





# المؤتمر البحثي الطلابي الرابع

المتخصص بأبحاث البكالوريوس

## 4<sup>th</sup> UNDERGRADUATE RESEARCH CONFERENCE

**Al-Quds University  
Jerusalem, Palestine**

***May 11 2022***

**CONFERENCE BOOK**

**Elham Kateeb**  
**Dean of Scientific Research**  
**Al-Quds University**

With great enthusiasm, we welcome you again to Al-Quds University on May 11<sup>th</sup>, 2022, to be part of the fourth Palestinian Undergraduate Research conference organized by Al-Quds University's Deanship of Scientific Research and Al-Quds Bard College.

Every year, towards the end of the spring semester, the Annual Undergraduate Research Conference celebrates the excellence in undergraduate student research and recognizes their skills in critical thinking, research and analysis, and public speaking.



This year we received 105 abstracts and concept papers from Palestinian and regional universities and from selected high schools. After a rigorous review process, 63 abstracts were accepted and spread between three in-person oral sessions (n=19), five virtual oral sessions (n= 14) and four in-person poster sessions (n=30).

Among the 63 research papers are 11 papers submitted by high school students. This embodies Al-Quds University's vision of involving students as early as possible in the research experience and offering the opportunity for talented high school students to show off their hard work in the field of research.

Research papers this year covered the disciplines of Medicine, Neuroscience, Dentistry, Pharmacy, Public Health, Engineering, Genetics, Environment, Applied Sciences, Law and Human Rights, Economics, Education and Literature.

We at Al-Quds University are very proud of our undergraduate students and their research projects and are honored to host them annually to support their original and creative work and provide them with the opportunity to network with peers and experts in their areas of interest.

This year is also unique because our organizing efforts for this event were supported by research clubs representing students at AQU and other partner Palestinian student research entities.

Finally, I invite you all to enjoy this year's engaging program and support our students with insightful questions and provoking feedback.

**Daniel Terris**  
**Dean of Al-Quds Bard College**  
**Al-Quds University**

Research is the lifeblood of higher education, and it is also the lifeblood of a healthy society. We humans are naturally inquisitive, but we need to harness our curiosity with care and systematic methods that bring clarity and precision to our quest for knowledge. That is research at its best, a process that we can begin to teach even to the very young, and that we need to nurture through university, so that everyone – whatever their field – emerges from their education with the will and the tools to solve the urgent problems that face humanity.

I am proud to offer my congratulations to the undergraduate students and the high school students from across Palestine who have made the effort to undertake and present sustained and meaningful research projects that you have conducted in the last year. High-quality research requires many elements. It takes passion and imagination to identify a gap in knowledge. It requires discipline to gather sources and track down data. No research succeeds without patience, since there are inevitable dead ends before a new and promising route is discovered. Research can be arduous and frustrating, but at its best it pays off with the advancement of knowledge. I am sure that all of you have in some way known the thrill that comes with the realization that you have discovered something that no one has known before you, and that you are adding to a body of knowledge that can change the way that we live.

I hope that this conference is just a beginning, that all of the students participating today are acquiring a habit of research that will last you a lifetime. Your skills will be valuable in whatever field of work you choose. Some of you will doubtless end up teaching in universities, where research is an essential part of daily life. But research is also vital in almost every field: in medicine, law, business, public service, and the non-profit sector, in all these fields we need both scholars and practitioners who have the active curiosity and research skills that advance knowledge and guide choices. I am confident that your outstanding skills, first developed during an era of crisis for the world, will in later years help guide the choices that improve the quality and dignity of life here in Palestine and around the world.



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# *Oral Presentations*

## Medicine

### **Clinical Audit of Anticoagulant Therapy with Pregnancy in Al-Emarati Hospital**

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**Background:** Thromboembolic disorders can be considered a fatal problem in pregnancy. Anticoagulant therapy plays an important role in both treatment and prevention. Warfarin is the best drug to use but carries the risk of bleeding in mothers and fetuses, especially in the late pregnancy and delivery. Moreover, the risks of embryopathy from warfarin in early pregnancy cannot be excluded. Parenteral heparin has the advantage of the inability to cross the placental barrier but still can be a cause of bleeding problems in pregnancy, and its long-term use still carries the problems of maternal bone demineralization (Bates, Greer et al. 2012).

The anticoagulant and thrombolytic use in pregnancy is a very important consideration, as pregnancy is associated with a fivefold increase in VTE risk, with the risk rising to 20-fold or more throughout the puerperium. The risk further increases if thrombophilia is associated. The risk of VTE can persist till 12 weeks of postpartum

Anticoagulant use in pregnant women should be paid great attention in both the period of pregnancy and the postpartum period. Risks and benefits to the mother and fetus should be balanced in the choice of anticoagulant therapy. Clinical audit can be defined as the process of assessment through the use of evidence-based criteria and/or the outcome of care by comparison with others.

**Objectives:** In the current study, the aim was to audit the anticoagulant therapy usage in pregnancy and compare it with the chosen international standards (RCOG standards).

**Methods:** Retrospective data were collected from pregnant women on anticoagulant therapy in the Department of Obstetrics and Gynecology of Al-Emarati Hospital, Gaza. A total of 70 pregnant women were included in this study. The study protocol was approved by the ethics committee of Faculty of Medicine, Islamic University of Gaza.

**Results:** Regarding the percentage of cases following the international guidelines, among the 70 studied cases on anticoagulant therapy, 48.57% has filled her VTE risk assessment score, while 51.43% was an empty risk assessment paper.

**Conclusions:** The use of anticoagulants in pregnancy must follow an evaluation of both its risks and benefits. Women requiring anticoagulation need careful attention throughout pregnancy and the postpartum period. Risks and benefits to the mother and fetus should be balanced in the choice of anticoagulant therapy, degree of monitoring, and therapeutic target.

**Research Keywords:** Anticoagulant therapy, clinical audit, pregnant women, RCOG standard.

## **The Prediction of The Size of The Femoral Component used in Knee Replacement Surgery in Relation to Patient's Height, Weight, Body Mass Index (Bmi), Gender, and Age**

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**Background:** Degenerative knee osteoarthritis is a common medical condition worldwide. Recent research projects proved that Total knee Replacement (TKR) is a successful surgery for treating osteoarthritis after failure of non-surgical interventions to restore the function of the joint and improve patient's quality of life.

The selection of the size of the femoral component is significant to get equal flexion-extension gaps which is also important to get pain free range of motion and stability.

The availability of stock is of paramount importance for the surgeon before starting the surgery to allow accurate sizing for the patient intra-operatively. We tried to predict the femoral size pre-operatively by analyzing the association between BMI, gender, age, and the actual size used in the operation.

**Objectives:** To study the association between size of femoral component used in total knee replacement surgery in relation to the patient's height, weight, body mass index, gender, and age, to allow accurate sizing for the patient in the operation room and to improve pre-operative planning for the availability of implant sizes.

**Methods:** A retrospective review was performed on a group of 385 patients who underwent TKR surgery between 2019 and 2020. Patient demographics included weight, height, BMI, gender, age, and the actual femoral size used in the operation were obtained from the medical records of Jordan University Hospital (JUH). SPSS (Statistical Package for the Social Sciences) version 28.0 (Chicago, USA) was used for data analysis. Pearson Chi-square test was utilized to investigate the association between type of femoral component and gender of patients. Spearman's rank correlation was used to analyze femoral component size and continuous measures (e.g., weight).

**Results:** The mean age of the study sample being 68 years (ranging from 26 and 92 years). 88.6% of the sample were females, and 11.4% were males with mean BMI of 31. We found a significant positive correlation between gender, height, weight, and the used femoral component size (P-value < 0.001, <0.001, <0.025, respectively); however, BMI and age were not statistically correlated to the femoral component size (P-value = 0.625, 0.138, respectively).

**Conclusions:** According to the results, we concluded that the chosen size of femoral component used in the surgery is highly associated with the height, weight, and gender of patients. But not with their BMI and age. These predictive variables can help improve pre-operative planning for the availability of implant sizes and implant supply chain efficiency.

**Research Keywords:** TKR; BMI; Femoral Component; Femoral Size; Knee Osteoarthritis

## **Influence of COVID-19 on lifestyle behaviors in the Middle East and North Africa Region: a survey of 5896 individuals Open Access Journal of Translational Medicine**

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**Background:** Coronavirus disease (COVID-19) pandemic has affected health and lifestyle behaviors of people globally. This project aims to identify the impact of COVID-19 on lifestyle behavior of individuals in the Middle East and North Africa (MENA) region during confinement.

**Objectives:** To identify COVID-19 impacts on the physical activity levels and eating habits among individuals residing in the MENA countries.

**Methods:** We conducted an online survey in 17 countries (Egypt, Jordan, United Arab Emirates, Kuwait, Bahrain, Saudi Arabia, Oman, Qatar, Yemen, Syria, Palestine, Algeria, Morocco, Libya, Tunisia, Iraq, and Sudan) from the MENA region on August and September 2020. The questionnaire included self-reported information on lifestyle behaviors, including physical activity, eating habits, smoking, watching television, social media use and sleep before and during the pandemic. Logistic regression was performed to analyze the impact of COVID-19 on lifestyle behaviors.

**Results:** A total of 5896 participants were included in the final analysis and 62.8% were females. The BMI of the participants was  $25.4 \pm 5.8$  kg/m<sup>2</sup>. Around 38.4% of the participants stopped practicing any physical activities during the confinement ( $P < 0.001$ ), and 57.1% reported spending more than 2 h on social media ( $P < 0.001$ ). There were no significant changes in smoking habits. Also, 30.9% reported an improvement in their eating habits compared with 24.8% reported worsening of their eating habits. Fast-food consumption decreased significantly in 48.8% of the study population. This direct/indirect exposure to COVID-19 was associated with an increased consumption of carbohydrates (OR = 1.09; 95% CI = 1.02–1.17;  $P = 0.01$ ), egg (OR = 1.08; 95% CI = 1.02–1.16;  $P = 0.01$ ), sugar (OR = 1.09; 95% CI = 1.02–1.16;  $P = 0.02$ ), meat, and poultry (OR = 1.13; 95% CI = 1.06–1.20;  $P < 0.01$ ). There was also an associated

increase in hours spent on watching television (OR = 1.07; 95% CI = 1.02–1.12;  $P < 0.01$ ) and social media (OR = 1.09; 95% CI = 1.01–1.18;  $P = 0.03$ ). However, our results showed a reduction in sleeping hours among those exposed to COVID-19 infection (OR = 0.85; 95% CI = 0.77–0.94;  $P < 0.01$ ).

**Conclusions:** The COVID-19 pandemic was associated with an increase in food consumption and sedentary life. Being exposed to COVID-19 by direct infection or through an infected household is a significant predictor of amplifying these changes. Public health interventions are needed to address healthy lifestyle behaviors during and after the COVID-19 pandemic.

**Research Keywords:** COVID-19, coronavirus, lifestyle, MEN

## **Follicle Stimulating Hormone, Luteinizing Hormone and Anti Mullerian Hormone effect on In Vitro Fertilization outcome**

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**Background:** Despite the great development in technologies, including assisted reproductive technologies (ART) the infertility problem remains known as a global condition, In vitro fertilization (IVF) is a common infertility treatment.

**Objectives:** To assess the effect of Follicle Stimulating Hormone (FSH), Luteinizing hormone (LH), and Anti Mullerian Hormone (AMH) on IVF outcome and success.

**Methods:** A retrospective cross-sectional study was performed between January and June 2021 through follow-up patients' data. The target population of this study consisted of 200 women aged 17-48 years from three IVF centers in Gaza Strip (Hala fertility Center, Al Basma Fertility Center, and Banon Fertility Center).

**Results:** The mean age of the studied cases was  $29.11 \pm 5.532$  years. Our study revealed that according to pregnancy occurrence, FSH and LH reflected no significant relation ( $P=0.828$ ), ( $P=0.089$ ) respectively, but a significant relation was found with AMH, eggs cleavage, and age ( $P=0.008$ ), ( $P=0.000$ ), ( $P=0.032$ ) respectively. The ages from 26 to 35 years had higher chances to become pregnant after IVF technique than the age group from 36 to 48 years old ( $P=0.024$ ).

**Conclusions:** AMH level has a direct significant relationship with the success of the IVF technique. AMH level, the number of cleavage eggs, and the most proper age between (26 to 35 years old) are vital for IVF process success, which was 56.5% of the total cases.

**Research Keywords:** Endocrinology, in vitro fertilization, follicle stimulating hormone, luteinizing hormone, anti mullerian hormone, infertility, Gaza strip, reproductive.

## Knowledge of cervical cancer risk factors among Palestinian women: a national cross-sectional study

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**Background:** High awareness of cervical cancer (CC) risk factors is important to decrease the morbidity and mortality associated with CC. This study aimed to assess the knowledge level of Palestinian women about CC risk factors and to determine the factors associated with good knowledge.

**Objectives:** This national study aimed to: (1) assess Palestinian women's level of knowledge of CC risk factors, (2) identify the factors associated with a good knowledge level, and (3) compare the knowledge among women from the Gaza Strip vs. the West Bank and Jerusalem (WBJ).



