

Remember, no single metric paints the full picture. Analyze these parameters in conjunction with the journal's specific reputation, editorial board, and focus area to make an informed decision about where to submit your research.

Steps to Systematic review

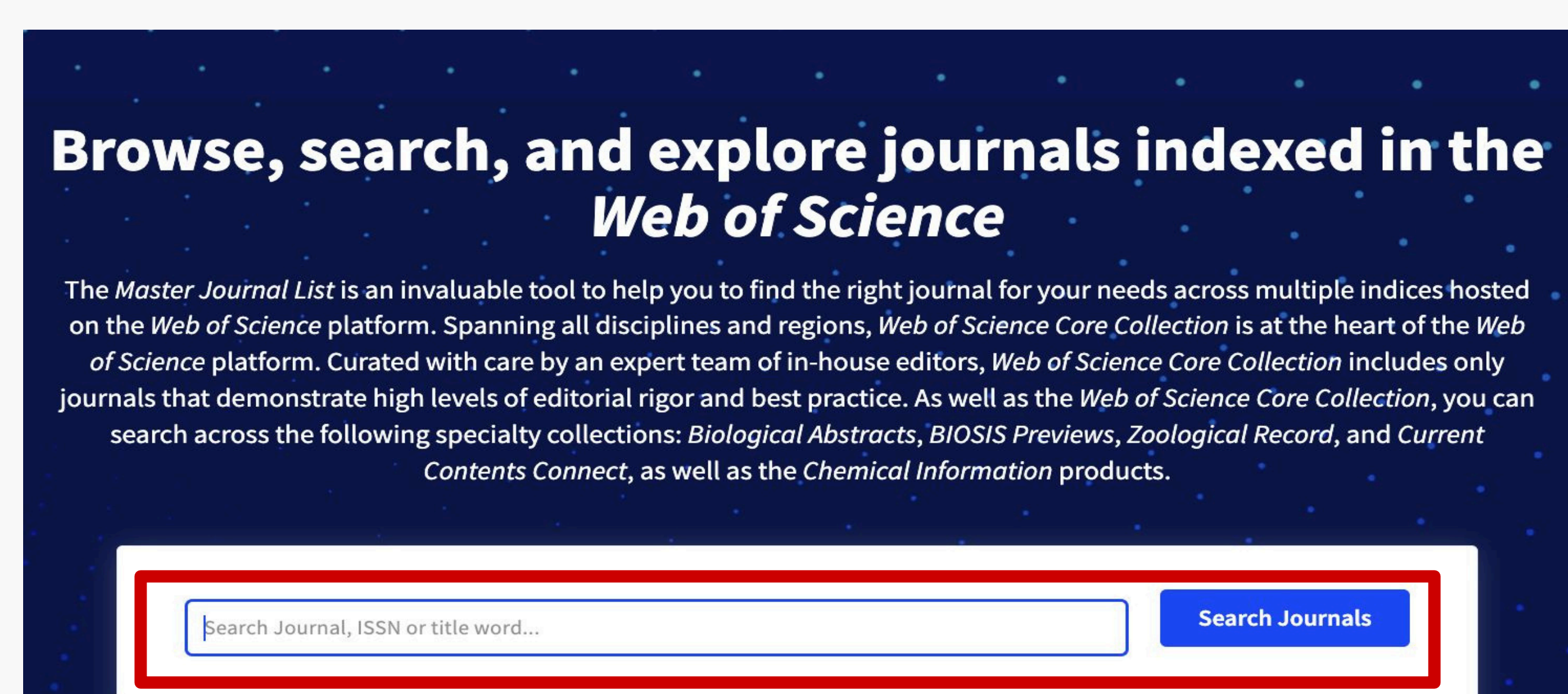
11 Manuscript writing & Submission

Before submitting your paper checking the journal index is crucial step to ensure the acceptance in Saudi Commission for Health Specialties (SCFHS) application.

- 1 You can check the journal index through Web of Science Master Journal List from the link here <https://mjl.clarivate.com/home> or by scanning the QR code



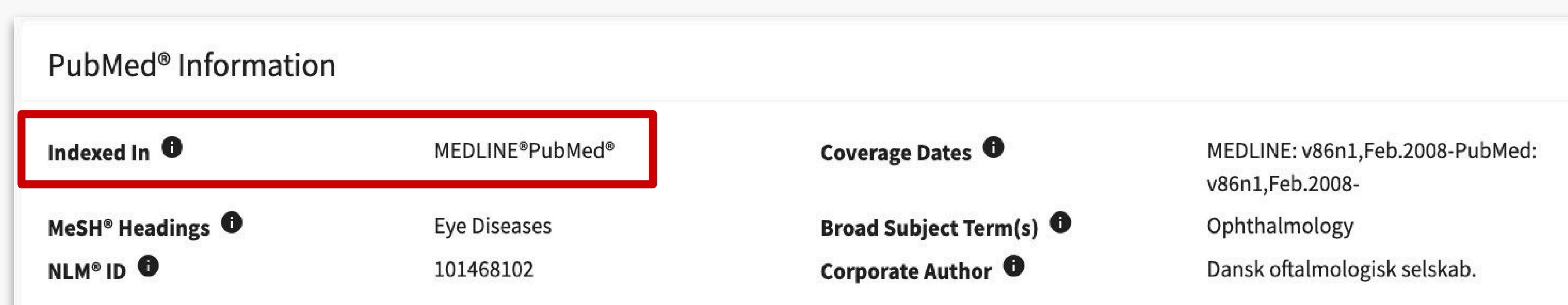
- 2 after you enter the website, paste journal name or ISSN number in search field



- 3 you will be able to check the Web of Science index and Pubmed as shown in picture



as shown here this journal is indexed in WoS



as shown here this journal is indexed in Pubmed

Steps to Systematic review

11 Manuscript writing & Submission

- 1 You can also check the journal index through **Pubmed NLM Catalog** from the link here <https://www.ncbi.nlm.nih.gov/nlmcatalog/journals/> or by scanning the QR code



- 2 after you enter the website, paste journal name or ISSN number in search field

A screenshot of the National Library of Medicine (NLM) Catalog search interface. The header shows the NIH logo and "National Library of Medicine National Center for Biotechnology Information". Below the header are navigation links: "NLM Catalog", "More Resources", and "Help". The main heading is "NLM Catalog: Journals referenced in the NCBI Databases". A sub-heading reads "Limit your NLM Catalog search to the subset of journals that are referenced in NCBI database records". A search input field is highlighted with a red border, containing the placeholder text "Enter topic, journal title or abbreviation, or ISSN:". To the right of the input field are links for "Advanced Search" and a "Search" button.

- 3 you will be able to check Pubmed index only as shown in picture

A screenshot of the journal details page for "Advances in ophthalmology practice and research". The page lists various metadata fields: Author(s), NLM Title Abbreviation, Title(s), Other Title(s), Publication Start Year, Country of Publication, Publisher, Description, Language, ISSN, LCCN, Electronic Links, and In: PubMed. The "Current Indexing Status" field is highlighted with a red border and states "Not currently indexed for MEDLINE.".

Advances in ophthalmology practice and research
Author(s): Zhejiang da xue Chu ban she, issuing body
NLM Title Abbreviation: Adv Ophthalmol Pract Res
Title(s): Advances in ophthalmology practice and research.
Other Title(s): Ophthalmology practice and research
AOPR
Publication Start Year: 2021
Country of Publication: United States
Publisher: [New York] : Elsevier Inc., [2021]-
Description: 1 online resource
Language: English
ISSN: 2667-3762 (Electronic)
2667-3762 (Linking)
LCCN: 2022237375
Electronic Links: <https://www.sciencedirect.com/journal/advances-in-ophthalmology-practice-and-research>
<https://www.ncbi.nlm.nih.gov/pmc/journals/4513/>
In: PubMed: v1n1, Nov. 2021-
PMC
Current Indexing Status: Not currently indexed for MEDLINE.

as shown here this journal is **NOT** indexed in Pubmed

Steps to Systematic review

11 Manuscript writing & Submission

A valuable resource like **DOAJ** offers free access to information to help you make informed journal choices for your research, including author publication charges (APCs) and expected submission to publication times. you can visit their website through the link here <https://doaj.org/> or by scanning the QR code

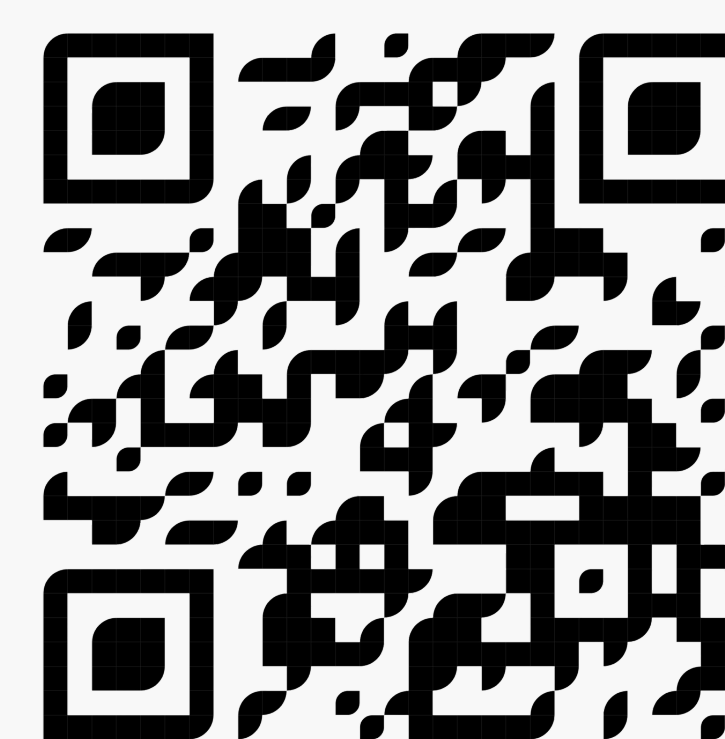


Similry “**journal finder by elsevier**” gives you access to..

1- journal information: include Impact factor, acceptance rate, Time to 1st decision, Time to publication and APC.