**Methods:** This was a national cross-sectional study. Adult women from hospitals, primary healthcare centers, and public spaces of 11 governorates in Palestine were recruited using a stratified convenience sampling. A translated-into-Arabic version of the validated CC awareness measure (CeCAM) was used to assess the knowledge about the 11 CC risk factors. For each correctly identified risk factor, the participant was given one point. The total score was calculated and was categorized into three categories: poor knowledge (0–3), fair knowledge (4–7), and good knowledge (8–11).

**Results:** A total of 7223 participants completed the Arabic CeCAM (response rate = 89.3%) and 7058 questionnaires were included in the final analysis: 2655 from the Gaza Strip and 4403 from the West Bank and Jerusalem. Participants recruited from the Gaza Strip were younger, getting lower monthly incomes, and with less chronic diseases than participants recruited from the West Bank and Jerusalem. The most frequently identified risk factor was ‘having a weakened immune system’ (n = 5458, 77.3%) followed by ‘infection with a sexually transmitted infection’ (n = 5388, 76.3%). The least identified risk factor was ‘having many children’ (n = 1597, 22.6%). Only 1670 women (23.7%) had good knowledge of CC risk factors. Women living in the Gaza Strip were more likely than women living in the West Bank and Jerusalem to have good knowledge (25.2% vs 22.7%). Completing a secondary or diploma degree, being employed, and having a monthly income of  $\geq 1450$  NIS (around \$450) were all associated with lower likelihood of having good knowledge of CC risk factors. Conversely, knowing someone with cancer was associated with higher likelihood of having good knowledge.

**Conclusion:** The overall awareness of CC risk factors was low. There is a substantial need to establish educational programs to promote Palestinian women’s awareness of CC.

**Research Keywords:** Cervical cancer, prevention, early detection, survival, risk factor, awareness, knowledge, early presentation, Palestine.

## **Missed Opportunities in the Diagnosis and Treatment of Iron Deficiency Anemia in Emergency Departments of Governmental Hospitals” Clinical Audit**

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**Background:** Iron Deficiency Anemia due to iron deficiency may be associated with behavioral changes, impaired psycho-motor development and impaired cognitive function. And since most cases are asymptomatic so this puts the responsibility on Medical staff to diagnose and treat it.

**Objectives:** To detect the percentage of IDA patients that have been missed by medical team in governmental hospitals emergencies since their chief complaint was other than hematological complaints and despite the confirming CBC test that shows low levels of Hemoglobin.

**Methods:** We used Questionnaire that contained the following questions that we asked to the patient’s guardian:

1. Patients name, age and gender.
2. Cause of Emergency visit and ordering CBC test.
3. If the CBC test was done in the hospital or not.
- \* If the guardian was asked by emergency physicians about the following:
  4. If the patient has any chronic diseases.
  5. family history of Thalassemia or if the patient is a known case of Thalassemia.
  6. If the patient suffers from Anemia symptoms.
  7. If the family were advised to repeat the test.
  8. If the patient was discharged with an iron supplement prescription, educated about iron rich food or advised to go to a hematologist.

Lab results that we followed:

Hemoglobin , MCV

\*Sample:

-WHO? One hundred fifty seven children who had a Complete Blood Count test that showed low level of HgB during their visit to the emergency department.

-WHERE? Emergency Departments of Ramallah medical complex Hospital, Beit-Jala Hospital, Hebron Governmental Hospital. WHEN? In the period between twenty five of August to the ninth of November of 2021.

**\*Inclusion Criteria:**

-Age (6 months-12 years) who have low HgB levels according to WHO criteria:

6months – 3 years (HgB less than 11)

-3 years– 12 years (HgB less than 11.5)

-Both female and male

-Using the CBC data that was done at the hospital lab only

**\*Exclusion Criteria:**

Known cases of anemia

Cases in which CBC was done for suspecting hematological problem.

**Results:** Medical Complex cases and 63% of Beit-Jala Hospital analyzed the data by using simple statistics. Data contains 58.23% males and 41.77% females patients. After dividing data into 2 age groups: First age group from 6 months – 3 years and the Second age group from 3 years – 12 years.

For the first age group, total patients is 104 patients with average Hemoglobin of 9.6 and average MCV of 66.6, 19.2% of cases were symptomatic with the most frequent complaint of pale skin, the percent of cases that have mild anemia is 59.6%, 39.4% moderate and 0.9% severe IDA.

Percent of cases that were not discharged with iron supplement prescription, educated about iron rich food or advised to go to hematologist is 76%!

For the second age group, total patients is 53 patients with average Hemoglobin of 10.2 and average MCV of 68.9, 45.2% of cases were symptomatic with the most frequent symptom of fatigue the percent of cases that have mild anemia is 79.2%, 18.8% moderate and 1.8% severe IDA.

Percent of cases that were not discharged with iron supplement prescription, educated about iron rich food or advised to go to hematologist is 94.4%!

According to the severity, there were two cases with severe anemia that were missed, and for the 52 cases with moderate anemia 75% of cases were missed too.

According to the hospitals at where we conducted the study, 89.7% of Hebron Governmental Hospital cases, 75.5% of Ramallah Hospital cases “were missed”

**Conclusion:** Why these high disappointing results? We assume that there is not enough time for taking history and doing physical exam, CBC results are not followed closely or there is under appreciation of the impact of IDA on this age group.

**Research Keywords:** Iron Deficiency Anemia, Hemoglobin, Mean Corpuscular Volume, Emergency, Pediatrics.

## **More than Seizure: Central Auditory Dysfunction in children with Benign epilepsy with central-midtemporal spikes (BECTS) and Temporal lobe epilepsy: Is there a relation? A systematic review**

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**Background:** Epilepsy is the most common childhood neurological disorder, which has various consequences on the life of the affected people.

**Objective:** this systematic review aims to study the relationship between benign epilepsy with central-midtemporal spikes (Rolandic epilepsy) and Temporal lobe epilepsy and central auditory processing in children.

**Methods:** A literature search in PubMed, Cochrane, Science Direct, and Google Scholar revealed thousands of articles, which were screened by two researchers. Studies used Dichotic Speech tests and Temporal Patterning Tests such as Gaps in Noise test (GIN) and Duration Pattern test, as well as some tests which evaluate neuronal activity were obtained and fully screened, this systematic review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA).

**Results:** In several studies an abnormal score for approximate GIN threshold was observed in children with temporal lobe epilepsy and rolandic epilepsy, and a worse performance in duration Pattern sequence is observed in many studies compared to healthy controls, Rolandic epileptic children also had greater problems in dichotic tests, which being affected in temporal lobe epilepsy too.

**Conclusion:** Our review strongly suggest comorbidity between central auditory dysfunctions and benign (rolandic) epilepsy and temporal lobe epilepsy, although the whole nature and causes of this comorbidity are not identified until today, it is important for clinicians to understand the audiological consequences of childhood epilepsy; since it could help to make better treatment options in the future.

**Research Keywords:** Temporal epilepsy, Benign rolandic epilepsy, central auditory dysfunction

## **Prevalence of Preoperative Anxiety among Hospitalized Patients in Palestine: A study of associated factors**

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**Background:** Preoperative anxiety is a health concern among patients scheduled for surgical interventions. Little is known on the prevalence of preoperative anxiety and its associated factors among hospitalized patients in Palestine. This study was conducted to assess prevalence of preoperative anxiety among patients scheduled for surgical interventions in different Palestinian hospitals across the West Bank and identify its associated factors.

### **Objectives:**

1. Assess the prevalence of preoperative anxiety among patients undergoing surgery in the Palestinian healthcare system.
2. Identify the factors associated with preoperative anxiety among patients undergoing surgery in the Palestinian healthcare system.

**Methods:** A cross-sectional design was used in this study. Patients scheduled for surgical interventions were interviewed using an interviewer administered questionnaire. The questionnaire collected the sociodemographic and clinical variables of the patients. The questionnaire also contained the Amsterdam preoperative anxiety and information scale (APAIS).

**Results:** Complete questionnaire was returned by 129 patients. Of the patients, 14.7% were worried about the anesthetic, 14.0% reported that anesthesia was on their minds continuously, 24.0% reported that they would like to know as much as possible about the anesthetic, 24.9% reported that they were worried about the procedure, 32.6% reported that the procedure was on their mind continually, and 35.7% reported that they would like to know as much as possible about the procedure. Higher preoperative anxiety scores were significantly associated with age, employment status, having chronic diseases, type of hospital, having previous surgery, and having previous anesthesia.

**Conclusion:** Preoperative anesthesia was prevalent among patients scheduled for interventions that required anesthesia in the Palestinian practice. Decision makers in healthcare should consider the factors associated with higher preoperative anesthesia scores when designing appropriate interventions to address preoperative anxiety among patients scheduled for surgical interventions in Palestine.

**Research Keywords:** Preoperative anxiety, anxiety, fear of anesthesia

## **Prevalence, Knowledge, Attitude and Management Of Diabetic Gastroparesis-Related Symptoms- among Type 2 Diabetes Mellitus Patients in the West Bank: A Preliminary Cross-Sectional Study**

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**Background:** Diabetic Gastroparesis (DGP) is a serious well-known complication, yet with limited studies on its prevalence and management. This study is the first in Palestine aimed to determine the prevalence of DGP, its associated symptoms and possible risk factors.

**Methods:** A preliminary cross sectional study was conducted from February 2020 to June 2021. Simple random sampling was used to select Palestinian adults ( $\geq 18$  years old) with diabetes mellitus type 2; participants were from seven MoH hospitals (with a bed capacity  $>100$ ). We used KoboToolBox, a web-based tool to collect data on: demographic variables, diabetes, smoking status, DGP related questions, and the Gastroparesis Cardinal Symptom Index (GCSI). Face to face interviews were conducted with an informed verbal consent obtained from participants. A total GCSI score  $\geq 1.9$  was set as having DGP symptoms. Possible risk factors were determined by regression analysis. SPSS version 22 was used to conduct the analysis. Approval was obtained from the Al-Quds University Research Ethics Committee.

**Findings:** A total of 1500 participants were included in the analysis; 54% (810) were females. Their mean age was 61.12 years (SD 10.83). Mean diabetes duration was 12.35 years (SD 8.81). Prevalence of clinical symptoms of DGP among type 2 patients was 21%(315). The clinical symptoms of DGP were significantly associated with diabetes duration ( $p= 0.031$ ) and H<sub>A1c</sub> ( $p=0.001$ ). We did a descriptive analysis of participants with GCSI score  $\geq 1.9$  (315) which revealed that 60% (189) of patients visited the doctor at least once complaining of DGP symptoms, but only 1.9 % (6) were diagnosed. We found that stomach fullness, nausea, and early satiety were the most common (95.6%, 91.8% and 91.2% respectively). The most initial and bothersome symptoms were nausea and bloating. There was a significant relationship between the GCSI score and fluid intake ( $p=0.013$ ), but no association with smoking ( $p=0.18$ ). Based on the logistic regression model, the presence of at least one cardinal symptom was more likely among obese females with longer disease duration and poor glycemic control.



**Interpretations:** Up to our knowledge, This is the first study in Palestine to tackle gastroparesis and assess its prevalence which found to be high in relation to actual percentage of diagnosed patients. Underdiagnosis of DGP isn't merely because of the unavailability of the standard diagnostic methods, as overlooking of gastrointestinal complaints in diabetic patients plays a major role. It's rationale to adopt a step-wise approach using GCSI for screening before moving to more advanced diagnostic methods. Two major limitations we encountered were: (1) the unforeseen pandemic, limiting our accessibility, which stretched the data collection period, and (2) the inexistence of the Arabic version of GCSI; we addressed this by generating a validated Arabic version, using the Clinical Outcome Assessment (COA) guideline provided by Mapi Research Trust. This study results is the first step for further research needed to deepen the understanding of DGP in the Palestinian healthcare context.

**Research Keywords:** Diabetic Gastroparesis (DGP), diabetes mellitus type 2, Gastroparesis Cardinal Symptom Index (GCSI)

## Pharmacy and Dentistry

### **Halitosis Self-Perceptiveness, Knowledge, and Attitude among Al-Quds University Students**

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**Background:** Halitosis is a universal problem that interferes in everyday social life. Self-perception of this problem may vary according to age, the young are more sensitive toward this issue and more ready to treat it.

Halitosis can affect individuals by creating communication problems along with psychological and social effects that are proposed in everyday life interactions and it is a multifactorial origin that can be physiological or pathological with systemic causes (ENT infections, liver diseases, kidney disorders ..etc) or local causes (plaque, tongue coating, faulty restorations ..etc.) but mainly due to lack of oral hygiene.

A lack of knowledge and training regarding halitosis creates challenges for dentists to manage it, realizing the need to dedicate education about halitosis at both graduate and professional education levels. Moreover, the need for awareness regarding oral health practice helps reduce the issues arising in the oral cavity.

**Objectives:** This study aims to evaluate Oral hygiene, self-perceived halitosis, Halitosis knowledge, and attitude of students at Al-Quds University in Palestine.

**Methods:** A cross-sectional study using a self-administered questionnaire validated from previous studies and translated to Arabic will be distributed to medical, dental, pharmacy, and health professions students from Al-Quds University.

The questionnaire consists of forty-three questions divided into six sections that include eight questions on sociodemographic, six questions on self-awareness, eight on attitude, twelve on oral health practice, four on knowledge, and five on willingness to manage halitosis.

Google Forms, and Facebook Inc are going to be used to distribute the questionnaire to university students groups. The minimum sample size is 328 students.

**Results:** A total of 359 surveys were analyzed for this study with a response rate of 94.7%. The majority of our sample were Females (n= 274). The prevalence of self-reported halitosis in our study was 67.4% (n= 242). All specialties have shown a similar concern toward bad breath and how it affects them socially and personally (approximately 54%). When asked to do an on-spot breath exam 13.9% of students reported an unpleasant smell (n= 50). Sixty-four percent of students considered their oral hygiene practice as “good” and sixty-eight percent have evaluated their oral health as “fair” although 68% don’t use dental floss among their oral health routine. Out of 81.8% of students using chewing gum, 75.7% use it to freshen bad breath. The majority of our sample believe a dentist is qualified to treat malodor (n= 346, 96.4%), 40.7% would use good oral health procedures that include brushing and mouth rinsing along to visiting the dentist to manage halitosis; forty-eight students reported they have visited a dentist to seek treatment and 82% of our sample are willing to see a doctor to treat halitosis. Yet, 8.3% preferred to manage bad breath problems by wearing a face mask (n = 30). Students have shown good knowledge on some local and systemic causes of halitosis but 39% have questioned the caffeinated drinks and sinus infections to be a local cause. They also disagreed on the hepatic, renal, and obesity as a cause of halitosis (68%, 52%, 65% respectively). On willingness and readiness, there is a hesitance in informing others on their bad breath issues (n= 255, 71%) although only 38.9% feel the need to avoid others with this issue.

**Conclusion:** Although students are quite aware of halitosis, still more education on causes and management should be enhanced to alleviate their confidence in their relationships and daily life. Dentists play an important role in encouraging good oral health practice that includes flossing, tongue brushing, and mouth rinsing to impact the self-perceived problem. Furthermore, The understanding of the fact that halitosis can be considered as a natural process due to a daily routine but also a body indicator for many diseases will strengthen readiness of students to investigate and advise others for a better healthy life.

**Research Keywords:** Halitosis

## Treatment Autism Spectrum Disease by Cannabis

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**Background:** About 1-2 out of 160 people are affected by autism in the world, meaning that the percentage of people with autism in the world is 1%. In light of this huge number of people with autism every year, new ways are being tried to reduce the symptoms of this disease.

### **Objectives:**

- (1) There's evidence that cannabis may help patients with certain medical conditions and relieve their pain such as autism spectrum disease.
- (2) Awareness to autism's parents about the new medication.

**Methods:** Questionnaire was done and was answered by patients' assistance and patients' parents.

Address: East Jerusalem.

180-200 patient diagnosed by ASD.

Ages : 8-17 years.

society: Arab Society.

Duration : Jan 2022 – Apr 2022.

**Results:** First, most of the parents did not know about cannabis treatment which made us do some awareness to them, and they asked for some information about this plant. Also they believe that all of these medications which relate to the CNS system must be given under the care of a psychiatrist, on the other hand most of them didn't mind trying this, as for them it's just a plant. In general 70% of people had accepted this new medication if it was a treatment for some diseases, and 30% did not, usually because of traditional and religious thoughts. Only 60% of the parents agreed to try it in their own children, while 90% of the autism's parents think that this treatment will be better than other drugs.

**Conclusion:** Autism's patients are afraid to use this new medication because they do not have any information about this plant. They believe that if it's just a plant why we do not use it, also most of them do not want to use it because of religious thoughts. Finally, we hope that this new medication will help them a lot , and be beneficial to them.

**Research Keywords:** Cannabis, treatment, autism spectrum disease, patient, parents, society, survey.

## **Antipsychotic Medications: Adherence and Availability in East Jerusalem**

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**Background:** Schizophrenia is a severe illness affecting all life aspects of the patients including work, self-care and capacity to establish interpersonal relationships. It is known to affect about 1.0% of the population. Despite the fact that adherence to antipsychotic medications is the cornerstone in the treatment and prevention of relapse of the disease, non-adherence is a major problem among schizophrenia patients.

### **Objectives:**

- 1.To evaluate the antipsychotic medications in East Jerusalem.
- 2.To illustrate the most frequently prescribed antipsychotic medications based on pharmacists' experience and knowledge.

**Methods:** A cross sectional study was done among 146 pharmacists in east Jerusalem. Google form Questionnaires were distributed electronically (English language) during March 2022. Data were analyzed using google drive version, 2022.

**Results:** According to pharmacists, the most frequently prescribed antipsychotic drug is Quetiapine (33.2%), followed by Risperidone and olanzapine at a rate of (30.8%), (30%) respectively. Haloperidol was the least prescribed. The most annoying side effect from the pharmacists' point of view is extrapyramidal and tardive dyskinesia (37.2%) followed by weight gain (33.1%) and sexual dysfunction (20.7%)

Non-adherence to antipsychotic medications was attributed mainly to: annoying side effects (33.1%), and the percentage of patients with the feeling of embarrassment (19.3%) was really surprising.

**Conclusion:** The fact that Quetiapine is the most prescribed medication, could be attributed to its' low incidence of side effects as well as its' effect on improving positive thinking, behavior and preventing severe mood swings. Haloperidol, on the other hand, has the highest incidence of side effects, which avoids its prescription.

Annoying Side effects decrease patients 'adherence to antipsychotic medications as it negatively affects daily life activities ,in addition to the psychotic effect on patients beliefs that reduces their conviction of the necessity to take the medication.

**Research Keywords:** Schizophrenia, availability and adherence, pharmacist knowledge in East Jerusalem

## **Awareness, Attitudes and Usage of Botox and Dermal Fillers Among Al Quds University Students**

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**Background:** The world in all its aspects is constantly evolving and progressing, and so is the cosmetic world. Based on research, the use of Botox and filler injections is currently number one in the world for anti-aging cosmetic surgery. In Palestine, the use as well as the pros and cons of these cosmetics is still unveiled.

**Objectives:** 1. Exploring the awareness and knowledge of the students at Al-Quds University concerning the use of Botox and Filler injections.  
2. Assessing the safety of used cosmetic products in east Jerusalem and Bethlehem.

**Methods:** A random sample of participants (n= 250) constituting from both men and women, was selected among students in Al-Quds university. Paper based questionnaires were distributed during March, 2022. Another group (n=20) was selected from plastic surgery practitioners in east Jerusalem and Bethlehem.

**Results:** Most of the sample was composed of women (63%). 56% of the participants ignore the difference between Botox and fillers injections in general. Approximately, half of the participants have no idea about their active ingredients. About 70% don't support the idea of using Botox and fillers. A good percentage of participants (40%) recognize the cosmetic use only of Botox and dermal filler injections.

Among 20 practitioners, the results showed that only women headed towards Botox and filler injections aging between 20 and 39. Dentists constitute the majority of practitioners and the substances used were majorly Hyaluronic acid and partly, Calcium hydroxyapatite as dermal fillers.

**Conclusion:** Although the largest part of the student sample was from medical specialties, the results showed little awareness and knowledge about Botox and Fillers compared to their prevalence locally recently. Most of the practitioners are dentists, in part due to their deeper knowledge of facial anatomy. Used products are approved by the FDA. Hyaluronic acid was most commonly used due to its' preferred safety profile compared to other chemicals used in dermal filler injections.

**Research Keywords:** Botox, dermal filler, awareness and knowledge, Al-Quds University.



## **Drug-Resistant Epilepsy: Vagus Nerve Stimulator (VNS); New hope to predict and Control Seizures**

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**Background:** Epilepsy is a neurological disorder. Epileptic seizures can be controlled by medications. Drug-resistant epilepsy occurs when a patient has failed to become and stay seizure free with adequate trials of two medications. Vagus Nerve Stimulator (VNS) modern treatment option for drug resistance epilepsy.

**Objectives:** Epilepsy is a neurological disorder. Epileptic seizures can be controlled by medications. Drug-resistant epilepsy occurs when a patient has failed to become and stay seizure free with adequate trials of two medications. Vagus Nerve Stimulator (VNS) modern treatment option for drug resistance epilepsy.

**Methods:** A set of participants (n=100) completed the Google form-based questionnaires during February -March 2022. The sample composed of responsible pharmacists working in private and public sector in Bethlehem.

**Results:** According to the pharmacists, Carbamazepine is the most widely prescribed antiepileptic medication (86%) followed by valproic acid (77%) then gabapentin (72%). About 42% of the participants had prior knowledge of drug-resistant epilepsy, while a percentage of 35% knew various treatment methods for drug resistant epilepsy. About half of the sample, previously had knowledge of pharmacists about VNS device. As for the application VNS device in Palestinian hospitals, 59% of them supported it, 23% doubted its effectiveness, and only 18% refused to apply it.

**Conclusion:** Although drug-resistant epilepsy affects approximately 25% of patients, pharmacists' knowledge about it is quite insufficient. Moreover, there is a lack of knowledge about non-pharmacological suggestions like brain surgery, keto diets and devices for predicting seizures. More than half of the participants are aware of the device and largely support its, application in the Palestinian health sectors. It should be notices that providing the VNS device in the Palestinian hospitals is essential for a safe and risk free life for the patients.

**Research Keywords:** Drug resistant epilepsy, uncontrolled seizures, brain stimulation device, VNS, Pharmacists, Bethlehem.

## How Does Medication Affect Social Interaction and Academic Achievement in Patients of ADHD

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**Background:** ADHD is a well-known and widespread neuropsychological disorder that affects mainly school aged children. On the other hand, there is lack of studies concerning its prevalence in East Jerusalem.

### Objectives:

1. to illustrate the effect of methylphenidate on diagnosed children with ADHD (educational and social interaction).
2. To estimate the prevalence of ADHD in elementary schools in east Jerusalem.

**Methods:** Both electronic and paper-based questionnaires were distributed over 23 elementary schools (boys and girls) in east Jerusalem. The sample size was (n=100) and the inclusion criteria : diagnosis with ADHD And/or not taking methylphenidate. Questionnaires were completed by social workers and teachers of the schools. Questionnaires were distributed during February and march 2022.

**Results:** Most of the sample were girls (61%). As high as 80% take pharmacological treatment (methylphenidate and 20% are medications free. More than Half of the sample have good compliance (58.6%). The percentage of non-adherent pupils(41.4%).

75% of medicated children showed significant improvement in educational achievement, completing missions at school and enhancing in their attention, 64,3% of them had complete home missions. Concerning communication skills, 64% were able to interact with their peers and society and 57% were able to make new friendships.

**Conclusion:** Most of the children had significant improvements in both academic and social patterns of life.

Noticeable advances in Communication skills were also observed following medication administration.

However, annoying side effects including loss of appetite (44%) and abdominal colic (&%) affected compliance towards the prescribed methylphenidate. Moreover, some parents still feel uncomfortable with using methylphenidate " Ritalin "

**Research Keywords:** ADHD, East Jerusalem, Academic achievement, socializing, prevalence.

## Health & Health Professions

### **Effectiveness of Using Online Technology Training Program for Post-Stroke Patients Rehabilitation**

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**Background:** The high incidence of stroke makes it one of the most important causes of adult disability, it also causes sensory, motor, cognitive, and visual impairments and restricts performance of activities of daily living. In the field of post-stroke rehabilitation, an innovative online technology training program has been widely used in post-stroke rehabilitation, whose effectiveness and safety have been widely verified. To date, however, there are few studies evaluating the effect of immersive online technology training program on post-stroke rehabilitation. This study outlines the application efficacy of immersive online technology training program rehabilitation of stroke patients at home.

**Objectives:** The aim of this study was to perform a meta-analysis to evaluate the using online technology training program if it is effective for post-stroke patients Rehabilitation.

**Methods:** We were proposed to do literature review and meta-analysis through a collection of 13 studies about the using online technology training program if it is effective for post-stroke patients rehabilitation. In order to do so, we performed an electronic search in PubMed, Google scholar and Physiotherapy Evidence Database. No date range parameters were used. We included articles that used technological means to help stroke patients conduct rehabilitation at home, reported empirical studies that evaluated the technologies with patients in the home environment. The types of technology of reviewed articles included video games, Tele-rehabilitation, robotic devices, and virtual reality devices. We present the merits and limitations of each type of technology.

**Results:** The search yielded more than 40 potentially relevant studies, leading to 13 studies that were included for in-depth analysis. The types of technology of reviewed studies included Tele-rehabilitation, robotic devices, and virtual reality devices. To summarize the main results of

the selected publications, the outcomes to be evaluated will be motor functionality of the extremities performance for activities of daily living and quality of life, through measurement scales. Previous studies on stroke rehabilitation systems indicated that technological interventions can improve patients' motor function, increase their motivation, and provide a great solution for home-based therapy.