2- Abstract-matching: the key to journal placement success. This **powerful feature** analyzes your research abstract and suggests the most relevant and impactful journals for publication, streamlining your submission process.

you can visit their website through the link here <https://journalfinder.elsevier.com/> or by scanning the QR code



Steps to Systematic review

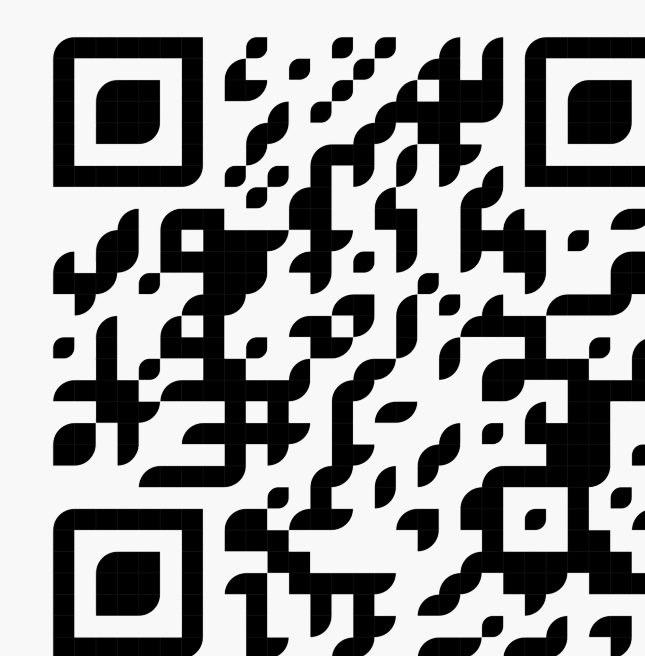
11 Manuscript writing & Submission

These journals often lure authors with rapid review and acceptance promises, often regardless of research quality. They typically charge high publication fees while offering minimal editorial oversight and peer review, resulting in low-quality publications that damage academic credibility and must be avoided

and shown below easy steps to identify these journal and how to avoid them

1 1st step and the easiest one is by checking the index status in **Web of Science Master Journal List** or **Pubmed NLM Catalog** through the steps explain in previous pages of this guid

2 Another valuable tool is **Beall's List**, a regularly updated database of potential predatory journals you can visit their website through the link here <https://beallist.net/> or by scanning the QR code



Steps to Systematic review

11 Manuscript writing & Submission

Next step after choosing the journal, is preparing the required document for submission which include :

1 Manuscript

the Layout is vary from journal to another but most commonly the file should be

- docx. (word) format
- Font “Time new roman” “ size 12
- Double spaced (2.0)
- Continuous line numbering

2 Cover letter

- “example shown page 24”

A cover letter for journal submission is a formal document sent to the editor of a journal alongside your research article to Introduce yourself and your research, Explain why you're submitting to this specific journal and confirm reading journal term and condition and guide to author and mention relevant funding sources, ethical considerations, or potential conflicts of interest.

3 Title page “example shown page 23”

The title page should include the article title, author name (s) and permanent affiliation (s), and the name, current address, email address, and telephone number

4 Picture & Figure

in separate file if any in the manuscript

Steps to Systematic review

Title page Template

[Research title]

Authors:

- [First Author Name], [Affiliation]
- [Second Author Name], [Affiliation]
- [Third Author Name], [Affiliation]
- [List all authors and their affiliations]

Corresponding Author:

- [Name of Corresponding Author]
- [Email Address]
- [Phone Number (Optional)]

Abstract:

[Write a concise and informative summary of your research, including the main findings and implications. Avoid using jargon and aim for clarity and precision. This should be approximately 250 words.]

Keywords:

[List 3-5 keywords that represent the main topics of your research. These keywords will help readers find your paper.]

Funding:

[Acknowledge any funding sources that supported your research. This is optional, but some journals may require it.]

Declaration of Conflicting Interests:

[Declare any potential conflicts of interest that you or your co-authors may have. If there are no conflicts, state, This section is required by most journals.]

e.g; We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support

Author Contributions:

[Briefly describe the contributions of each author to the research. This section is optional, but some journals may require it.]

e.g;We attest that all authors contributed significantly to the creation of this manuscript, each having fulfilled criteria as established by the ICMJE.

Acknowledgments:

[Acknowledge any individuals or institutions that provided assistance with your research. This is optional.]

Date Submitted:

[Insert the date you submitted your manuscript.]

Author Names & signature :

Dr. Ahmed Mohammed [signature]

Dr. Khalid Ahmed [signature]

Dr. Mohammed Khalid [signature]

Steps to Systematic review

Cover letter template

A cover letter for journal submission is a formal document sent to the editor of a journal alongside your research article .

1 - Address the editor by their name if you know it.

Dear Editor-in-Chief **1**
Science Explained journal

University of Research
Milton Park
Oxfordshire
OX14 1RS
(01234) 567890
a.example@research.edu

2 - Include your manuscript title and the name of the journal.

We wish to submit an original research article entitled xxxxx for consideration by Science Explained journal. **2**

3 - State that your paper has not been published/is not under consideration by another journal.

We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere. **3**

4 - Briefly describe your research. Why is it important? Why will readers find it interesting?

In this paper, we show that X is equal to Z. This is significant because it is critical to demonstrate the impact of X and Z on Y. **4**

Given the increase in X and Z globally, we believe that the findings presented in our paper will appeal to the specific scientists who subscribe to Science Explained. Although prior research has identified a few methods that could be used in space exploration, such as X and Y, the applications developed from those findings have been cost-prohibitive and difficult to administer globally. Thus, our findings will allow your readers to understand the factors involved in identifying the onset of X and Y and develop more cost-effective procedures.

5 - Declare any conflicts of interest, or confirm there are none.

We have no conflicts of interest to disclose. and confirm that author guid been read. **5**

6 - Include contact information for yourself and any co-authors.

Please address all correspondence concerning this manuscript to me at a.example@research.edu.

Thank you for your consideration of this manuscript.

Sincerely,

Dr. Anne Example, PhD **6**
Professor, Department of Space Exploration
University of Research

Key information to include in your cover letter done by Taylor & Francis group

10 journals in different speciality

In the next pages we provide some journals you may consider for your research in varying speciality as public health, Medicine and surgery, In addition to 10 journal with quick “**Time to 1st Decision**” you may put as first option in case you are looking for quick publication, even though we would like to bring the following to your attention:

- 1 Publication cost or fee are approximation and some journal has submission as add cost or editing fee.
- 2 Most of the journal has open and closed or hybrid model, so mention the journal fee does not mean it is only open access journal since some work with the two models
- 3 Impact factor is not fixed number so review it before choosing the journal for you next publication as it may change
- 4 Similarly with index status as some journal could be removed from some database and other are emerging so always review as explained in previous section of this guide
- 5 Some journal are not Web of science (WoS) or pubmed index and been mention in this Guide because it is issued by Saudi University or official entity, and its considered in the Research publication 5 points at SCFHS

Public health & Family medicine

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
Medicine (baltimore) journal	http://journals.lww.com/md-journal/	✓	✓	1.552	1875 \$
Diabetes, Metabolic Syndrome and Obesity	https://www.dovepress.com/diabetes-metabolic-syndrome-and-obesity-journal	✓	✓	3.3	2890 \$
Primary Care Diabetes	https://www.pcdeurope.org/journal/	✓	✓	2.567	3150 \$
Journal of Family and Community Medicine	http://www.jfcmonline.com/	✓	ESCI	2.7	500 \$
journal of family medicine and primary care	http://www.jfmpc.com/	✓	ESCI	1.4	1000 \$
journal of general and family medicine	https://onlinelibrary.wiley.com/journal/21897948	✓	ESCI	1.6	2,500 \$
international journal of general medicine	https://www.dovepress.com/international-journal-of-general-medicine-journal	✓	✓	2.3	2680 \$
The Journal of Primary Health Care	https://www.publish.csiro.au/hc	✓	ESCI	1.2	-
European Journal of General Practice	https://www.tandfonline.com/toc/igen20/current	✓	✓	3.4	1,590 \$
Journal Of Primary Care And Community Health	https://journals.sagepub.com/author-instructions/jp c	✓	ESCI	3.6	free

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

** issued by Saudi university of official society

Internal Medicine

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
International journal of rheumatology	https://www.hindawi.com/journals/ijr/	✓	ESCI	950\$	2.3
Saudi journal of kidney **diseases and Transplant	http://sjkdt.org/mci.asp	✓	ESCI	-	0.5
Medicine (baltimore) journal	http://journals.lww.com/md-journal/	✓	✓	1875\$	1.6
Diabetes, Metabolic Syndrome and Obesity	https://www.dovepress.com/diabetes-metabolic-syndrome-and-obesity-journal	✓	✓	2890\$	3.3
Journal of applied **Hematology	https://journals.lww.com/jaht/pages/default.aspx	X	X	Free	
Annals of Thoracic **medicine	https://journals.lww.com/AOTM/pages/default.aspx	✓	✓	Free	2.3
International journal of general medicine	https://www.dovepress.com/international-journal-of-general-medicine-journal	✓	✓	2680\$	2.3
ANNALS OF SAUDI MEDICINE**	https://www.annsaudimed.net/	✓	✓	Free	1.7
Rheumatology and Immunology Research	https://www.degruyter.com/journal/key/rir/html#overview	✓	X	-	New
Journal of Parkinson's Disease	https://www.journalofparkinsonsdisease.com/about-journal	✓	✓	2000\$	5.2

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Cardiology

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
Open Heart BMJ	https://openheart.bmj.com/	✓	ESCI	2.7	2750\$
Frontiers in Cardiovascular medicine	https://www.frontiersin.org/journals/cardiovascular-medicine	✓	✓	3.6	3,295 - 2,095\$
Journal of cardiovascular development and disease (MDPI)	http://www.mdpi.com/journal/jcdd	✓	✓	2.4	3176\$
Saudi Heart Association	https://saudi-heart.com/	✓	✓	0.71	no fee
Clinical cardiology (Wiley)	https://onlinelibrary.wiley.com/journal/19328737	✓	ESCI	3.287	3,460\$
Journal of Cardiovascular Medicine (JCM)	https://journals.lww.com/jcardiovascularmedicine/pages/default.aspx	✓	✓	3.0	3,837\$
Canadian Journal of Cardiology	https://onlinecjc.ca/	✓	✓	7.2	3710\$
Cardiology	https://karger.com/crd/pages/details	✓	✓	1.9	3000\$
Case Reports in Cardiology	https://www.hindawi.com/journals/cric/	✓	ESCI	0.6	750\$
Journal of Cardiovascular Electrophysiology	https://onlinelibrary.wiley.com/journal/15408167	✓	✓	2.942	4290\$

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

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General Surgery

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
International Journal of Surgery	https://journals.lww.com/international-journal-of-surgery/pages/default.aspx	✓	✓	15.3	1,300-1,850
Journal of The American College of Surgeons	https://journals.lww.com/journalacs/pages/default.aspx	✓	✓	5.2	-
The Saudi Journal of Gastroenterology	https://journals.lww.com/sjga/pages/default.aspx	✓	✓	2.5	250-500
The Breast Journal	https://www.hindawi.com/journals/tbj/	✓	✓	2.1	1220-2760
Journal Of Surgical Case Reports	https://academic.oup.com/jscr	X	ESCI	0.5	Case Report: 849 Case Series: 970
Annals of Medicine and Surgery	https://journals.lww.com/annals-of-medicine-and-surgery/pages/default.aspx	✓	ESCI	1.7	1,950\$
Surgical Laparoscopy, Endoscopy And Percutaneous Techniques	https://journals.lww.com/surgical-laparoscopy/pages/default.aspx	✓	✓	1.0	-
Seminars in Vascular Surgery	https://www.sciencedirect.com/journal/seminars-in-vascular-surgery/vol/32/issue/3	✓	✓	2.5	3080\$
Turkish Journal Of Thoracic And Cardiovascular Surgery	https://tgkdc.dergisi.org	X	✓	1.6	Free
Diseases of the colon and rectum	https://journals.lww.com/dcrjournal/pages/default.aspx	✓	✓	4.1	-