**Conclusions:** This literature review will provide evidence regarding the efficacy of multiple technological interventions are effective and feasible in the recovery of functionality after stroke, for the use of robotics, VR, brain stimulation, and Telerehabilitation continues to grow and has great potential in helping people make a better recovery from stroke, so that Patients can be used the technologies at their homes or at a local healthcare facility.

**Research Keywords:** Post-stroke, virtual reality, tele-rehabilitation ,technology, robotic, home-based

## **Assessment of Breast Cancer Diagnosis Process at Gaza Strip**

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*Medical Laboratory Sciences Department, Faculty Of Medical Science, Israa University, Gaza, Palestine.*

**Background:** Breast cancer is the most frequent cancer in women worldwide, with an estimated one million new cases diagnosed each year and it is considered as the largest cancer-related cause of death among women worldwide.

**Aim of the study:** To assess breast cancer diagnosis process at Gaza strip.

**Methodology:** The study is designed as a descriptive, retrospective study. The study population is women diagnosed with breast cancer from May to October 2021. The sample size was 100 patients enrolled in the oncology department at Al Rantissi, Alshifa and Gaza European hospitals. A questionnaire was designed to fulfill the objectives of the study and the researcher filled the questionnaire through patients face to face interview and patients' records.

**Results:** The study showed that, Malignant findings were found throughout mammography, Ultrasound, biopsy and Magnetic Resonance Imaging (MRI), sensitivity test revealed 80%, 89%, 96% and 100% respectively. The most common signs and symptoms include 91% of breast mass, 59% mass under axilla, 24% with different breast size, and 11% pain. The study also showing a significant agreement between mammography, U/S, biopsy and MRI; and no significant relationship between participants' delay and demographic characteristics.

**Conclusion:** The study shows the role of MRI and biopsy findings in diagnosing breast cancer which serve as a cornerstone for improving breast cancer diagnosis process. Mammography, U/S and biopsy have a significant role in diagnosing breast cancer and the most sensitive method is MRI with limited role of medical laboratory tests. Mammography and U/S should be conducted together in order to confirm the results.

**Research Keywords:** Breast Cancer, Mammography, Ultrasound, Biopsy, Malignant, MRI, Gaza, Palestine.

## **Correlations Between Degree Of Myopia, Axial Length, Anterior Chamber Depth, Central Corneal Thickness, Corneal Diameter And Corneal Power**

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**Background:** Myopia is a serious public health problem which appears due to inconsistent contributions of ocular components which includes (corneal power, anterior chamber depth, lens power, and axial length) to overall eye structures. Refractive components of the anterior segment of myopic eyes were unable to recover exaggerated development of the posterior segment during the emmetropization process. Therefore, parallel rays of light are brought to focus in front of the retina. It is also commonly known as nearsightedness. There are three types of myopia, mild, moderate, and severe. Myopia is a widespread type of refractive errors across the globe.

Previous studies have found that prevalence of myopia in Saudi Arabia 46.7%, Indonesia 48%, Iran 27.2%, Japan 41.8%, Pakistan 36.5%, and Spain 25.4%. It is responsible for around 75% of the refractive error-related complications. Axial length (AL) acts as an essential indicator of refractive state of the eye. It may be defined as the distance between the anterior and posterior poles of the eyeball and this is expressed in millimeter. Chang et al. found a significant association between the degree of myopia and the AL. Some previous reports revealed that the anterior chamber (AC) is a space filled with aqueous humor (AH). The changes in the AC depends upon the degree of myopia, as it gets deeper. Previous study has demonstrated that the central corneal thickness is a vital indicator of cornea status. It has been found that the myopic eyes have low central corneal thickness (CCT), increase corneal power (CP), and large corneal diameter (CD).

It is critical for practitioners to know about changes in ocular parameters in myopic patients so that may assist in advising and managing their patients more suitably. The current study is the first to look at the association between the degree of myopia and ocular parameters including CCT, AL, ACD, CD, and CP in Gaza Strip, Palestine. To measure the ocular parameters of myopic patients, we carried out a cross sectional study using A-Scan/Pachymeter, Corneal Topography, and Auto kerato-Refractometer. The results of the present study may be valuable for diagnostic and therapeutic purposes.

### **Objectives:**

To investigate the correlation between the degree of myopia and a panel of variables which include axial length, depth of the anterior chamber, central corneal thickness, corneal power and corneal diameter.

To determine the correlation between the axial length and the anterior chamber depth.

To evaluate the correlation between the corneal power and central corneal thickness.

**Methods:** A cross-sectional study (prospective analysis) was conducted using a convenience sampling method based on the examination of female myopic patients at the Optometry Department, Faculty of Health Sciences, Islamic University – Gaza (IUG), Palestine. The study protocol has been approved by the Optometry Department. A total of 70 adult participants were examined from February to April 2018. The appropriate sample size was determined using the PS Software in accordance with a previous study. The right eye was tested in the present study. Students were classified into three groups according to their degree of myopia (Low myopia between - 0.50 to -3.00 Ds), (Moderate myopia between -3.25 and -6.00 Ds), and (High myopia > -6.00 Ds). All clinical examinations were done by 4<sup>th</sup> year optometry students under the supervision of a master certified optometrist, who was responsible for verifying the examinations.

**Results:** Overall, 70 female myopic patients were assessed aged between 18 and 25 years in the Optometry Clinic Islamic University-Gaza (IUG), Palestine. The mean  $\pm$  standard deviation of axial length (AL), anterior chamber depth (ACD), central corneal thickness (CCT), corneal power (CP), and corneal diameter (CD) were  $24.01 \pm 0.81$  mm,  $3.62 \pm 0.25$  mm,  $545.1 \pm 36.3$   $\mu$ m,  $44.09 \pm 1.64$  D, and  $12.03 \pm 0.33$  mm respectively.

A total of 49 (70%) patients assessed a mild myopia; 18 (25.7%) patients were evaluated a moderate myopia; and three patients (4.3%) were reported as having a severe myopia.

In eyes with higher axial length, the anterior chamber depth was higher ( $r=0.27$ ,  $p=0.02$ ). However, no significant correlation was found between central corneal thickness and corneal power ( $r=-0.21$ ,  $p=0.07$ ).

**Conclusion:** It can be concluded that the degree of myopia was significantly correlated with AL. The more myopic refractive error, the greater in axial length. The AL also correlated with anterior chamber depth. On the contrary, there was a non-significant correlation between the CCT and CP. Furthermore, the degree of myopia was not correlated with anterior chamber depth, central corneal thickness, corneal power and corneal diameter.

**Research Keywords:** Degree of myopia, refractive error; axial length; anterior chamber depth, central corneal thickness; and corneal diameter.



## **The Correlation between Physical Activity (or Being Physically Active) and Pain, Activities of Daily Living, and Participation among Postpartum Women Who Underwent Cesarean Delivery**

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**Background:** During Post C-Section, postpartum women's experience a decline in the physical activity (PA) level due to insufficient pain control or excessive sedation, Pre and postpartum complications can be increased in the physically inactive women that may interfere with their daily activities and participation and with their quality of life. Thus, efficient strategies to increase or maintain PA level in the pre and postpartum period are warranted.

**Objectives:** This study aims to investigate the correlation between PA and Pain, ADL's and participation among postpartum women who underwent C-Section

**Research Design:** This study is a quantitative, non-experimental, descriptive, cross-sectional survey in design.

**Participants:** non-random purposive sample size of 160 participants were reached, 111 participants meet the inclusion criteria (aged between 18-40 years old and underwent C-Section delivery during the first year of postpartum) and 49 participant were excluded either because they refused to participate or because they meet the exclusion criteria (Postpartum women with vaginal delivery, less than 18 years and above 40 years, had a previous pelvic floor or abdominal surgery, Women who experienced complications after C-Section including; Blood clot, Post-surgery infection and Fatal abnormalities. in addition to ,Women who took Epidural anesthesia during delivery, had Multiple births (twins), and Women with illnesses that may cause fatigue such as cancer and heart problems).

**Setting:** the questionnaires were distributed to the participants with the help of UNRWA clinic in Bethlehem city, and via social media (Facebook).

**Data Collection:** a detailed cover letter, an informed consent form, and online self-administered questionnaire forms were published on different social media groups and distributed in-person or over-the-phone. Questionnaires have been published in early April 2021, and responses have been stopped after three weeks

Data analysis: using the SPSS software, this study used descriptive and inferential statistics that are simpler to perform on a large sample population and helped analyze and describe the data in a meaningful way.

**Results:** the findings of this study showed that PA can affect pain, ADL's and participation; postpartum women who practice vigorous PA tend to have no difficulties in taking care of others (89.5%) and mild pain (58.3%). Besides, postpartum women who practice vigorous PA or transferring PA had no difficulty with sleeping (83%) (52.5%) respectively whereas they tend to have no interaction with sexual relationships (84.2%) (55.6%) respectively. In addition to this, postpartum women who practice vigorous or moderate PA had higher interaction with social activities (75%) (50.7%) respectively.

**Conclusion:** this study showed that pain, ADL's impairment and the decrease in women's participation are an aftereffect for C-Section that needs to be self-treated, by applying PA to ease pain, improve ADL and participation which might increase the wellbeing of postpartum women following C-Section

**Research Keywords:** Cesarean section, C-section, postpartum, physical activity, PA, Activities of daily living, ADL's, pain, participation.

## Vitamin B12 Status among Chronic Kidney Disease Patients in Gaza Strip

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**Background:** In the world, chronic kidney disease (CKD) is a rising health burden, with an estimated 20 million people affected. CKD is characterized as either a prolonged decrease in kidney function with a rate of glomerular filtration below 60 ml/min/1.73 mt<sup>2</sup> or evidence of damage to the kidneys. The key factor contributing to chronic renal failure (CRF) anemia is the lack of erythropoietin, iron deficiency and reduced red cell lifespan. Nutritional deficiency, vegetarian diet, or deranged vitamin metabolism are another possibility in uremic patients.

### **Objectives:**

- 1.To assess the status of vitamin B12 level among chronic kidney disease and renal failure patients in Gaza Strip.
2. To measure the prevalence of vitamin B12 deficiency in hemodialysis patients.
3. To assess the correlation between the status of vitamin B12 and other biochemical tests.

**Methods:** It is a hospital based descriptive study conducted at Al-Shifa Hospital-Gaza and Al-Aaqsa hospital, 70 CKD patients suffering from renal failure treated in hemodialysis nephrology unit were included. Questionnaire interview was applied which included questions about: Family history, age, body mass index (BMI), Vitamin B12, urea, creatinine and uric acid level, complete blood count (CBC), red blood cells (RBC), calcium and phosphorus results were recorded. Data were analyzed using SATA statistics program.

**Results:** The mean of cases age was  $47.57 \pm 15.870$  years; more than half of them were female. The study revealed that most of them have a complain of hypertension; all of them were complain of Vitamin B12 deficiency between low 35.71% and borderline 64.29% limits before using supplements. However, two third of them were using vitamin B12 supplements and nearly 80% of them improved to normal vitamin B12 results after using supplements for three months. Also, almost most of them had normal white blood cells (WBCs) count but 84.29%were anemic had hemoglobin less than 10 mg/dl. In addition, nearly 32% are diabetic with high blood sugar.

However, more than two third of them had elevated urea ( $>100$ ) and creatinin levels ( $>5$ ), and the total calcium was low ( $<8.2$ ) among 65.71% of them.

The study revealed a significant relationships between vitamin B12 level and daily nutritional habits ( $P=0.015$ ), and duration of being on dialysis ( $P<0.000$ ).The vitamin B12 mean difference before and after use of supplement; and revealed a significant difference ( $P<0.0001$ ) between Vitamin B12 at baseline and Vitamin B12 post using supplement, which could be associated to the effect of using supplements.

**Conclusion:** Serum vitamin B12 level monitoring should be required regularly in CKD patients, and vitamin B12 deficiency should be expected by nephrologists in CKD patients.

**Research Keywords:** Chronic kidney disease, Vitamin B12, Gaza strip, Glomerular Filtration Rate.

## Neuroscience

### **Cytokine Profiles Could a Priori Predict Response to SSRIs in Medication-Naïve Patients with Major Depressive Disorder**

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**Background:** Major depressive disorder (MDD) is one of the most prevalent psychiatric disorders in Palestine. It manifests as symptoms of depressed mood and loss of interest in daily life activities. The “Cytokine Hypothesis of Depression” argues that MDD results from an imbalance between pro- and anti-inflammatory cytokines. Only 30% of patients with MDD respond to treatment with SSRI antidepressants.

**Objectives:** In this study, we investigate pro- and inflammatory cytokines as potential a priori predictors of response to SSRIs in patients with MDD.

**Methods:** We recruited eight medication-naïve patients with MDD and eight matched healthy controls. Patients with MDD were tested twice, at diagnosis, and 4-6 weeks after receiving SSRIs. After treatment, patients with MDD were classified into responders (N=5) and non-responders (N=3). Healthy subjects were also tested twice with a 4–6-week gap. We collected peripheral blood samples from all participants both at test and retest. Using ELISA, plasma was assessed for IL-2, IL-6, IL-10, IFN- $\gamma$ , and MIF levels.

**Results:** Compared to non-responders, responders showed higher medication-naïve levels of pro-inflammatory IFN- $\gamma$ , MIF, and IL-2 and anti-inflammatory IL-10. However, the medication-naïve concentration of IL-6 was lower in responders compared to non-responders. After 4-6 weeks of receiving SSRIs, MIF levels were decreased in responders but not in non responders; IL-6 decreased in both groups; IFN- $\gamma$  and IL-2 levels did not change in either of the groups. Cytokine levels in healthy controls did not show differences between test and retest. ROC

analysis of the medication-naïve cytokine levels revealed that IFN- $\gamma$  and IL-2 could identify responders, while IL-6 has better specificity for non-responders.

**Conclusion:** Our preliminary results indicate a clear difference in pathophysiology of SSRI-responsive and non-responsive MDD in the form of medication-naïve cytokine profiles. Potentially, cytokine diagnostic kits could be designed to evaluate patients with MDD before treatment to assess their potential for response.

**Research Keywords:** Cytokines, major depressive disorder, selective serotonin reuptake inhibitors, medication-naïve patients, ELISA

## **Cognitive Variability Across the Menstrual Cycle: High Estrogen Enhances Learning and Bias Toward Negative Feedback in Healthy Women**

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**Background:** During menstrual cycle, approximately 80% of all women of reproductive age experience physical and psychological changes. Cognitive alterations are among the most common complaints, with women reporting changes in attention and concentration, visuospatial and motor skills, working, verbal and visual memory. Although studies argue in favor of cognitive fluctuation across the different phases of menstrual cycle among healthy women, this has not been experimentally assessed

**Objectives:** In this study, we investigate within-subject changes in reinforcement learning from positive and negative feedback across the follicular (low estrogen, low progesterone), ovulatory (high estrogen, low progesterone), and luteal (high estrogen, high progesterone) phases of menstrual cycle.

**Methods:** We recruited and tested twelve healthy women three times during each one of their menstrual phases (with counterbalancing). We evaluated reproductive hormonal levels at each testing session using plasma and saliva samples to confirm the menstrual phase. At each testing session, participants completed a reinforcement learning task that dissociates positive and negative feedback.

**Results:** Learning from negative feedback was significantly high during both the ovulatory and mid-luteal phases compared to the follicular phase. There was a significant reduction of learning from positive feedback during the ovulatory phase, followed by the mod-luteal phase. There was no significant difference between learning from positive or negative feedback in both the early-follicular phase.

**Conclusion:** Our preliminary results argue that hormonal changes seen in the menstrual cycle have significant cognitive consequences, especially for learning and bias toward negative feedback under high estrogen levels. Future studies will focus on linking hormonal and cognitive variability with pre-menstrual symptoms.

**Research Keywords:** Menstrual cycle, reinforcement learning, estrogen, progesterone, within-subject variability, learning bias



## Using Dimensionality Reduction to Decode the Cognitive Correlates of Psychological Trauma in Patients with Post-Traumatic Stress Disorder

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**Background:** Exposure to psychological trauma usually marks monumental changes in an individual's clinical features, cognitive function, and underlying neural circuitry. A fraction of exposed individuals will develop subsequent post-traumatic stress disorder (PTSD). To date, there is no clear understanding of the cognitive consequences of exposure to psychological trauma, especially that which is related to PTSD. This could be attributed to the use of generic constructs to describe clinical features and cognitive function.

**Objectives:** In this study, we aimed to distinguish the cognitive effects of psychological trauma in healthy subjects and patients with PTSD. We also evaluated a trauma-unexposed healthy group.

**Methods:** All subjects completed a well-validated cognitive paradigm that dissociates associative learning, retention of learning, and generalization of the learned rules. Using feature extraction and data structuring, we created a novel system for scoring cognitive performance and PTSD, depression, and anxiety clinical features. Based on their performance, each subject obtained a three-dimensional score composed of efficiency throughputs for associative learning, retention, and generalization.

**Results:** Patients with PTSD were significantly different than both trauma-exposed and trauma-unexposed healthy subjects in their associative learning efficiency throughput. Examination of PTSD, depression, and anxiety scores revealed a significant correlation between re-experiencing and associative learning efficiency throughput only in trauma-exposed healthy subjects. In patients with PTSD, only anxiety scores correlated with retention efficiency throughput.

**Conclusion:** These results suggest that the cognitive deficit in PTSD is driven by a failure to form associations. This could be initiated upon exposure to trauma as evident in the trauma-exposed healthy subjects. Beyond that, the cognitive correlates of PTSD could be an outcome of anxiety rather than the trauma. Our findings highlight the cognitive underpinnings of PTSD while controlling for the effects of trauma. This could guide the development of data-driven criteria for assessing the risk for developing PTSD after exposure to psychological trauma.

**Research Keywords:** Learning and generalization, psychological trauma, post-traumatic stress disorder, feature engineering, dimensionality reduction

## **Alpha and Theta Band Power Alterations on EEG are Linked to Psychological, but not Somatic, Symptom Severity in Patients with Major Depressive Disorder**

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**Background:** Major depressive disorder (MDD) is a serious psychiatric disorder characterized by low mood, loss of pleasure, and other psychological and somatic symptoms. Previous studies show that MDD is associated with changes in alpha and theta oscillations measured by electroencephalography (EEG). Yet, most studies did not differentiate between subsets of MDD symptoms and their relationship to different brain oscillations.

**Objectives:** To address this question, we grouped MDD symptoms into two main subsets: somatic (e.g., sleep disturbance and fatigue) and psychological symptoms (e.g., low mood and anhedonia).

**Methods:** We correlated psychological and somatic MDD symptoms to the power of the alpha and theta oscillations measured by EEG from six patients with MDD and 34 healthy individuals using 23-channel VirgoEEG amplifier. We computed a fast Fourier transform of the cleaned EEG timeseries to output the power spectrum density (PSD) of various oscillation bands and confined subsequent analysis to the alpha and theta bands.

**Results:** Our results indicate that there is strong positive correlation ( $r > 0.5$ ) between psychological symptoms with both alpha and theta band power in the MDD group (approaching significance). There were no strong or significant correlations between alpha or theta band power and the MDD symptom subsets in the healthy group.

**Conclusion:** Our findings shed an important light on brain oscillations affected by MDD symptom type and severity. Future studies will focus on the diagnostic utility of EEG alpha and theta rhythms in MDD.

**Research Keywords:** Electroencephalography (EEG), alpha oscillation, theta oscillation, major depressive disorder, somatic symptoms, psychological symptoms

## **Reinforcement Learning Predicts Response to SSRIs in Medication-Naïve Patients with Major Depressive Disorder**

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**Background:** Patients with major depressive disorder (MDD) exhibit hyposensitivity to positive reinforcement and hypersensitivity to negative reinforcement. In patients who respond to treatment, selective serotonin reuptake inhibitor (SSRI) antidepressants arguably modulate MDD symptoms by attenuating learning from negative reinforcement. However, only 30% of patients with MDD respond to antidepressants including SSRI. Cognitive differences between responders and non-responders were heretofore not investigated medication-naïve patients with MDD.

**Objectives:** We investigated cognitive predictors of response to SSRIs in medication-naïve patients with MDD.

**Methods:** Using a probabilistic category-learning task that dissociates learning from positive and negative feedback, we evaluated medication-naïve patients with MDD and healthy subjects. Response to SSRIs was assessed after 4-6 weeks of SSRI administration for MDD. We investigated differences between responders (54%) and non-responders (46%) to SSRIs in processing positive and negative feedback at the medication-naïve state.

**Results:** Both medication-naïve responders and non-responders exhibited impaired learning from positive reinforcement compared to healthy subjects. Medication-naïve non-responders were significantly more impaired in learning from negative reinforcement than medication-naïve responders and healthy subjects. Machine learning classifiers accomplished 80% accuracy in distinguishing MDD responders and non-responders before starting their SSRI regimen.

**Conclusion:** Our results can have immediate clinical relevance for a priori classification of responders and non-responders to SSRI treatment among MDD patients.

**Research Keywords:** Major depressive disorder, reinforcement learning, selective serotonin reuptake inhibitors (SSRIs), prediction of treatment response, machine learning.

## The Interplay of the CRY1 and PER2 Genes in the Modulation of Chronotype

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**Background:** Prior studies investigated the role of the negative feedback loop within the suprachiasmatic nucleus on modulating the circadian rhythm. The regulation of the circadian rhythm is modulated by the synchronization of the endogenous system with the environmental cues including light and temperature. Variations in clock genes between individuals can produce different chronotypes (morningness and eveningness). The cryptochrome gene (CRY1) and period gene (PER2) genes have an inhibitory effect on the negative feedback loop. The c.1657+3A>C CRY1 polymorphism causes a gain of function mutation leading to the lengthening of the chronotype (late chronotype). Meanwhile, PER2 polymorphism (G3853A) has been associated with diurnal performances and the early chronotype.

**Objectives:** In this study, we investigated the interplay between the two clock genes; CRY1, and PER2 on the modulation of chronotypes.

**Methods:** We evaluated a sample of 77 healthy undergraduate participants using the Munich chronotype questionnaire (MCTQ) and the Beck depression inventory II (BDI-II). All participants were genotyped for c.1657+3A>C CRY1 polymorphism and G3853A PER2 polymorphism.

**Results:** Our results show a significantly increased effect of the CRY1 polymorphism on corrected midpoint sleep in free days with C-carriers showing a later chronotype. Furthermore, there was a significant effect of PER2 on corrected midpoint sleep in free days where G-homozygotes exhibited later chronotype than A-carriers. Interestingly, there was no significant effect of genotypes on depression severity, nor a significant correlation between chronotype and depression scores in healthy participants.

**Conclusion:** This study provides a preliminary understanding of the separate effect of PER2 and CRY1 naturally-occurring genetic variations on chronotype and the severity of depression symptoms in healthy individuals.

**Research Keywords:** Circadian rhythm, the period 2 gene (PER2), the cryptochrome 1 gene (CRY1), the Munich chronotype questionnaire (MCTQ), the Beck depression inventory II (BDI-II), depression symptoms, chronotypes.

## **Symptom Variability in Medication-Naïve Patients with Major Depressive Disorder as a Proxy to Predict Response to Treatment**

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**Background:** Major Depressive Disorder (MDD) is characterized by episodes of low mood and loss of interest for two or more consecutive weeks. It is considered to be the leading cause of morbidity and mortality worldwide. Only 30% of patients with MDD achieve full remission after treatment with antidepressants, psychotherapy or neuromodulation. It is unknown whether response to treatment depends on the baseline expression of MDD symptoms among patients.

**Objectives:** In this study, we examined whether MDD symptom expression at diagnosis can predict response to selective serotonin reuptake inhibitors (SSRIs) in medication-naïve patients

**Methods:** We evaluated 34 medication-naïve patients with MDD upon diagnosis and 4-6 weeks after receiving treatment with SSRIs. Similarly, we tested 12 matched healthy controls twice with a 4-6-week gap (no SSRI treatment). We established the MDD diagnosis based on the structured results of the mini-international neuropsychiatric interview (MINI). All subjects were administered the Beck depression inventory II (BDI-II), a 21-question survey that evaluates the severity and type of MDD symptoms. We assessed response to treatment based on the MINI and BDI-II results. We categorized MDD symptoms into two classes: somatic reflecting physical symptoms and non-somatic highlighting to psychic symptoms.

**Results:** At diagnosis (baseline), the severity of somatic, but not non-somatic, MDD symptoms was significantly lower in future responders (before treatment). After treatment with SSRIs, non-somatic symptoms were significantly remediated more than somatic symptoms. Non-responders exhibited the opposite pattern, with reduction in somatic symptoms. Machine learning classifiers using baseline MDD symptoms distinguished future responders and non-responders with 97% accuracy.

**Conclusion:** Our initial findings suggest that responders and non-responders express different MDD symptoms before and after treatment. This can be utilized to predict future response to SSRIs and lead to patient-centric treatment protocols for MDD.

**Research Keywords:** Major depressive disorder, selective serotonin reuptake inhibitor, treatment response prediction, somatic symptoms, non-somatic symptoms, machine learnin



## Quantifiable Structured Clinical Diagnosis for Psychiatry: An Integration of Machine Learning and Cloud Computing Approaches to Achieve Scalability

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**Background:** Current diagnostic systems for psychiatric disorders suffer many limitations that hinder their applicability. The diagnosis of psychiatric disorders is exclusively conducted by clinicians using lengthy interviews that lack sensitivity and specificity. According to recent clinical trials, only a fraction of patients with psychiatric disorders respond to initial treatment with psychometric medications or psychotherapy. Unfortunately, clinicians cannot predict, a priori, who will or will not respond to treatment. If, however, a simple computer-based system utilizing multidimensional symptom expression could diagnose patients with psychiatric disorders and differentiate those who are, or are not, likely to respond to treatment, this would provide immediate clinical relevance.

**Objectives:** We are building a brief (~20 minutes) online structured clinical interview which will assess the severity, frequency, and morbidity of mental health symptoms and swiftly reproduce the diagnostic outputs according to the DSM/ICD.