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

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Plastic Surgery

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
Plastic & Reconstructive Surgery - Global Open	https://journals.lww.com/prs-go/pages/default.aspx	✓	✓	1.57	Original Articles-2195\$-Case reports 799\$
Archives of Plastic Surgery	https://www.e-aps.org/	✓	✓	1.12	NM
European Journal of Plastic Surgery	https://www.springer.com/journal/238	✓	✓	1.7	Publishing under-subscription model-Open access 3390\$
Annals of Plastic Surgery	https://journals.lww.com/annalsplasticsurgery/pages/default.aspx	✓	✓	1.44	Publishing under-subscription model -Submission fee 75\$
Journal of Plastic, Reconstructive & Aesthetic Surgery (JPRAS)	https://www.jprasurg.com/	✓	✓	2.74	Publishing under-the subscription model-Open access 3470\$
Journal of Plastic Surgery and Hand Surgery	https://www.tandfonline.com/journals/iphs20	✓	✓	1.4	No APCs
Journal of Cutaneous and Aesthetic Surgery (JCAS)	https://www.jcasonline.com/	✓	ESCI	0.82	No APCs
Maxillofacial Plastic and Reconstructive Surgery	https://jkamprs.springeropen.com/	✓	✓	NM	2090\$
The Journal of Craniofacial Surgery	https://journals.lww.com/jcraniofacialsurgery/pages/default.aspx	✓	✓	0.83	Submission fee: 100\$Open access: 2400-2850\$
Scars, Burns & Healing	https://journals.sagepub.com/home/sbh	✓	✓	NM	1755\$

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

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Orthopedic surgery

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
BMC Musculoskeletal Disorders	https://bmcmusculoskeletdis/ord.biomedcentral.com	✓	✓	2.3	\$2990\$
The Bone & Joint Journal	https://boneandjoint.org.uk/journal/BJJ	✓	✓	4.6	4670\$ - 3645\$
Current Orthopedics Practice	https://journals.lww.com/c-orthopaedicpractice/pages/default.aspx	✓	ESCI	0.3	3,319\$ - 2,806\$
The Journal Of Bone & Joint Surgery	https://journals.lww.com/jbjsjournal/pages/default.aspx	✓	ESCI	5.3	4,562\$ -3,826\$
**Journal Of Spine Practice	https://knepublishing.com/index.php/jsp	X	X	-	-
World Journal Of Orthopedics	https://www.wjgnet.com/2218-5836/index.htm	✓	ESCI	1.9	\$1,500
The Journal Of Arthroplasty	https://www.arthroplastyjournal.org	✓	ESCI	3.5	4380\$
The Journal Of Knee Surgery	https://mc.manuscriptcentral.com/jks	✓	✓	1.7	-
Arthroscopy: The Journal of Arthroscopic and Related Surgery	https://www.arthroscopyjournal.org	✓	✓	4.7	3500\$
Knee Surgery, Sports Traumatology, Arthroscopy (KSSTA)	/https://www.kssta.org	✓	✓	3.8	-

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Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
Clinical otolaryngology	https://onlinelibrary.wiley.com/journal/17494486	✓	✓	2.1	Closed access: FreeOpen Access: 4520 \$
European Archives of Oto-Rhino-Laryngology	https://link.springer.com/journal/405	✓	✓	2.6	Closed access: FreeOpen Access: 4590 \$
Journal of Voice	https://www.sciencedirect.com/journal/journal-of-voice	✓	✓	2.2	Closed access: FreeOpen Access: 3650\$
Laryngoscope investigative otolaryngology	https://onlinelibrary.wiley.com/journal/23788038	✓	✓	2.5	2,640\$
Journal of Laryngology and Otology	https://www.jlo.co.uk/	✓	✓	2.2	Closed access: FreeOpen Access: 3450\$
Aesthetic Surgery Journal OpenForum	https://academic.oup.com/asj/openforum	✓	X	-	2575\$
HNO	https://link.springer.com/journal/106	✓	X	0.9	Closed access: FreeOpen Access: 3290
JPRAS open	https://www.sciencedirect.com/journal/jpras-open	✓	✓	1.4	1920\$
The Journal of Craniofacial Surgery	https://journals.lww.com/jcraniofacialsurgery/pages/default.aspx	✓	X	0.83	Submission fee: 100\$Open access: 2400-2850\$
Saudi Journal of Otorhinolaryngology Head and Neck Surgery**	https://journals.lww.com/sjoh/pages/default.aspx	✓	✓	-	Free

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

** issued by Saudi university of official society

Ophthalmology

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
International Journal of Ophthalmology	http://www.ijo.cn/gjyken/home	✓	✓	1.4	1800\$
European journal of .ophthalmology	https://journals.sagepub.com/home/ejo	✓	✓	1.7	No APCs
International .ophthalmology	https://www.springer.com/journal/10792	✓	✓	1.6	3590\$
Ophthalmic Plastic and ,Reconstructive Surgery	https://journals.lww.com/oph-rs/pages/default.aspx	✓	✓	2.0	3,319\$
American Journal of Ophthalmology	https://www.ajo.com/	✓	✓	5.488	4390\$
journal of cataract and refractive surgery	https://journals.lww.com/jcrs/pages/default.aspx	✓	✓	2.8	4000\$
Journal of refractive surgery	https://journals.healio.com/journal/jrs	✓	✓	2.4	2000\$
Ophthalmologica	https://karger.com/oph	✓	✓	2.6	3,850\$
Middle East African journal of ophthalmology	https://journals.lww.com/mejo/pages/default.aspx	✓	ESCI	0.6	-
Acta Ophthalmologica	https://onlinelibrary.wiley.com/journal/17553768	✓	✓	3.4	4700\$

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

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Emergency medicine

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
The American journal of emergency medicine	http://www.sciencedirect.com/science/journal/07356757	✓	✓	3.6	-
Saudi Journal of **Emergency Medicine	https://www.sjemed.com/	✓	✓	-	260\$
International Journal of Emergency Medicine	https://intjem.biomedcentral.com/	X	ESCI	3.2	2990\$
EMERGENCY MEDICINE INTERNATIONAL	https://www.hindawi.com/journals/emi/	X	✓	1.2	2060\$
CLINICAL TOXICOLOGY	https://www.tandfonline.com/journals/ictx20	✓	✓	3.3	4390\$
WORLD JOURNAL OF EMERGENCY MEDICINE	http://wjem.com.cn/EN/1920-8642/home.shtml	✓	✓	2.1	-
INJURY-INTERNATIONAL JOURNAL OF THE CARE OF THE INJURED	https://www.sciencedirect.com/journal/injury	✓	✓	2.5	3410\$
EMERGENCY MEDICINE AUSTRALASIA	https://onlinelibrary.wiley.com/journal/17426723?journalRedirectCheck=true	✓	✓	2.3	Closed Access: freeOpen access: 3,570
ACADEMIC EMERGENCY MEDICINE	https://onlinelibrary.wiley.com/journal/15532712	✓	✓	4.4	Closed Access: freeOpen access: 3,710\$
RESUSCITATION	https://www.sciencedirect.com/journal/resuscitation	✓	✓	6.5	4120

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

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Dermatology

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
international journal of dermatology	https://onlinelibrary.wiley.com/journal/13654632	✓	✓	3.6	\$3,950
journal of cutaneous medicine and surgery	https://journals.sagepub.com/home/CMS	✓	✓	2.3	-
indian journal of dermatology venereology and leprology	https://ijdvl.com	✓	✓	2.9	Free
indian dermatology online journal	https://journals.lww.com/idoj/pages/default.aspx	✓	ESCI	1.7	Free
Pediatric dermatology	https://onlinelibrary.wiley.com/journal/15251470	✓	✓	1.5	\$3730
Dermatologic surgery	https://journals.lww.com/dermatologicsurgery/pages/default.aspx	✓	✓	2.4	-
Journal of Dermatology and Dermatologic Surgery**	https://journals.lww.com/jdds/pages/default.aspx	X	ESCI	0.3	Free
journal of cutaneous and aesthetic surgery	https://journals.lww.com/jcas/pages/default.aspx	✓	ESCI	0.6	-
Clinical, Cosmetic and Investigational Dermatology	https://www.dovepress.com/clinical-cosmetic-and-investigational-dermatology-journal-metrics33	✓	✓	2.3	\$2890
Dermatology online journal	https://escholarship.org/uc/doj	✓	ESCI	0.78	\$300

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

** issued by Saudi university of official society

Short Submission to publication time

Journal	Journal link	Pubmed index	WoS index	Impact factor	Fee (usd \$)
Cureus	https://www.cureus.com/author_guide	✓	ESCI	1.2	Free - 500\$
International Journal of Medicine in Developing Countries ** (المعرفة)	http://ijmdc.com/index.php?sec=gfa	X	X	-	770\$
International (MDPI) Journal of Environmental Research and Public Health	https://www.mdpi.com/journal/ijerph	✓	✓	3.3	2344\$
Advances in Medicine (Hindawi)	https://www.hindawi.com/journals/amed/about/	✓	X	N/M	820\$
Journal of Taibah University Medical Sciences	https://www.sciencedirect.com/journal/journal-of-taibah-university-medical-sciences	✓	✓	2.2	625\$
Journal of Clinical (MDPI) Medicine	https://www.mdpi.com/journal/jcm	✓	✓	3.9	3048\$
(MDPI) Clinics and Practice	https://www.mdpi.com/journal/clinpract	✓	✓	2.3	1600\$
(MDPI) Diagnostics	https://www.mdpi.com/journal/diagnostics	✓	✓	3.6	3048\$
(MDPI) Vaccines	https://www.mdpi.com/journal/vaccines	✓	✓	7.8	2500-3165\$
(MDPI) Healthcare	https://www.mdpi.com/journal/healthcare	✓	✓	2.8	3165\$

ESCI, Emerging Sources Citation Index. APC, Article Processing Charges

** issued by Saudi university of official society

SECTION #04

**INSTITUTIONAL
REVIEW BOARDS
“IRB” SUBMISSION**

Guide for successful IRB submission at king saud university medical city

Content:

- Contact information & Meeting schedule
- Reference Management
- Overview on the Required Documents
- Certificate of Bioethics
- KSU-IRB Form-019
- Data retrieval post IRB approval

Introduction & Contact info

Institutional review boards “IRB” or An independent ethics committee or Ethical review board, It is a committee that has been formally designated to approve, monitor and review the ethicality of biomedical and behavioral research, in protecting the rights of participants in a research project, as it has the authority to:

- Approve, disapprove, or terminate all research activities
- Require modifications in protocols, including protocols of previously approved research.