**Methods:** We utilize the basic structure mini-international neuropsychiatric interview (MINI) as the reference for the online system. Based on data collected from hundreds of participants at the Palestinian Neuroscience Initiative, using machine learning, we managed to significantly reduce the number of screening questions necessary to complete the MINI profile.

**Results:** We created a cloud-based capacity to present questions of clinical interviews with different dependencies. Questions have a label (for searching), tags (for searching), a status, and answer groups. Answer Groups allow composite responses to the question via radio buttons and/or sliders. Answer Groups can have internal dependencies to the same question or external dependencies to other questions. Researchers and administrators can create modules from a group of questions. Modules have a label and tags for searching and a status for visibility rules.



**Conclusion:** Our system represents a significant step toward digitizing basic mental health services in Palestine to reduce stigma and increase access.

**Research Keywords:** Psychiatry diagnostics, DSM, ICD, the mini-international neuropsychiatric interview, machine learning, cloud-computing, databasing.

## Environment

### **Electrical Conductivity of Dead Sea Water**

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**Background:** The Dead Sea is a landlocked hypersaline lake located in the deepest part of the Dead Sea Jordan Rift Valley. Its huge benefits come from the high salinity rate, which also affects the electrical properties (especially the electrical conductivity) of its water.

**Objectives:** In this research we are concerned about the electrical conductivity of the Dead Sea Water at frequency range (200 MHz - 9 GHz) and how it differs from the values for the Distilled Water.

**Methods:** Vector Network Analyzer (VNA).

**Results:** For Dead Sea water, the significant increase in conductivity occurs at frequencies less than 2 GHz and then completes the increase slightly. On the other hand, the conductivity increases linearly in the whole frequency range for Distilled water. For both (Dead Sea water and Distilled water) reach close values of conductivity as the frequency increases.

**Conclusions:** The conductivity of Dead Sea water is much larger than the conductivity of distilled water over the frequency range (200 MHz - 9GHz ) This is expected by the fact of the direct proportionality between the number of free ions, which is large in the high salinity medium and the electrical conductivity of that medium. So Dead Sea water can be used efficiently in low-frequency applications that need a high dielectric conductive medium.

**Research Keywords:** Conductivity, Salinity, Dead Sea, Vector Network Analyzer(VNA).

## **Farmer Workers and Pesticide: Knowledge, Impact on Health, and Precautionary Measures. A Descriptive Study From Gaza**

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**Background:** Pesticides are used in agriculture in an unsafe and indiscriminate manner, posing a serious threat to the environment and human health. The aim of this study was to assess knowledge, attitude, impact on health, and precautionary measures toward pesticides among a sample of farmworkers in Gaza.

### **Objectives:**

- 1.To describe knowledge, associated Occupational Pesticides by a focus on farmers
- 2.To describe practice associated Occupational Pesticides by age, and gender.
- 3.To describe impact on health associated Occupational Pesticides by exposure details, pesticide applicators and rural workers, agricultural pesticides, and age ranges.

**Methods:** This is a cross-sectional descriptive study The target population was agricultural farm workers in the Gaza Strip working in open or closed fields, or both, and applying pesticides during the summer of 2021.The sample size of 250 farm workers. The questionnaire consisted of five main sections: socio-demographics, effect of pesticides on human health, other alternatives to pesticides, and attitudes regarding the use of pesticides and protective equipment or clothes during preparation, application of pesticides, finally activity and Physical Information.

**Results:** Only one farmer out of all was diagnosed with cancer, only 22(8.80) had a chronic disease. Most farmers have a vision problem 159 (63.60%) and have been using glasses or contact lenses to correct farsightedness from an early age 235 (94%). Comparing the use of pesticides ten years ago until the present time, we find that there is an increase in the use of pesticides and also an increase in the use of preventive Tools.

**Conclusion:** Findings from this preliminary study showed that farmworkers were aware of possible problems associated with exposure to pesticides because they deal carefully with their contaminated clothes and also a ware of spillage or leakage of pesticides. Yet some of them did not employ safe practices in their application of pesticides.

**Research Keywords:** Farmer workers, Pesticides, Descriptive Study, and Gaza strip.

## Law

### الدفاع الشرعي

أحمد يحيى السميني، صالح سعيد الزهر، الدكتورة سونيا ملاك.  
قسم المهارات القانونية، كلية القانون، جامعة قطر، قطر.

**الخلفية:** فكرة الدفاع الشرعي إنما جاءت من فطرة فطر الإنسان عليها، وهي حب البقاء، ودفع الخطر الذي يهدد نفسه سواء أن كان ذلك على المال أو على النفس، فيقوم بردة فعل لوقف ذلك الخطر المتوقعة أو الذي حدث فعلا من أجل المحافظة على نفسه، أو ماله، أو غيره، أو ماله من الهلاك، فقد يستبسل في سبيل ذلك بكل ما يملك من جهده البدني أو استعمال أجهزة أخرى لحماية نفسه وغيره، وأن كان الأصل في سلوك الاعتداء أنه مجرم إلا أنه في حالة الدفاع الشرعي يعتبر من أسباب الإباحة التي تنفي هذا تجريم، وتجعله فعلا مباحا ومشروعا.

وأن كان لا بد لنا أن نوضح بعض المصطلحات الواردة في نص المادة 49.51 من قانون العقوبات ومنها:

الدفاع الشرعي: وهو حق دفع اعتداء حال وغير مشروع، المقصود بالخطر: كل فعلا يهدد سلامة وصحة الشخص، أو ماله، أو صحة غيره أو ماله، والمقصود بالسلطة العامة التي يلجأ إليها في حالة الخطر: هي الأجهزة الأمنية كالشرطة التي تكون المنوطة بحماية الأفراد من أي اعتداء عليهم، أما المقصود بالوقت المناسب الذي قد يطول أو ينقص حسب الأحوال: فهو الوقت الكافي الذي يسمح لشخص المعتدى عليه أن ينجو من الخطر الموجه عليه أو على غيره أو ماله أو مال غيره.

**الأهداف الرئيسية من البحث:** يكمن الهدف من هذا البحث لمعرفة ما مدى نجاعة الشروط التي وضعها المشرع القطري لتحديد حالة الدفاع الشرعي المتعلقة بالخطر نفسه بالإضافة إلى الشروط المتعلقة بالشخص المدافع، ومعرفة الآثار المترتبة على استخدام الشخص لحالة الدفاع الشرعي في حالتها البسيطة وكذلك الأمر بالنسبة لاستخدام حالة الدفاع الشرعي مع التجاوز بحسن النية، ذلك أن مثل هذه المواضيع كثيرة الوقوع في الحياة الواقعية بين أفراد المجتمع وخاصة فئة الشباب الذين كثيراً ما ينساقون بالخلافات إلى التعدي ونشوب الشجار بينهم، وبطبيعة الحال قد يكون أحدهما معتدي مسؤولاً عن الاعتداء والآخر مدافع (دفاع شرعي) ولا يكون مسؤولاً عن اعتدائه.

**الأسلوب المتبع:** النهج التحليلي والمقارنة.

**النتائج:** شمول حالة الغير والدفاع عنه محسوبة لصالح المشرع القطري فضلا عن نظيره المصري والذي يعد (المصري) مصدرا لمختلف التشريعات الأخرى.

**الخاتمة:** مع بروز أهمية الدفاع الشرعي في الواقع العملي، والتي تثير العديد من الإشكاليات عادة، فإن التحليل الصحيح لمقصد المشرع، يعين على تطبيق القانون بالشكل المطلوب، باستعمال المنهج التحليلي فإن ذلك يثري النص ويدعمه بأراء الفقه؛ والذي بدوره يعين على سهولة الفصل بالمنازعات، وقد أحسن المشرع القطري بوضع شروط وضوابط تحكم حالة الدفاع الشرعي وخلافاً لنظيره المصري وفي هذا ضمانا لحسن تطبيق العدالة وانصاف كلا الطرفين.  
**الكلمات الرئيسية للبحث:** حق الدفاع، الدفاع الشرعي، حماية حسن النية، المدافع، رد الاعتداء.

## Schools

### **Covid-19 Vaccine Hesitancy among Palestinians**

*Lama Diriyeh<sup>1</sup>, Yazan Hussien<sup>1</sup>, Reem Ladadwa<sup>2</sup>.*

<sup>1</sup> *American School of Palestine, Palestine.*

<sup>2</sup> *Al-Nayzak Organization, Horizons Academy, Palestine.*

**Background:** In the context of COVID-19 global pandemic, vaccines are one of the effective measures to control the effects of the virus. Vaccine Hesitancy is one of the underlying issues facing vaccinations and refers to “a delay in acceptance or refusal of vaccines despite availability.” It can stem from many factors such as marginalization and social exclusion, negative experiences at health services, or misinformation about vaccines circulated on unregulated social media platforms. This issue is complex and depends on economic and socio-cultural factors and shapes our health and clinical situation and should thus be further studied and examined.

**Objectives:** The purpose of this study is to assist SARS-CoV-2 vaccine hesitancy in the Palestinian community and explore its demographic and socio-cultural associations.

**Methods:** Data was collected using an online survey in both English and Arabic, and distributed online among schools students and parents. Descriptive analysis and linear regression were utilized to analyze the collected data.

**Results:** 350 questionnaires were collected (69% were over 18 years old). In this category, most were between 30-49 years old and identified as middle class with an average monthly income of 4001-12000 NIS. 85% described their residence as urban, while 13% as rural. 67% had at least a Bachelor’s degree, and 28% had a Master’s degree.

The entire sample believed in the existence of Covid-19 virus, and were vaccinated. However, only 65% supported taking the vaccine, whereas 15% did not, and 20% had a neutral opinion. Of the reasons cited for not agreeing with the vaccination policy, 60% said that the vaccines haven’t been studied enough; and 52% said that vaccines may have side effects that haven’t been announced yet; 46% said that vaccinated individuals may get infected after taking the vaccine;

36% said that the danger of taking a vaccine exceeds the danger of getting infected with Coronavirus Covid-19.

For the vaccine preference, 55% of the sample preferred an American vaccine, whereas 9% preferred a Russian vaccine, and 26% had no preference. Moreover, 76% of the sample believed that vaccines are a political rather than a medical issue, whereas only 2% believed it was medical, and 22% had a neutral opinion.

**Conclusion:** Linear regression revealed a positive correlation between taking the vaccine and residence ( $R=0.869$ ) and marital status ( $R=0.571$ ). As expected, believing that vaccines are a political issue was negatively correlated with taking the vaccine ( $R=0.578$ ). Surprisingly, education level was not correlated with taking the vaccine ( $R=0.390$ ). Our findings suggest that despite a widely vaccinated sample, a large percentage believes in a political aspect of the vaccine. The data also suggests that a much smaller percentage agrees with vaccinating individuals under 18 years old, than vaccinating older individuals.

**Research Keywords:** Covid-19, Vaccines, Hesitancy, Palestinian

## **Behavioral and Social Determinants of Early Childhood Caries among Palestinian Preschoolers in Jerusalem area: A Cross-sectional Study**

Saif Amer<sup>1,2</sup>, Elham Kateeb<sup>2</sup>

<sup>1</sup> Ramallah Friends School.

<sup>2</sup> Oral Health Promotion and Research Unit, Al-Quds University.

**Background:** Early Childhood Caries (ECC) is a public health problem that is influenced by biological, behavioural, psychosocial, and economic determinants predisposed by children's environment.

**Objectives:** This study came to determine the prevalence of ECC among 4–5 year-old preschoolers in the Jerusalem Governorate and to describe the influence of behavioral and social determinants on the development of ECC in the population under study.

**Methods:** This is a cross-sectional study that was carried out between June 2019 and January 2020 in the Jerusalem Governorate of the Occupied Palestinian Territories (oPt). Four preschools that are located in the main four geographic areas of the Jerusalem governate outside the Separating Wall (North, Northeast, East and Southeast) and had the highest numbers of children enrolled in the academic years 2019/2020 and 2020/2021 were selected to be included in the study. All children aged four and five years old in the selected schools were screened for ECC using the decayed, missing, and filled teeth index (deft), and plaque accumulation was quantified by the Plaque Index (PI). Data on children's feeding and oral hygiene practices, demographic characteristics, access to dental care and socio-psychological factors were collected by a validated questionnaire sent to the children's main caregivers. Descriptive statistics were generated to describe the oral health status of this sample and bivariable and multi variable analysis were used to explain the influence of different behavioral and social determinants on the prevalence of the ECC.

**Results:** Our final sample included 481 preschoolers who completed the questionnaire and the clinical screening. Ninety-seven percent (n=447) had experienced dental decay, with an average deft score of  $6.6 \pm 4.3$ , which places this sample in the high caries experience category according to the World Health Organization rank of deft scores. The final linear regression model explained 29% of the variation in the deft scores. The following variables were statistically significant in the final model: "recent visit to the dentist",  $\beta = -3.96$ ,  $p < .000$ , reason for the recent dental visit,



$\beta=1.98$ ,  $p=.002$ , father's irregular job,  $\beta=2.5$ ,  $p<.000$  and Caregiver's Locus of Control,  $\beta=-2.09$ ,  $p<.000$

**Conclusion:** Preschoolers in the study sample suffered from extremely high dental caries. Although infant feeding habits, current diet habits, and oral hygiene practices are important factors in explaining the high level of the disease, other socio-economic determinants of health such as access to dental care, father's current employment status, and caregivers' Locus of Control were detrimental influencers in the ECC burden. Addressing behavioral and biological factors in the attempts to prevent ECC is inadequate. Policies and interventions related to socioeconomic determinants of health need to be included in any program designed to alleviate the high burden of ECC.

**Research Keywords:** Dental caries, Preschoolers, Social Determinants, Oral health

## *Poster Presentations*

### *COVID-19 and Health*

#### **The Impact of Information Sources on COVID-19-Related Knowledge, Attitudes, and Practices (KAP) among University Students: A Nationwide Cross-Sectional Study**

*Israa Baker<sup>1</sup>, Nizar Marzouqa<sup>2</sup>, Elham Kateeb<sup>3</sup>.*

*<sup>1</sup>Al-Quds University, Faculty of Dentistry, Ramallah.*

*<sup>2</sup>Al-Quds University, faculty of Medicine, Bethlehem.*

*<sup>3</sup>Al-Quds University, Deanship of Scientific Research.*

**Background:** COVID-19 is an emerging respiratory disease caused by a novel coronavirus accompanied by a tsunami of misinformation and fake news. This can weaken the public health responses by affecting the COVID-19-related knowledge, attitudes, and practices (KAP) of the public.

**Objectives:** This study aimed to evaluate the effect of the information-seeking patterns on COVID-19-Related society's perceptions, Attitudes, and Practices.

**Methods:** A cross-sectional study was conducted from 9 to 25 May 2020. A self-administered questionnaire (SAQ) was developed and circulated online using Google Forms. Targeted undergraduate students aged from 18 to 30 years, from seven Palestinian universities were randomly selected to represent the major governorates in the West Bank and Gaza.

**Results:** We found that the most trusted information source among students was the World Health Organization (WHO), followed by the Palestinian Ministry of Health (MoH) briefings and healthcare workers, whereas social media was the most frequently used source of information. In total, 76% avoided going to crowded places, and only 33% wore a mask while being outdoors. The vast majority (93%) checked the accuracy of COVID-19-related information before publishing it, 56% used the WHO and MoH briefings for fact-checking, and only 8% relied on healthcare workers.

**Conclusions:** Efforts should be made to recommend healthcare workers as credible information sources.

**Research Keywords:** knowledge; information sources; information checking; COVID-19; Palestine

## Effect of Online Learning Due to COVID-19 on Mental Health among Medical Students in Gaza City

*Mosheer Al-Dhdouh, Khamis Elessi.*

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**Background:** The Coronavirus disease 2019 (COVID-19), originated in Wuhan city of China, has spread rapidly worldwide, sending millions of people into lockdown. The World Health Organization (WHO) declared the coronavirus outbreak a pandemic. In light of the rising concern about the current COVID-19 pandemic, Almost all universities worldwide have switched to online learning.

Moreover, the study of medicine, in which the development of practical skills is a significant proportion of the course, has not previously been envisaged through online learning. However, the COVID-19 pandemic forced the medical education system to temporarily switch to online learning

**Objectives:** This study aimed to investigate the effect of online learning on the mental health of medical students.

**Methods:** A questionnaire-based cross-sectional study was conducted among medical students ranging from 1st-year to 6th-year from the Islamic University of Gaza and Alazhar University of Gaza. The study was conducted during the online learning period (March 2021). Burnout syndrome, depression, anxiety, and how students dealt with the new system were all analyzed among students.

**Results:** The findings revealed that 70.76% of participants complained of moderate to high Burnout syndrome. Furthermore, 87.7% of participants had some degree of depression ranging from mild, moderate, moderate-severe to severe (36.25%, 29.82, 14.03, 7.06), respectively. Analysis of the anxiety level using General Anxiety Disorder-7 Tool (GAD\_7) showed that 79.52% of students had anxiety; 38.1% had a low anxiety level, 27.48% had a moderate anxiety level, and 14.03% had a high anxiety level.

74.26% of all responders had a high degree of fear from technical issues related to online exams. Additionally, 69.01% expressed fear when they think of their career given the lack of interaction with patients and gaining the clinical skills they are supposed to learn. Finally, 58.48% expressed feeling a bit alarmed because of all these discussions of online learning.

**Conclusions:** Due to the long-lasting pandemic situation and onerous measures such as lockdown and stay-at-home orders, the COVID-19 pandemic brings negative impacts on medical education. The findings of our study highlight the urgent need to develop interventions and preventive strategies to address the mental health of medical students.

**Research Keywords:** COVID-19, Online learning, medical students, mental health.

## **Death Anxiety in Palestinian And American Undergraduates in Time of COVID-19**

*Haitham Abu Zeina<sup>1</sup>, Dania Nablsi<sup>1</sup>, Haitham Abu Zeina<sup>1</sup>, Kloteld Zreneh<sup>2</sup>, Natalia Ghattas<sup>1</sup>, Stephanie Saieh<sup>1</sup>, Tuleen Asmari<sup>1</sup>, Nahida Al-Arja<sup>3</sup>.*

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*<sup>3</sup>Palestine, Bethlehem University, Faculty of Arts, Ph. D. Department of Social Studies and Social Services.*

**Background:** In response to the new Covid-19 pandemic and its complications in regard to The Arabic Scale of Death Anxiety on Palestinian and American Students.

### **Objectives:**

1. To measure the effect of Covid-19 pandemic in a Palestinian context,
2. To compare Death Anxiety results with previous studies done in the Intifadas and other Arab Countries,
3. To draw differences and similarities in a cross-cultural approach between the U.S and Palestine,
4. And move forward with a more research-oriented approach towards the topic of death from Palestinian perspectives situated in a post-diasporic and mid-conflict era.

**Methods:** Participants of BU in the study were asked to answer a survey then complete The Arabic Scale of Death Anxiety Scale by Ahmad Abdel-Khalek (2004). The scale contains 23 items (i.e. I am afraid of falling asleep and never waking up) on a Likert-scale format of 5 possible answers (Strongly Disagree) up to (Strongly Agree). The scores can range from (Strongly Disagree) which indicates lower death anxiety, and (Strongly Agree), which indicates the highest level of death anxiety. However, participants of CBU were asked to read a scenario of a person fighting Covid-19 but succumbing to death, or another scenario of a person experiencing a heart attack. After reading the scenario, the participants were asked to complete the ASDA. MacArthur Scale of Subjective Social Status was utilized to allocate CBU participants's social status, while income was reported in BU participants.

**Results:** BU and Alhliya participants had higher ASDA scores ( $M = 3.232$ ,  $SD = 0.962$ ) than CBU participants ( $M = 2.843$ ,  $SD = 0.843$ ). In the three samples, the majority of participants were female, roughly 82% of the BU and Alhliya sample, and 69% of the CBU sample.

Accordingly, in both samples, females had significantly higher ASDA scores than males. For social status, married participants had higher ASDA scores than single ones. The mean ASDA score of the divorced group was highest, and there was little statistical power with only two

individuals in this group. This demographic was not collected in the CBU group since most students are single. As for religion, among the BU participants, there was a significant effect of religion. Specifically, Muslim participants had significantly higher ASDA scores than Christian participants. There was no such difference among CBU participants. As for the social economic status, we performed a median split on the data from each sample. In the CBU sample, participants below the median SES had significantly higher ASDA scores than those above the median (small effect size). There was no such difference in the BU sample. There was no such difference among CBU participants.

**Conclusions:** In this study, the authors attempted a cross-cultural approach to compare between American and Palestinian students' death anxiety during the on-going Covid-19 pandemic. Different variants were grounded to allocate the possible effects these variants could have on students' death anxiety such as sex, religion and social status. Overall, BU participants had higher ASDA scores ( $M = 3.232$ ,  $SD = 0.962$ ) than CBU participants ( $M = 2.843$ ,  $SD = 0.843$ ).

**Research Keywords:** Undergraduates, death anxiety, Covid-19, socioeconomic status, religion, cross-cultural

## **Consequences of Covid-19 Infection in Adult Patients at Least 10 Months of Infection in West Bank: A Retrospective Study**

*Ahmad Abu Sada<sup>1</sup>, Marwan Shtaya<sup>1</sup>, Atheer Shaheen<sup>1</sup>, Iyad Jo'beh<sup>1</sup>, Bayan Qtishat<sup>1</sup>, Tareq Jarrar<sup>1</sup>, Noor Halaseh, Duha Dodeen<sup>1</sup>, Ahmad Zuhair, Hussein Hallak<sup>2</sup>.*

<sup>1</sup> *Medical student, College of Medicine, Al-Quds University, Palestine.*

<sup>2</sup> *Associate Professor, College of Medicine, Al-Quds University, Palestine.*

**Background:** The world these days still facing the COVID-19 pandemic, that mainly caused by the novel virus SARS-CoV-2. Reports show that the first cases of the virus were observed in Wuhan, Hubei, China. At first most cases compline of respiratory symptoms and sometimes respiratory distress that causes death in some cases. However, the disease shows its effect on other systems, including the cardiovascular, central nervous and gastrointestinal. As time passed with the pandemic many strains of the virus started to appear that caused the variation of symptoms severity, types and disease spreading.

Covid-19 long term consequences these days remain unclear, due to the lack of research on this topic in the whole world and especially in the middle east, so our research was directed to gather more information about the topic and to see if there is a significant complication.

Our retrospective study was directed toward Palestinians who were confirmed to be infected with covid-19 by The Palestinian Health Ministry in (25th November to 15th December 2020) and to see the long-term manifestation on them.

### **Objectives:**

- evaluate the presence and severity of long-term consequences of COVID-19, apart from the pathogenesis that many studies investigate.
- Correlating the severity of acute symptoms of COVID-19 to possible consequences.
- Taking in mind possible comorbidities and chronic previous health states and how these fill the gap in ameliorating or debilitating the post-COVID19 consequences.
- Determine the incidence of certain post-viral symptoms and how they correlate with the demographics and socioeconomic status.
- The long-term goal is to help healthcare providers gain a better overview and take better precautions and procedures to reduce the severity of post-viral fatigue.

**Methods:** This is a retrospective study in the West bank of patients with confirmed Covid-19 infection between 25th November to 15th December 2020 (8121patient).

The contact information -including phone number, gender, and the living place of confirmed Covid-19 patients- was obtained from electronic medical records of the Palestinian Ministry of Health in an Excel form. Patients were contacted by telephone through trained research members. So, members filled out the questionnaire through the phone call.

Before data collection, the participants were told about the study's impact after taking their permission. It could have a positive effect and could reduce harmful effects. The team will not use any phone number or E-mail in the research data analysis.

The research team used a randomized sample of over 367 participants. Randomization is to reduce bias and increase validity based on geographic locations, age and gender. Normally in retrospective studies, there's a study limitation that is recall bias. Patients who died before the call, under the age of 18 years old, refused to participate or were unable to be contacted were excluded. Data analysis has been via SPSSv26.

Patients were asked a series of questions for evaluation of their symptoms, associated COVID-19 risk factors and consequences and the quality of their life. The questionnaire included questions about the severity and the nature of the symptoms that occurred after the recovery in the sample. Part of the questionnaire was taken from a Patient-Led research team with minor edits to fit local status. Results of the validated online questionnaire were published in a study that was named 'What Does COVID-19 Actually Look Like?'

**Conclusion:**The Data were collected and we're currently in the analysis.

**Research Keywords:** Covid-19 and consequences.

## *Humanities and Practicing Art (Literature & Society, Media)*

### **World War Zionism: A Necropolitical Study of the Jews in World War Z, State of Exception, and the Two Stages of Death**

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<sup>1</sup> English Department, Faculty of Arts, Bethlehem University, Palestine.

<sup>2</sup> Dean of Research, Faculty of Arts, Bethlehem University, Palestine.

**Background:** Critics tackle how zombie literature, in general, portrays refugees, reflecting political anxieties, fears of elimination, and contagion. They also focus on analyzing the depiction of Palestinians in the World War Z' movie and novel. However, none of the critics address the representation of the intra-ethnic Jewish conflict within the novel. By portraying the Palestinian community as unified with the Israeli one in the New State of Unified Palestine, Max Brooks manages to undermine the socio-political dimensions of the Palestinian struggle as well as the anti-Semite dimensions of Zionism.

**Objectives:** Critics tackle how zombie literature, in general, portrays refugees, reflecting political anxieties, fears of elimination, and contagion. They also focus on analyzing the depiction of Palestinians in the World War Z' movie and novel. However, none of the critics address the representation of the intra-ethnic Jewish conflict within the novel. By portraying the Palestinian community as unified with the Israeli one in the New State of Unified Palestine, Max Brooks manages to undermine the socio-political dimensions of the Palestinian struggle as well as the anti-Semite dimensions of Zionism.

**Methods:** Utilizing the theoretical approach of Achille Mbembe's Necropolitics and critical analysis.

**Results:** Through aforementioned methods and analysis, this research showcases how zombie literature is used to promote Zionist ideologies, as well as how doomsday scenarios represent political reformations and justice as far-fetched and unrealistic optimisms.