For submission and inquiries, you can email the following IRB Staff

Dr. Taha Inam	Dr_taha_inam@hotmail.com	(469-1530) (0548083373)
Ms. Rubie de Ocampo	rdeocampo@ksu.edu.sa	(469-1531)
Ms. Ofela Lebanto	olebanto@ksu.edu.sa	(469-1529)

Overview on the Required Documents

Required Documents for IRB Application:

Non-Interventional Studies:	Interventional/Clinical Trials:
<ul style="list-style-type: none"> • KSU-IRB Form-019 • Signed Application Checklist • Signed Conflict of Interest • Form Certificate of Confidentiality • CV of the PI/Inv. in KSU-IRB • Template Informed Consent (for surveys and questionnaire-based studies) • Copyright or permission to use the study tool (if necessary) • Study Tool (data collection sheet, survey form, questionnaire sheet) • Certificate from Bioethics (mandated by KACST) 	<ul style="list-style-type: none"> • KSU- IRB 001 Application Checklist • KSU IRB 002_003 Research Proposal Form • KSU-IRB 004 Informed Consent Checklist • KSU-IRB 005 Informed Consent for Clinical Trial (Arabic and English versions) • KSU-IRB 0023-E Study Delegation Log • CV of the PI/Investigators in KSU-IRB Template • Certificate from Bioethics (mandated by KACST) • GCP Certificate <p>*sponsored trials need to be submitted thru CTU</p>

Submitting all required documents accurately can significantly improve the efficiency of the IRB approval process and minimize potential delays. We encourage you to carefully review and submit the necessary materials to ensure a smooth and timely review proposal

And don't panic as the number of files may seem overwhelming, don't worry! We'll guide you through each one step by step and strive to make the process as smooth and straightforward as possible

Non-Interventional Studies Documents

<p>KSU-IRB Form-019 “Signed Application Checklist” “Signed Conflict of Interest Form” “Certificate of Confidentiality”</p>		<p>This document serves as the primary proposal form, outlining the study's detailed plan and methodologies which also contain in its latest version “Signed Application Checklist” and “Signed Conflict of Interest Form” and “Certificate of Confidentiality” impeded in the same file</p>
<p>CV of the PI/Inv. in KSU-IRB Template</p>		<p>this file is filled by the research supervisor include professional information and Qualifications</p>
<p>Study Tool</p>	<p>Study Tool (data collection sheet, survey form, questionnaire sheet)</p>	<p>this include previously published surveys from other studies or newly developed surveys designed by the authors of this research project</p>
	<p>Copyright or permission to use the study tool (if necessary)</p>	<p>if the study tool, for example the survey form or questionnaire sheet been retrieve from previous study, you should attach mail from the author state the permission to use and edit on the tool unless it been mention the tool is available for public on the study manuscript</p>
	<p>Informed Consent (for surveys and questionnaire-based studies)</p>	<p>This form is one of the IRB documents you only require to fill the required info in the file either online survey form or paper if your study is QUESTIONNAIRE-BASED STUDY and sign it by the primary investigator</p>
<p>Certificate from Bioethics (mandated by KACST)</p>		<p>this is mandate requirement for the project authors to attach, which free online course can be done at any time which will explain in detail in this guide</p>

KSU-IRB Form-019

As mentioned previously, This document serves as the primary proposal form, outlining the study's detailed plan and methodologies which also contain in its latest version “Signed Application Checklist” and “Signed Conflict of Interest Form” and “Certificate of Confidentiality” impeded in the same file

we will take you through each section and highlight some tips could ease the completion process

King Saud University
Institutional Review Board
جامعة الملك سعود
مجلس المراجعة المؤسسية

For IRB use only:
Expedite Review Proposal
IRB Project No.

KSU-IRB Form 019-E PROPOSAL FORM FOR NON-INTERVENTIONAL STUDIES
Version 2.0 dated 22 January 2022

Research Project Title: _____
Primary Investigator: _____
College/Department: _____
Email Address: _____
Contact No. (Mobile): _____

APPLICATION CHECKLIST: (Please READ and ✓ the appropriate boxes)

- The submitted proposal should be detailed as per IRB requirements.
- All co-investigators should sign the proposal and make sure that their names and titles are correct. For students, names should be in accordance to the name in passport (as required by SCFHS).
- Informed Consent Form (for online survey or face-to-face questionnaire) or waiver of consent for using samples from unidentified donor/patient.
- Copy of survey form/questionnaire sheet or data collection sheet.
- Copyright permission for the use of study tools (questionnaires/survey form).
- Approval/Notification to the involved department (other than the investigator's department) for retrospective data collection or collecting materials from archive.
- For Master/PhD Student: Letter from Supervisor/College confirming the research project as part of the student thesis.
- Copy of investigator's CV in KSU-IRB Template.
- Signed and dated Declaration of Conflict of Interest.
- Certificate of Bio-Ethics of each study member completed free online through National Committee (NCRE) at King Abdulaziz City of Science & Technology (KACST) <https://ncbe.kacst.edu.sa/en/researchers/> (THIS IS MANDATORY).
- Brief description of the role of each investigator.
- Signed Certificate of Confidentiality.
- IRB review fee, if applicable as per memo of the Central IRB of the University.
- Sign this check list.

For Multicenter Studies:
 Approved version of the Informed Consent Form
 Data Sharing Agreement/Collaborative Research Agreement from other sites
 Approval from other sites' Ethics Committees/IRB, or administration

Principal Investigator Signature: _____
Date: _____

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Abstract

even though abstract is the first shown part of any proposal or article it should be written lastly, try your best to make it concise and to the point with no more than 250 word in total.

Abstract consist of four main sections :

1- Introduction/ Significance

Briefly establish the field of research, In addition to research question or objective of your study and its importance or significant, and this section can be consider as or identify as background or introduction. should not exceed more than 3 sentences

2- Methodology/ Study setting

you should mention the..

- Study design either (cross sectional, retrospective study or case control),
- Study setting (where the study been conducted “King Khaled university hospital, Riyadh Saudi Arabia” or for example if its directed to the community).
- Define briefly the inclusion criteria or target subject of the study,
- Study duration
- Sample technique or data collection method.
- Data analysis plan

3 & 4 -Last two section (Results and conclusion) is not required in the proposal form

for sure you don't have to strictly follow the example, each study could have different abstract structure

KSU-IRB Form-019

Research Significance

Describe briefly how this study will contribute to existing knowledge in the field) define and address the disease or community perception of concern and you may provide basic statistics which help to clarify the world wide implications, additionally Emphasize the gap you're filling with brief overview on the existence knowledge and what this study would add.

eventually this should end with brief paragraph with no more than 250 word

King Saud University المملكة العربية السعودية Institutional Review Board جانس المراجعة المؤسسية		For IRB use only: Scientific Review Proposal IRB Project No.
ABSTRACT (Background, objectives, and methods not more than 150 – 200 words)		
RESEARCH SIGNIFICANCE (Please describe briefly how this study will contribute to existing knowledge in the field) (not more than 200 words).		
RESEARCH OBJECTIVES أهداف البحث		
LITERATURE REVIEW أبحاث البحث		
RESEARCH METHODOLOGY		

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Research Objective

State the purpose or question asked. If more than one objective, state primary objective and key secondary objectives. and use always (To estimate, To determine, To identify) as leading sentence, and formulate your objective using SMART (specific, measurable, achievable, relevant, and time-bound)

Literature Review

provide the latest relevant literature preferably in this sequence (International, Regional, National, Local) if all available, you may write up to 2-3 pages and use reference management up to help you through your writing process as it will be explain in the next pages of this guide.

KSU-IRB Form-019

Research Methodology

Study Design: (تصميم الدراسة)

Retrospective cohort study, analytical cross sectional, case control

Study Duration: (مدة الدراسة)

From "June" of 2024 to "December" of 2024.

Study Setting: (إعداد الدراسة)

The study will be conducted at KKHU, Riyadh, Saudi Arabia.

Target Population: (الفئة المستهدفة)

patient with diabetes, medical students at ksu,, adults visiting the primary care clinic of KKHU.

Sample Size: (حجم العينة)

calculated either manually or using assistance website tool

Inclusion Criteria: (معايير الاشتمال)

- 1- Patients diagnosed diabetes mellitus
- 2- Adult (age 18-60)

Exclusion Criteria (معايير الاستبعاد) :

- 1- patients less than 18 years of age
- 2- patients not using anti diabetic medication

Sampling technique:

explain in next pages

Ethical Considerations:

- The study will not conduct until it had been reviewed and approved by IRB
- The study will maintain the privacy and confidentiality of all the information of the participants.
- The informed consent will be clear and indicate the purpose of the study and the right of the participant to withdraw at any time without any obligation towards the study team.
- Participants' anonymity will be assured by assigning each participant with a code number for the purpose of the analysis with no personal identifiers at the time of data entry.

The image shows a template for the KSU-IRB Form-019. It is a multi-page document with a header in Arabic and English. The main content area is divided into several sections, each with a numbered list of items to be filled out. The sections are: 1. Study Design, 2. Study Setting, 3. Study Duration, 4. Target Population, 5. Sample Size with Sample Size Calculation/Sampling Technique, 6. Subject Recruitment Procedures, 7. Study Subject Selection (with sub-sections 7.1 Inclusion Criteria and 7.2 Exclusion Criteria), 8. Study Procedures, 9. Data Collection Method/Data Source, 10. Questionnaires/data Sheets from other authors, 11. Confidentiality and Ethical Consideration, and 12. Statistical Analysis. There are also sections for REFERENCES and RESEARCH INVESTIGATORS INFORMATION. The form is designed to be filled out by the researcher and submitted to the IRB for review.

KSU-IRB Form-019

Research Methodology cont.,

Data Collection/Data Source: (جمع البيانات / البيانات المصدر)

The data collection will be through anonymous online self-administered questionnaires OR The Data will be extracted from the Electronic Health Records (EHR) using E-SIHL and will be arranged in Microsoft excel.

Recruitment method:

explain how you will collect the data based on your data source and sampling technique if through existing database, or incase its online recruitment: Specify platforms like social media groups, online forums, or research recruitment websites you will utilize. if on site specify the locations where you will collect or distribute forms (e.g., university campuses, community centers).

Questionnaires/data Sheets from other authors

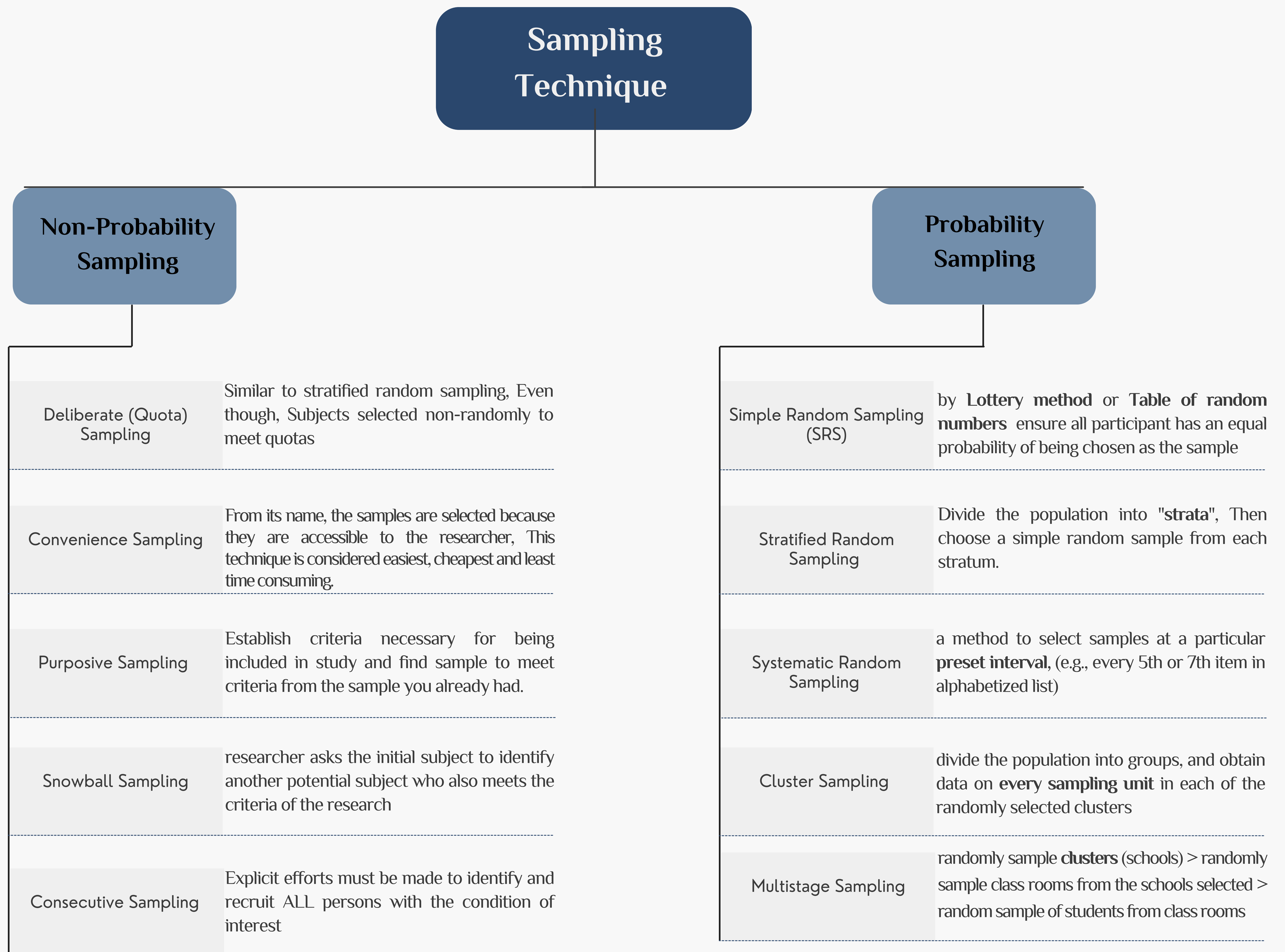
Attach your questionnaire with the copyright or permission to use if required OR the data sheet in case your data will be collected through existing database or electronic health record

Statistical Analysis: (تحليل احصائي)

Data will be analyzed using SPSS 00.0? version statistical software. Descriptive statistics (mean, standard deviation, frequencies and percentages) will be used to describe the quantitative and categorical variables. Bivariate statistical analysis will be carried out using appropriate (chi-square, student's t test, one-way analysis of variance and Pearson's correlation) statistical test, based on the type of study and outcome variables. A p-value of <0.05 and 95% CI will be used to report the statistical significance and precision of results.

Methodology

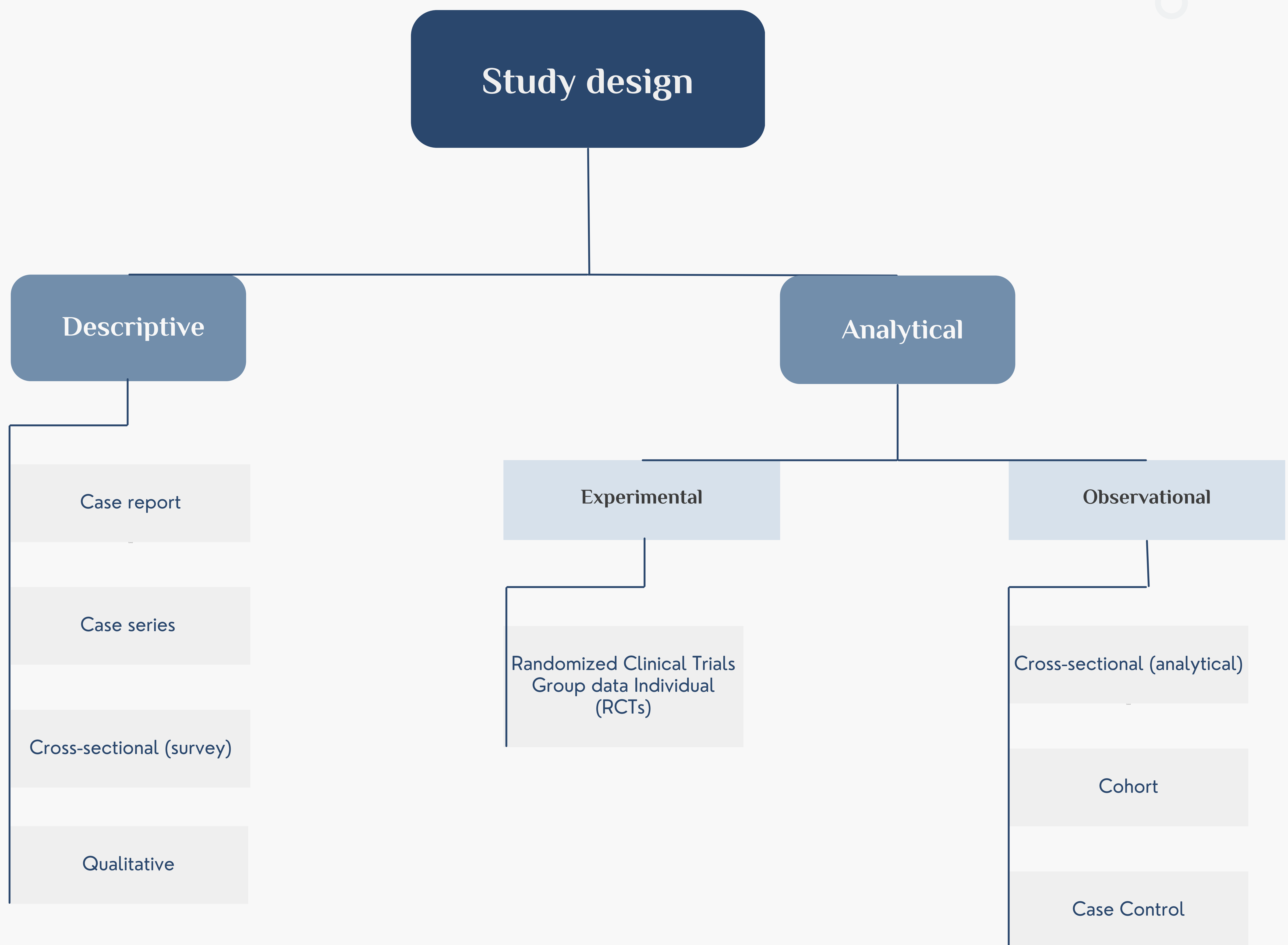
Sampling Technique



Non-Probability Sampling	Probability Sampling
Favorable	Unfavorable
Require time and effort	Less time and effort Required
Heterogenous variability	Homogeneous variability

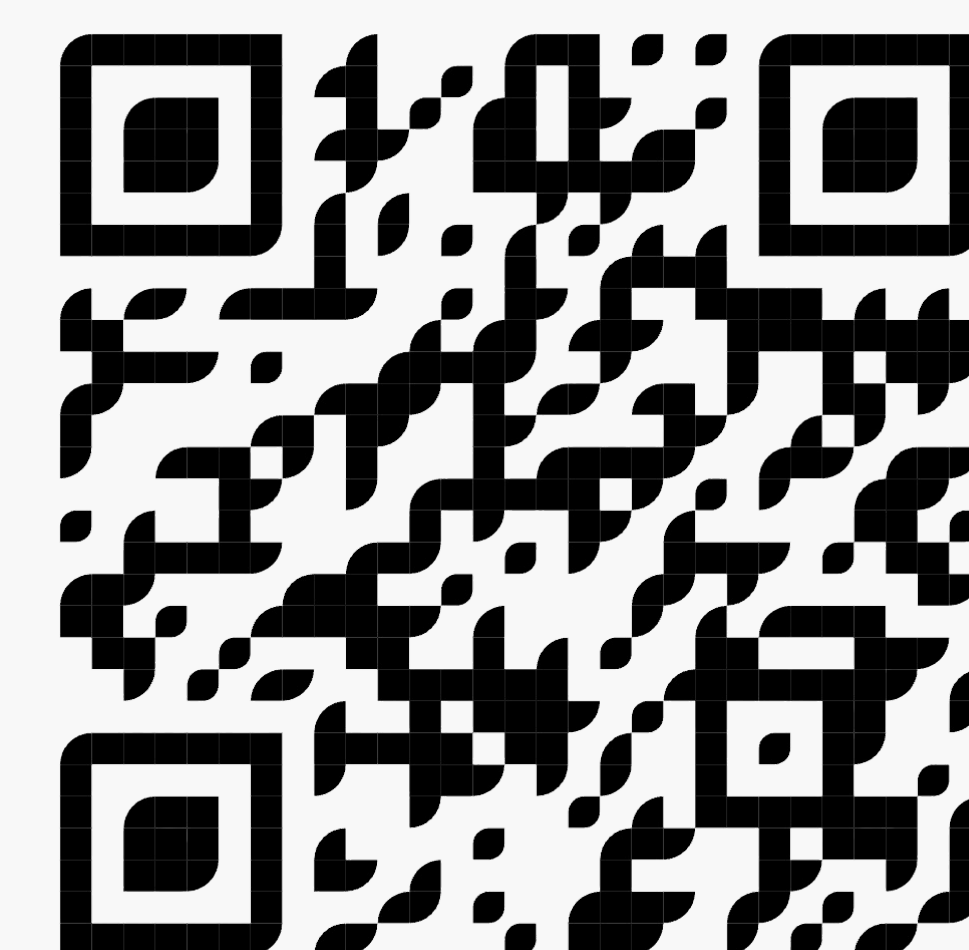
Methodology

Study design



Through this Link you will access Research Methodology Consultation Office which provide free service include guidance and assistance on specific questions and obstacles you are facing with your project

<https://ksmsc.com/student-publicationsfa/>

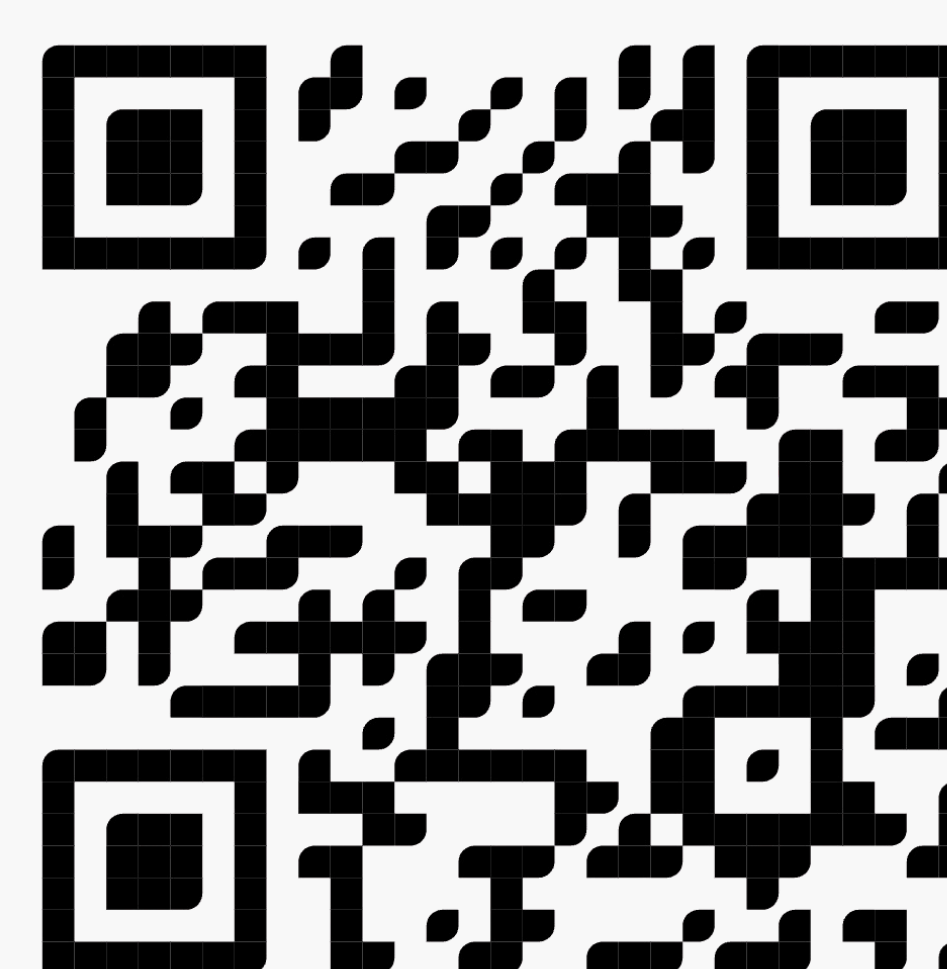


Reference Management

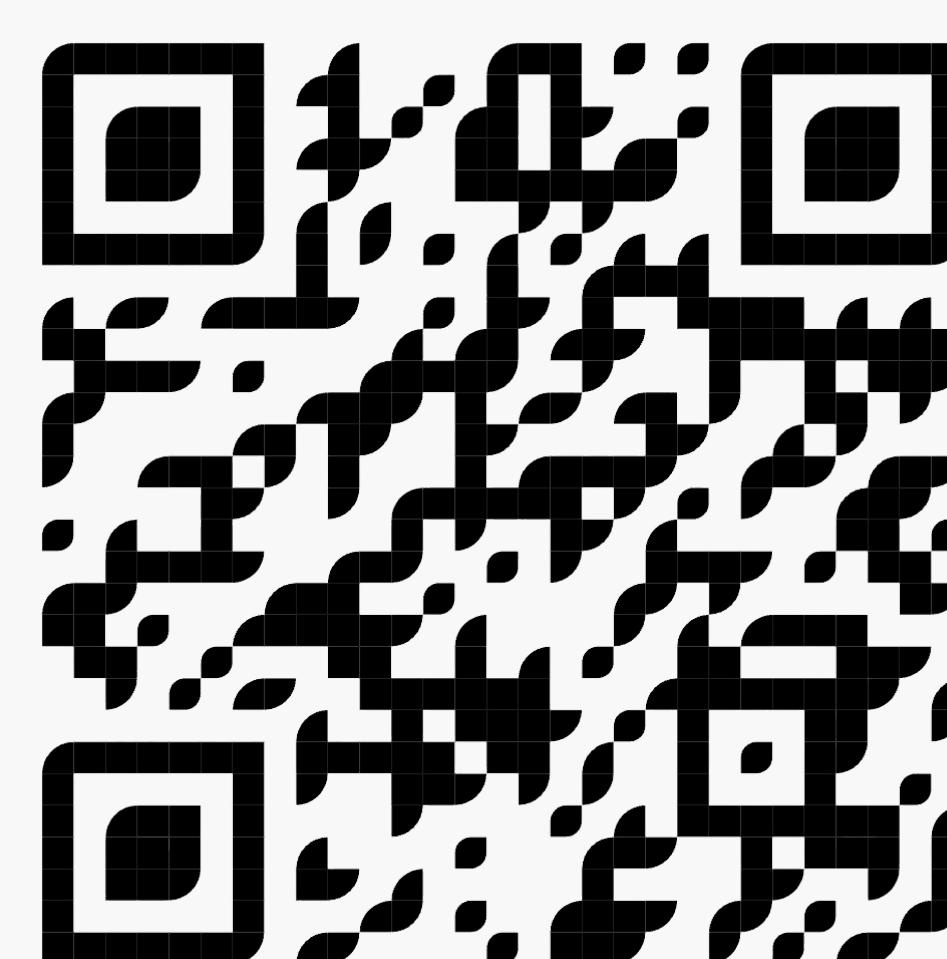
Research involves navigating a vast ocean of information, and keeping track of the sources you encounter can be a daunting task. This is where reference management software comes in, acting as your personal research assistant. which also empowers collaboration as you can share and discuss your references with colleagues and Here some of the widely use **reference management software** :

EndNote	Zotero	Mendeley
Require purchase	Free	
work with word software	work with word software + Google document	work with word software
Unlimited Storage space	300MB Limit	2GB Limit

Our main focus in this guide on Mendeley as it one of the most commonly used software in addition to the free access and easy use <https://www.mendeley.com/download-reference-manager/macOS>



Here is Link to video explain how to nstal Mendeley easily and for free and how to use and utilize Mendeley as reference manager in MS word <https://ksumsc.com/student-publicationsfa/>



KSU-REC 006QS

ICF_Arabic_ Questionnaire-based

ICF_English_ Questionnaire-based

This form is required to be used and filed if your study contain **Paper based** distributed questionnaire

 King Saud University Vice Rectorate for Graduate Studies & Scientific Research Deanship of Scientific Research Research Ethics Committee	جامعة الملك سعود وكالة الجامعة للدراسات العليا والبحث العلمي عمادة البحث العلمي لجنة أخلاقيات البحث	For REC use only: Expedited [] Proposal No. _____
---	--	--

INFORMED CONSENT FOR QUESTIONNAIRE-BASED STUDY
Form # KSU-REC 006QS-E
 King Saud University, Riyadh, Kingdom of Saudi Arabia

Research Project Title:
 Name of Principal Investigator:
 Name and address of Institution:
 Contact no:
 Dear Participants,

I would like to ask this opportunity if you are willing to take part on this questionnaire-based survey. The aim of the study is to: _____ . Please answer the questions to the best of your knowledge. All information asked in this study questionnaire will be treated confidential. If you are willing to participate voluntarily in this study, please sign this form and you will receive a copy for your own records. Please tick (✓) the boxes as shown below according to your will.

I agree to participate in this study survey, and to utilize the information for scientific research purposes.
 I agree to allow the researchers to audiotape my voice in an interview for research purpose, (if applicable).
 I agree to allow the researchers to access my existing medical records, both electronic and paper, for their study, and to collect the data prospectively, generating from routine practice and procedure.

Signed by: [TO COMPLETE THIS PORTION DURING THE CONSENT PROCESS ONLY]

Participant's Name or Initials:	
Signature:	
Date of signature (DD/MM/YYYY):	

Person obtaining consent: [TO COMPLETE THIS PORTION DURING THE CONSENT PROCESS ONLY]

Complete Name:	
Signature:	
Principal Investigator or Co-Investigator:	
Date of signature: (DD/MM/YYYY):	

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 Form # KSU-REC 006QS-E, Version 2.0, Updated 17 Oct 2017
 Informed Consent Form - Questionnaire-Based Survey
 Confidential

Page 1 of 1

King Saud University Vice Rectorate for Graduate Studies & Scientific Research Deanship of Scientific Research Research Ethics Committee	جامعة الملك سعود وكالة الجامعة للدراسات العليا والبحث العلمي عمادة البحث العلمي لجنة أخلاقيات البحث
---	--

نموذج موافقة مسبقة للمشاركة في دراسة قائمة على الاستبيان
رمز النموذج أ - KSU-REC 006QS
جامعة الملك سعود، الرياض، المملكة العربية السعودية

عنوان مشروع البحث: (يرجى إدراج عنوان الدراسة بالكامل)
 اسم الباحث الأساسي:
 اسم وعنوان الجامعة:
 رقم الاتصال:
 أعزائي المشاركين،

أرد أن أتهنئ هذه الفرصة وموالتك إذا كنت ترغب المشاركة في هذه الدراسة القائمة على الاستبيان. يرجى الإجابة على الأسئلة إلى حد معرفتك. جميع المعلومات المطلوبة في استبيان هذه الدراسة سوف يتم التعامل معها بكل سرية. و إذا كنت ترغب في المشاركة تطوعياً في هذه الدراسة، يرجى التوقيع على هذا النموذج وسوف تحصل على نسخة وتحتفظ في السجلات الخاصة بك. الرجاء وضع علامة (✓) على الخانات إن شاء الله كما هو موضح وفقاً لرغبتك .

() أنا أوافق على المشاركة في هذه الدراسة وعلى استخدام المعلومات لأغراض البحث العلمي.
 () أوافق على السماح للباحثين بوضع صوت صوتي في المقابلة لأغراض البحث (إذا كان قابل للتطبيق)
 () أنا أوافق على السماح للباحثين بالوصول إلى سجلاتي الطبية الموجودة، سواء كانت إلكترونية أو ورقية لأغراضهم، وجمع البيانات بأثر مستقبلي، واستخراجها من الممارسات والإجراءات الروتينية .

تم التوقيع بواسطة:

إكمال هذا الجزء أثناء عملية الموافقة فقط	
اسم المشارك أو الأخرى:	
التوقيع:	
التاريخ (يوم/شهر/سنة):	

إكمال هذا الجزء أثناء عملية الموافقة فقط
 تم الحصول على موافقة الشخص بواسطة:

اسم الباحث الرئيسي /	
التوقيع:	
التاريخ (يوم/شهر/سنة):	

حقوق الطبع والنشر لهذه الوثيقة محفوظة لجامعة الملك سعود © عام 2017. لا يمكن إعادة أي جزء من أي نموذج بأي شكل أو بأي وسيلة، أو نقله أو نشره بدون موافقة خطية مسبقاً من جامعة الملك سعود.
 Form # KSU-REC 006QS-E, Version 2.0, Updated 02 Oct 2017
 Informed Consent Form - Questionnaire-Based Survey

استبيان قائم على استبيان الموافقة على الاستبيان

KSU-REC 0060S-E

ENGLISH CONSENT for ONLINE SURVEY ARABIC CONSENT for ONLINE SURVEY

This form is required to be used and filed if your study contain ONLINE SURVEY

King Saud University
جامعة الملك سعود
Institutional Review Board
مجلس المراجعة المؤسسية
Vice Rectorate for Graduate Studies & Scientific Research
مؤسسة البحث العلمي
Committee
لجنة إعلانات البحث

1

نموذج موافقة مسبقة على استبيان إلكتروني
KSU-REC 0060S-E
جامعة الملك سعود، الرياض، المملكة العربية السعودية

عزيزي المشارك،
شكراً على موافقتك على المشاركة في هذا الاستبيان الإلكتروني لدراسة بعنوان:
.....
والغرض من هذا الاستبيان الإلكتروني هو وسيتغرق إكمال
هذا الاستبيان حوالي دقيقة.
نؤكد لك أن جميع إجاباتك التي ستقدمها ستبقى في سرية تامة، لا تتردد في الاتصال بالأستاذ / د.
..... ورقم الهاتف المحمول للإجابة على
أسئلتك.
إذا كنت موافق على المشاركة في هذا الاستبيان الإلكتروني فيرجى النقر على "التالي" للبدء.

الموقف من المشاركة في الاستبيان

- أوافق على المشاركة في هذا الاستبيان طواعية
- لا أوافق على المشاركة في هذا الاستبيان

إذا كنت موافق على المشاركة في هذا الاستبيان الإلكتروني فيرجى النقر على "التالي" للبدء.

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Form #: KSU-REC/0060S-E, Original version, 03/Oct/2019
ICF:
Confidential

Page 1 of 1

King Saud University
جامعة الملك سعود
Institutional Review Board
مجلس المراجعة المؤسسية

For IRB use only:
Expedited Review Proposal
IRB Project No.

INFORMED CONSENT FOR ONLINE QUESTIONNAIRE-BASED SURVEY
Form # KSU-REC 0060S-E
King Saud University, Riyadh, Kingdom of Saudi Arabia

Dear **Participant**,

You are invited to participate in this survey and your contribution is greatly valued as it will help us to achieve the intended purpose of this study.

Study: _____ Title: _____

The purpose of this online survey is to: _____ It will take approximately _____ minutes of your time to be completed. Your participation is completely voluntary and you can withdraw from the research at any time.

The responses are completely anonymous and confidential and researchers will not be able to identify participants. You will not be asked for your name or any other identifying information. We will use this collected information for the research purpose only.

Please feel free to call Prof. / Dr. /Mr. /Ms. _____, with Mobile No. _____ to answer your questions.

AGREEMENT ON PARTICIPATION IN THIS STUDY

I agree to participate in this study and I know that my response will be completely anonymous.


I don't agree to participate in the study.

If you are willing to participate in this online questionnaire-based survey, please click "**Next**" to begin.

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KSU-IRB CV template

This form is Curriculum vitae required to be filled and signed by the research primary investigator



King Saud University
Institutional Review Board (IRB)

CURRICULUM VITAE

Name:		
Present appointment: <i>(Job title, department, and organization)</i>		
Address: <i>(Full work address)</i>		
Telephone number:	KSU Email address:	Personal Email address: <i>(optional)</i>
Qualifications:		
Professional Registration: <i>(Name of body, registration number and date of registration.)</i>		
Previous and other appointments: <i>(Include previous appointments in the last 5 years and other current appointments.)</i>		
Research Methodology Training Experience: <i>(Summary of research experience, including the extent of your involvement. Refer to any specific clinical or research experience relevant to the current application.)</i>		
Research Ethical Training: <i>(Details of any relevant training in the design or conduct of research, for example in the Clinical Trials Regulations, Good Clinical Practice, consent or other training appropriate to non-clinical research. Give the date of the training.)</i>		
Relevant Publications: <i>(Give references to all publications in the last two years plus other publications relevant to the current application.)</i>		
Signature:	Date:	

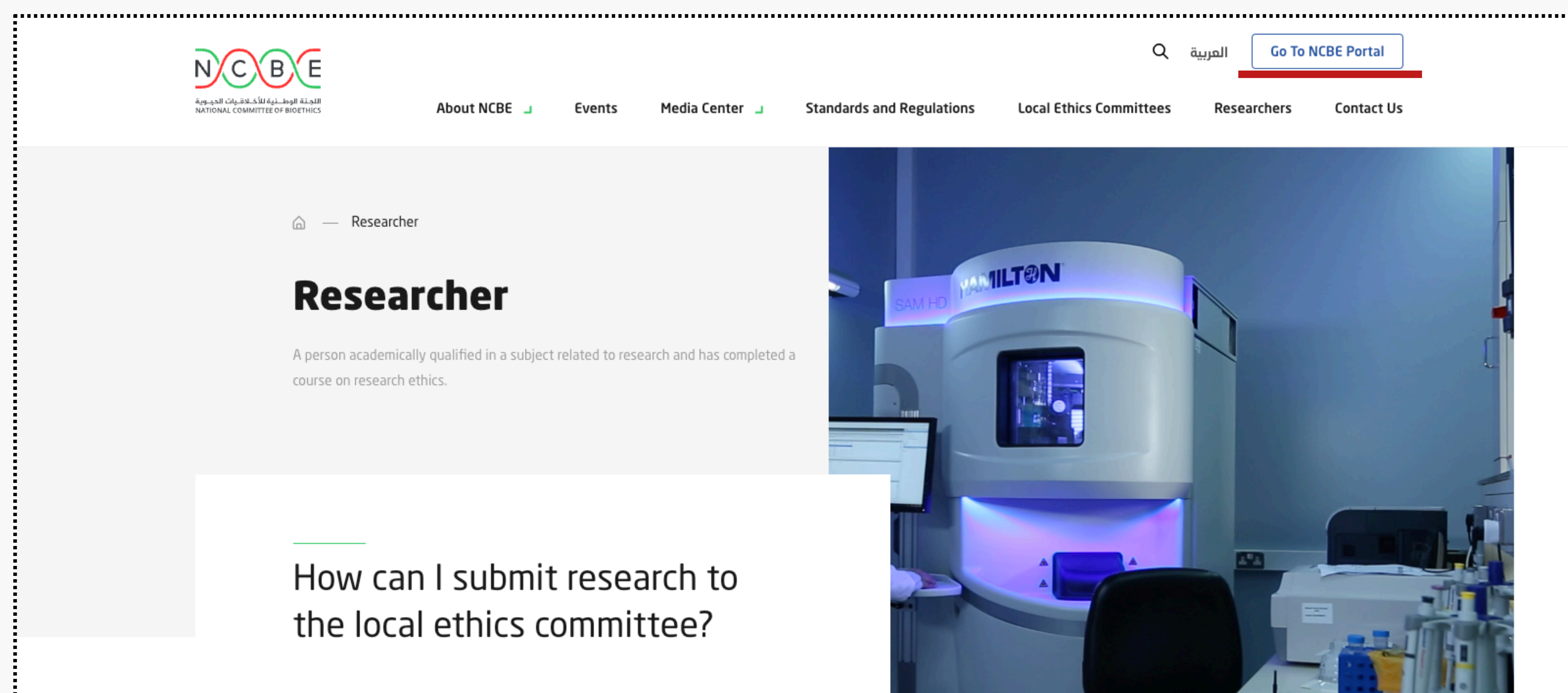
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KSU-IRB_CV Template, Version 1.0, 02 Oct. 2017.

Certificate of Bioethics

Certificate from Bioethics is **mandatory** requirement on when submitting research proposal to the IRB committee, and you can access the course and get the certificate for free through the **national committee of bioethics** website <https://ncbe.kacst.edu.sa/en/researchers/>

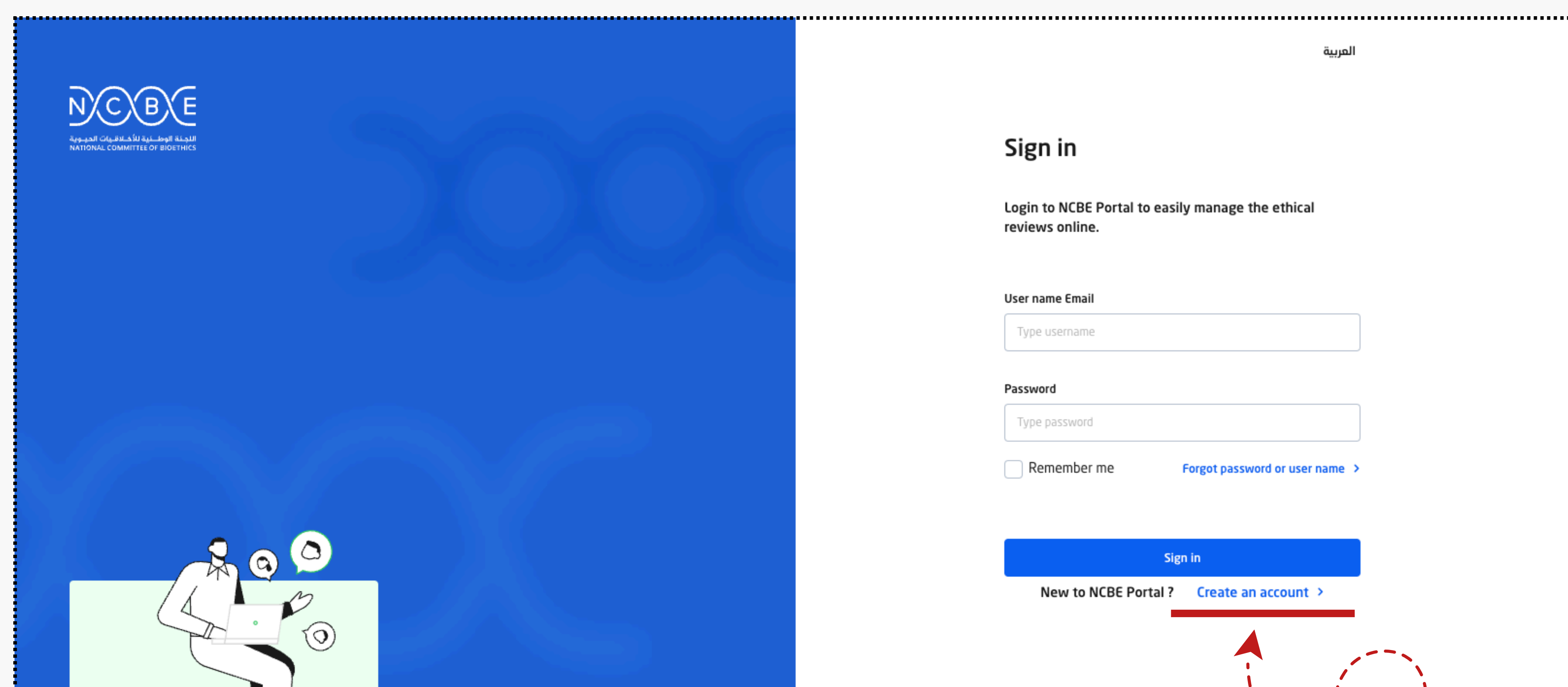
1

Once you enter the website through the parcode or the link provided above [Click on Go to NCBE portal](#)



2

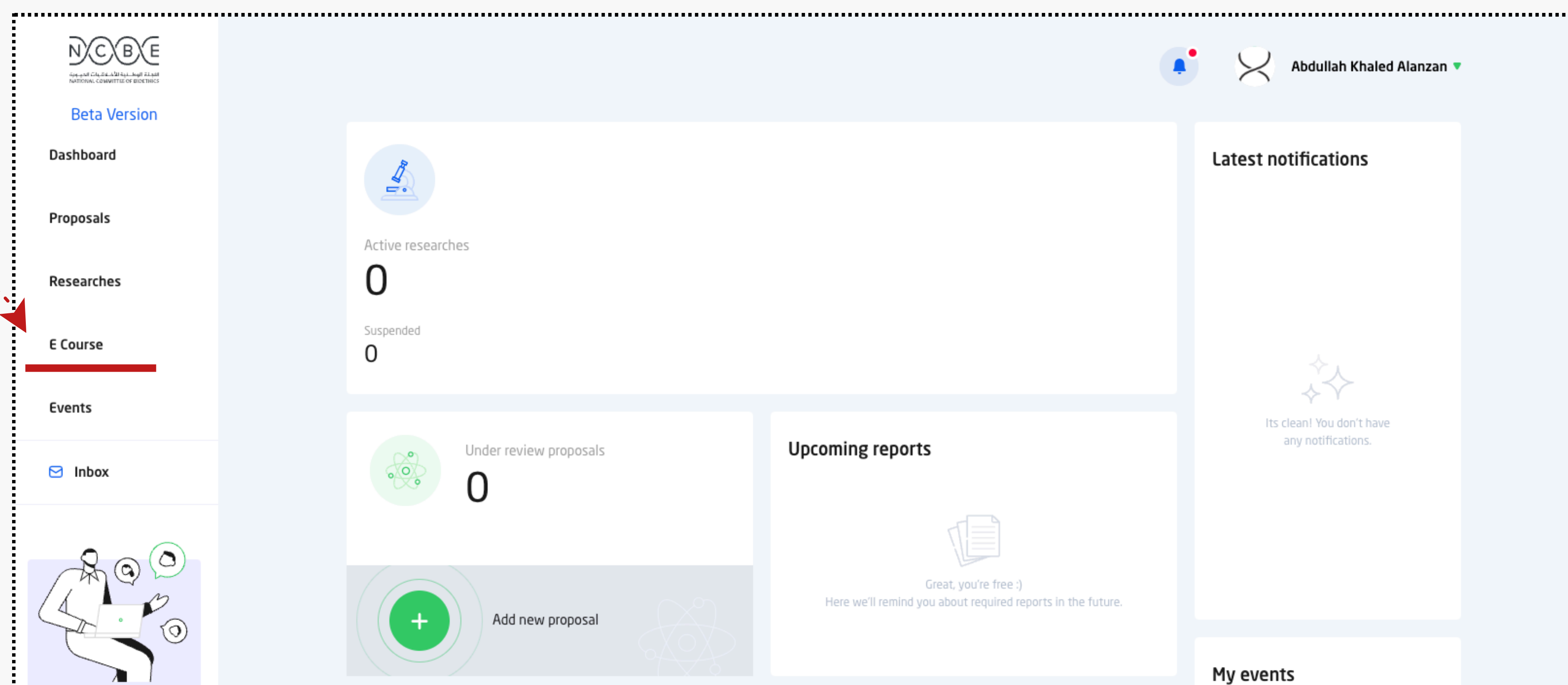
Most likely this will be your first visit so you will be required to register new account by [clicking on Create an account](#)



Certificate of Bioethics

3

After finishing registration process sign in,,
you will find yourself on the dashboard, just click on [E course](#)



4

Enter the [Course of biomedical research ethics](#) and complete the 4 video
to be eligible to enter the exam to receive your completion certificate



You can retake the exam again if you dont pass the first one
the once you pass the certificate is valid for around 3 years then you
will have to retake the exam again for renewal

IRB file Study Type	KSU-IRB Form-019	KSU-REC 006QS ICF_Arabic/English_ Questionnaire-based	KSU-REC 006OS-E ARABIC CONSENT for ONLINE SURVEY	KSU-IRB CV template	Certificate of Bioethics	Copyright or permission to use the study tool	Copy of Study Tool (data collection sheet, survey form, questionnaire sheet)
Observational study "online survey"	✓	✗	✓	✓	✓	Required If the tool from other study	✓
Observational study "Paper survey"	✓	✓	✗	✓	✓	Required If the tool from other study	✓
Observational study Secondary Data**	✓	✗	✗	✓	✓	Required If the tool from other study	✓
Systematic review	✗	✗	✗	✗	✗	✗	✗
Narrative review	✗	✗	✗	✗	✗	✗	✗
	for Systematic review and Narrative review its prefer to inform the IRB before journal submission and assure research ethical requirement are followed						
Case Report	<p>1- Case Report Consent forms. (should hide the name and show the signature) either English or Arabic-as per patient's ease).</p> <p>2- Conflict of Interest Form (If no conflict, only primary author sign it, or if there are conflicts, then separate for all Authors).</p> <p>3- CV of at least Primary Author or all authors</p>						

**Secondary Data include Data extracted from the Electronic Health Records (EHR) using E-SIHL or available online Data

Post IRB approval

Data retrieval


in case your study require Data to be extracted from the Electronic Health Records (EHR) using E-SIHL the process will go through the IT department

once you receive the IRB approval

1. you will write litter to the Director of IT department “**Engr. Mubarak Alshahrani**” example shown next pages **Fig1**
2. after that you will fill **Data sharing request form** from the IT department using the supervisor name and infoprmtion (copy of the form provided in the next page) **Fig2**
3. once the form sign by the research supervisor, you will send it the **head department** your supervisor related to, to be signed
- 4.the following step is to be trnasfered from the department to the **medical director** the the **CMO** and **CIO** to be approve and signed

Post IRB approval

Data retrieval


 المملكة العربية السعودية
 King Saud University
 المدينة الطبية - القصير
 الإدارة الإلكترونية للمعلومات

Data / Information Sharing Request Form

Requester Information

National ID NO	Date Of Birth	
Requester Full name		
Contact Information		
National Address		
Office Phone	Mobile Number	
Organization		
<input type="radio"/> King Saud University Medical City (KSUMC):		<input type="radio"/> Outside KSUMC :
<input type="radio"/> KKUH		<input type="radio"/> College
<input type="radio"/> KAUH		<input type="radio"/> Research Center/ chairs
<input type="radio"/> DUH		<input type="radio"/> Vendor
<input type="radio"/> Other (Please Specify) :		
Employee ID	(Employee / Student) ID	
Email : @ksu.edu.sa	Email : @	
Requester Statuses:		
<input type="radio"/> Physician <input type="radio"/> Researcher <input type="radio"/> Student <input type="radio"/> Employee <input type="radio"/> Other (Please Specify) :		
Department/ Speciality :		
Purpose of Requesting data / information :		
<input type="radio"/> Patient Care <input type="radio"/> Decision making <input type="radio"/> Quality improvement <input type="radio"/> Statistics		
<input type="radio"/> Research/study (Please add IRP NO & Copy from The IRP approval)		
<input type="radio"/> Governmental / National Institute		
<input type="radio"/> Other purposes (Please Specify)		
Requested Type	<input type="radio"/> Image <input type="radio"/> Report <input type="radio"/> Data <input type="radio"/> File <input type="radio"/> other	
Requested data or information description		
Requested data Format	<input type="radio"/> Hard copy <input type="radio"/> Soft Copy	
The method of receiving the data	<input type="radio"/> Send to Email	<input type="radio"/> Send to the national address
		<input type="radio"/> Sent to a specific destination
		<input type="radio"/> Self-pickup
Data usage Start Date:	Data usage End Date:	
Request submit Date:	Requester Signature:	

Approval

Head of Department:	<input type="radio"/> Yes <input type="radio"/> No	Name	Signature:
Medical Director:	<input type="radio"/> Yes <input type="radio"/> No	Name	Signature:
CMO Approval:	<input type="radio"/> Yes <input type="radio"/> No	Name	Signature:
CIO Approval:	<input type="radio"/> Yes <input type="radio"/> No	Name	Signature:

Action by IT Data Office

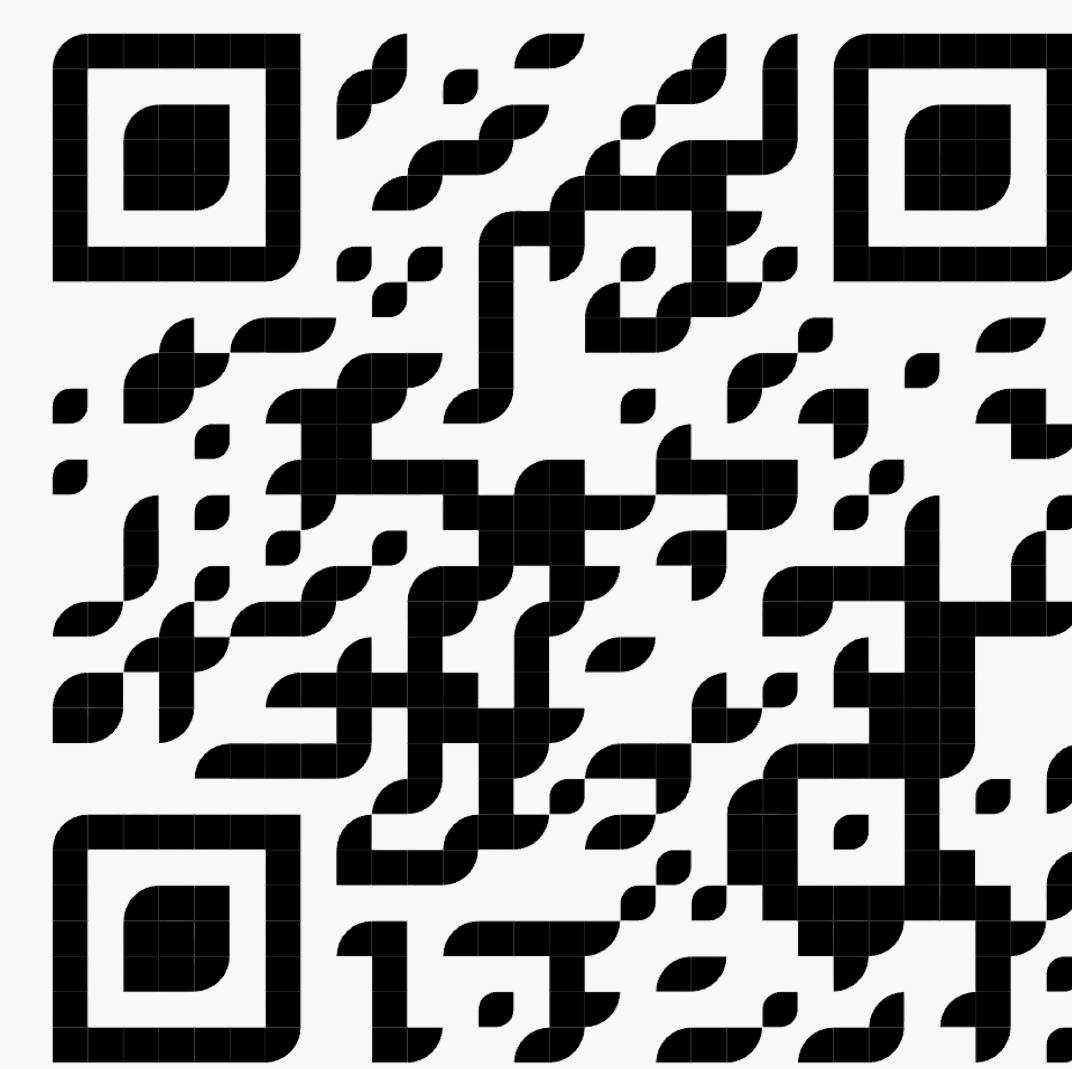
Data Office Approval:	<input type="radio"/> Yes <input type="radio"/> No	Name	Signature:
Request Priority:	<input type="radio"/> High (4 days) <input type="radio"/> Moderate (10 days) <input type="radio"/> Low (20 days)		
Source of Data:	<input type="radio"/> <input type="radio"/> <input type="radio"/>		
Request Statuses	<input type="radio"/> Acceptance <input type="radio"/> Rejection <input type="radio"/> Extension <input type="radio"/> Notification		
Comments :			

I hereby acknowledge and agree to use the I receive from the IT department only for the purpose stated in this request and I shall not further disclose, transmit, or disseminate the data specified to any third party.

Signature: _____

Fig2. Data sharing request form to the Director of IT department

Scan the parcode to get transferred to the Google drive with pdf copy of the form



Post IRB approval

Data retrieval

To	Engr. Mubarak Alshahrani Director IT Department King Khalid University Hospital
From	Dr. "supervisor name" supervisor title Consultant Department of Email address:
Request	Request for Patient Information for Research Purposes

To Whom It May Concern,

I am writing to you on behalf of our Research Team from the Department of xxxxx.

As part of our ongoing research efforts, we are currently conducting a study to gain more understanding about "add research topic and significant". This significant research endeavor has received approval from our Institutional Review Board, under approval number Ref.no.xx0xx000.

In line with this, we are kindly requesting your assistance to provide us with a list of patients who have been diagnosed with xxxxx within the 00 years.

For our study to be effective, we would appreciate if the list could include the Medical Record Numbers (MRNs) and the age of the patients. This is to ensure that our data analysis will be as accurate as possible.

Please note that all patient information will be anonymized, and all research activities will be carried out accordingly. We understand the sensitive nature of this request and want to assure you that all data provided will be strictly used for research purposes and will be handled with the utmost confidentiality.

We look forward to your favorable response and extend our sincere gratitude in advance for your cooperation in contributing to the advancement of medical research in this field.

please feel free to get in touch with us in casse any questions or further clarification needed.
Thank you for your time and consideration.

Supervisor signature

Fig1. guide or example of litter to the Director of IT department

This is just a guide not template, personalize the email as needed and dont forget to edit the require field



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SCIENTIFIC MAGAZINE

We would appreciate reaching out in case you have any suggestion or inquires

KSUMSCJOURNAL@GMAIL.COM

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