**Conclusions:** To depoliticize the Israeli-Palestinian struggle, Sephardic Ultra-Orthodox Jews are victims of the state of exception, small massacres, and the two stages of death. Zionism is portrayed through rose-tinted lenses: a peaceful ideology, only defending itself against imminent threats. While Palestinians have once been the subject to necropolitical sovereignty, Max Brooks' World War Z: An Oral History of the Zombie War establishes the true threat as an intra-ethnic conflict between the Jewish nation itself.

**Research Keywords:** Necropolitics, Intra-ethnic conflict, zombie literature, Palestinian conflict, state of exception, small massacres, zombificatio



## **Assessing the Level of Efficiency of Translating Intertextuality in Mahmoud Darwish's Poetry: A Translation from Arabic to English**

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English Department, Faculty of Arts, Bethlehem University, Palestine.*

**Background:** Translators constantly face the problem of preserving meanings when translating any text, let alone a text filled with intertextual references and underlying messages. This is because the process of translation is not only translating a text into another but also a process of translating cultures and religions and a process of decontextualization and recontextualization.

**Objectives:** This research addresses the complexity of translating intertextuality, specifically allusions, and proposes a solution that targets its underlying issue which is the loss of meaning that occurs when translating intertextuality. The problem that translators face when translating intertextuality is whether they can compensate for that loss and how. This paper argues that using the strategy of visibility change can aid in the compensation of the loss of the intended meaning that the author was trying to communicate.

**Methods:** In order to prove our point, we first extracted religious and literary allusions from Mahmoud Darwish's *The Butterfly's Burden*. We explained how the allusions, which gained their connotative meaning from the pre-text, were utilized in the source language host-text in order to identify the intended meaning of the poet. Finally, we classified what strategies the translator Fady Joudah used in the target language host-text when translating the allusion from Arabic to English in order to evaluate the translator's efficiency of communicating the poet's intended meaning on the basis of whether he retained the intentional, semiotic, and informational status.

**Results:** Our claim, that using the pragmatic strategy of visibility change in addition to the use of either syntactic or semantic strategies has a higher degree of compensation for the loss of the intended meaning, was proved correct because in the cases where the visibility change was used by Joudah, the compensation for the loss of the intended meaning was higher.

**Conclusion:** Future researchers are encouraged to analyze other types of intertextuality and to compare the translation of intertextuality of various translators.

**Research Keywords:** Intertextuality, allusions, translation strategies, translation assessments, pre-text, source language host-text, target language host-text, Mahmoud Darwish, Fady Joudah.

## سيمائية شخصية البطل في رواية القوقعة

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<sup>2</sup> أستاذ مشارك في الأدب والنقد، قسم اللغة العربية، دائرة الآداب جامعة بيت لحم، بيت لحم.

**الخلفية:** تتبع خلفية الدراسة في تحليل وقراءة شخصيات رواية القوقعة وإبراز علامات حضورها على مستوى اشتغال النص في بنيتها العميقة والسطحية، وارتباط الشخصية بوظائفها السردية ودراسة أفعالها وسلوكياتها ضمن البنية المكانية في الرواية، إن مفهوم القوقعة يدرس أيضا الجانب الوطني ورفض الظلم والاستبداد وانفعالية الشخصيات وإبراز مواقفها على مستوى داخلي وخارجي.

تطرح الدراسة أيضا، عمق الصراع النفسي لشخصية البطل على المستوى الدلالي اللغوي بالنظر إلى أهميتها وكيفية تقديمها؛ حيث على حد علم الباحثة لا يوجد بحث يدرس سيميائية شخصية البطل في رواية القوقعة حيث تعد دراسة سيميائية الشخصية في الروايات العربية مؤشرا مهماً على أهمية الشخصية وأبعادها الفكرية والاجتماعية وأيدولوجية البناء في مراحلها داخل الرواية، ففي هذا البحث تطرقت الباحثة إلى دراسة سيميائية الشخصية في رواية (القوقعة) للكاتب مصطفى خليفة وفق المنهج الوصفي التحليلي الذي يبين مكونات النص الروائي وما يتأسس عليه من عناصر جمالية ترتبط بحضور الشخصية ودورها في تفعيل الرؤية، انطلاقاً من اشتغالها النصي الذي ينبني على استثمار ما تتجه إليه اللغة والأسلوب والفكر والعاطفة في وصف تجربة السجن.

وتندرج الرواية تحت أدب السجن الذي يتناول معاناة السجين في الأسر، فقد جسدت القوقعة مفهوم أدب السجن بوصف مظاهر التعذيب والتنكيل ومعاناة الأسير بربطها ببيئة مكانية تتعلق بشخصية البطل وما يدور من أحداث، ارتبطت أيضا بمفهوم التجربة الشعورية للكاتب الذي سقط في قوقعة الذات، وبقي عالقا في أفكاره يتلصص ما بين الفينة والأخرى، والتجربة الذاتية للكاتب مصطفى خليفة الذي أسقطها بشخصية البطل في رواية القوقعة...

و"القوقعة" بمفهومها العام وشخصياتها تقوم على بعدين فارقين للشخصية الروائية أولهما كفي يتعلق بطبيعتها في النص الروائي والتصوير الواقعي لها وارتباطها بعناصر السرد والرؤية الأيدولوجية لها، وثانيهما كمي يتحدد بمقدار حضور الشخصية لأعمالها وصفاتها داخل المتن الروائي وارتباطها بعنقبات السرد.

وقسمت الباحثة الدراسة في ثلاثة فصول رئيسة؛ جاءت على النحو الآتي:

الفصل الأول: إجراءات الدراسة ومنهجيتها

الفصل الثاني: تشكيل دور شخصية البطل في رواية القوقعة وعلاقتها بعناصر السرد الأخرى

الفصل الثالث: أبعاد توظيف شخصية البطل في رواية القوقعة ودلالاتها.

### الأهداف الرئيسية من البحث:

1- تحديد مفهوم سيميائية الشخصية الروائية ودلالاتها.

2- تحليل تفاعل شخصية البطل مع عناصر السرد في النص الروائي.

3- دراسة الأبعاد النفسية والاجتماعية والفكرية داخل الرواية وارتباطها بمنظومة النص.

**الأسلوب المتبع:** اعتمدت الباحثة المنهج الوصفي التحليلي بالتوازي مع المنهج السيميائي في هذه الدراسة في تحليل شخصية البطل وأبعادها في الرواية.

#### النتائج:

1. إن دراسة شخصية البطل وفق البعد السيميائي في رواية القوقعة قد أسهمت في الكشف عن الأبعاد التي تتصل بحضور الشخصية في العمل الروائي بعامة .
2. إن الباحث في شخصية البطل في رواية "القوقعة" يجد أنها شخصية ذات حضور رمزي دال ؛ وإنها بدت شخصية جدلية تقوم في حضورها على المفارقة .
3. يمكن دراسة رواية " القوقعة " بوصفها رواية شخصية ، إذا سلطنا الضوء في التحليل على البطل .
4. إن شخصية البطل في رواية " القوقعة " أسهمت في الكشف عن الفكرة التي تحملها الرواية من جهة، وعبرت عن رؤية الكاتب من جهة أخرى .
5. إن العمل السردي وما قامت عليه رواية القوقعة أسهم في نقل للأحداث مرتبطة بالزمان والمكان واستراتيجيات في بناء الحدث وتنوع الشخصيات داخل الرواية
6. إن الباحث في رواية القوقعة يجد أن ارتباط شخصية البطل بسيمياء العتبات وما لها تأثير سيكولوجي في بناء الرواية ، ومدى توافقها مع شخصية البطل والشخصيات الأخرى
- 7- إن الكشف عن شخصية البطل في رواية القوقعة استند إلى علاقة شخصية البطل بعناصر السرد الأخرى .

#### الخاتمة:

حاولت الباحثة الوقوف على سيميائية شخصية البطل في رواية " القوقعة " للكاتب مصطفى خليفة ؛ وقد تناولت الباحثة الأبعاد السيميائية عبر البحث في النص الموازي للرواية ، حيث درست الدلالات السيميائية في العنوان وصورة الغلاف والإهداء ، ثم راحت تبحث في علاقة شخصية البطل بعناصر السرد المتمثلة بالمكان والزمان والشخصيات الأخرى ، وتناولت البعد النفسي والبعد الاجتماعي والبعد الأيدلوجي لشخصية البطل ؛ وقد وجدت الباحثة أن الولوج إلى شخصية البطل والكشف عن مكوناتها يحتاج إلى البحث في الفضاء الروائي الذي احتوى البطل ، والكشف عن العلاقة الفنية التي تربط بين الكاتب والبطل ؛ من هنا ، بدأ الكاتب بحسب رؤية الباحثة يتلبس شخصية البطل ويسقط عليها صفاته النفسية والفكرية .

#### التوصيات :

- 1- وجوب دراسة الزمان والمكان في رواية " القوقعة " بوصفهما عنصرين سرديين مرتبطين في الشخصية والتوسع بهما .
- 2- ضرورة التفات الباحثين إلى دراسة البعد النفسي للشخصيات الثانوية داخل الرواية وتحليلها
- 3- ضرورة الاعتماد على مناهج نقدية حديثة تسهم في الكشف عن الأبعاد التي يحملها حضور الشخصية في الأعمال الروائية .
- 4- العمل على دراسة عناصر السرد في رواية " القوقعة " دراسة رأسية وبيان دورها في التعبير عن فكرة الكاتب .

**الكلمات الرئيسية للبحث:** السيميائي ، شخصية البطل ، القوقعة.

## Six Passengers, ست ركاب

*Tala Salem, Palestine, Laura Menchaca Ruiz.*

*Al-Quds Bard College, Media & T.V.*

**Background:** Media & T.V Graduate. Member of the Euro-Palestinian Youth Steering Committee.

**Objectives:** My project illustrates the struggles of Palestinian students caused by the Israeli occupation. Palestinian students in every Palestinian university are affected by the Israeli occupation during their educational journey. The struggle never ends, and no matter how small it may seem at times, it exists and it builds up over time in the student's life. My project aims to portray this to my target audience, which is everyone, Palestinians and foreigners, to tell a story and to inspire, to archive and to resist.

**Methods:** My project took the form of a series of comedic skits. I chose this form because, in being short, they are straight to the point, and most importantly for me, they are able to portray other students and my ways of adapting and resisting the occupation with humour.

**Results:** Turning our struggles into laughter is a sign of empowerment; it shows how strong the Palestinian students are to go through these struggles with a smiling face, while setting our mind on getting our education and fighting the occupation with our degrees and knowledge.

**Conclusion:** By the end of the screenplay, the reader will have a deeper insight on what a Palestinian university student goes through, from crossing checkpoints, obstacles in the educational process, to witnessing war clashes in an educational institution.

Research Keywords: Israeli occupation, comedic skits, checkpoints, war clashes.

## Education

### المعوقات التي تواجه الأطفال ثنائيي اللغة من وجهة نظر أولياء أمورهم

مريم طهوب الأموي، ديبعاد الخالص.

دائرة تعليم المرحلة الأساسية ورياض الأطفال، كلية العلوم التربوية، فلسطين.

**الخلفية:** تعد مرحلة الطفولة المبكرة من أهم وأخطر المراحل التي يمر بها الإنسان، ففيها تتشكل ملامح شخصيته الأولى، وتتحدد اتجاهاته وميوله، وفيها يكتسب من الخبرات والمعارف ما يلزمه حتى آخر حياته. ولهذا السبب تلقى هذه المرحلة اهتماماً كبيراً، كل هذا في سبيل توفير وسط ملائم للطفل، ينمو فيه بشكل متوازن من النواحي الجسدية والعاطفية والعقلية والاجتماعية والأخلاقية. (جرادات، 1979؛ خطابية، 2017).

ويعد النمو اللغوي جزءاً مهماً من النمو العقلي لدى الطفل، وقد أكد بياجيه (Piaget) على العلاقات التبادلية بين اللغة والنمو العقلي، حيث تدخل اللغة في عمليات التفكير عامة، والتفكير المجرد خاصة. وحتى يكون الطفل الصور الذهنية عن الأشياء من حوله فهو يحتاج للغة، فينمو تفكير الطفل بنمو اللغة لديه. وتنمو اللغة بنمو علاقاته الاجتماعية، "حيث أن سماع الطفل لكلام الآخرين يبعث التفكير، والتفكير يتبعه التعبير، أي يتبعه اللغة"، وتبنى اللغة عند الطفل بناء على تفاعلاته اليومية. (خطابية، 2017)

إن الذكاء والنمو اللغوي من أهم وأكبر المؤثرات على جوانب حياة الطفل المختلفة، فلغة الدور الأساسي في التواصل الاجتماعي، فباستخدام اللغة يتواصل الفرد مع محيطه، ويعبر عن نفسه، وحاجياته، واهتماماته. (توفيق، 2015) واللغة كما ذكر ثروندايك، أعظم ما أبدعه الإنسان!

قد ينشأ بعض الأطفال متحدثين لغتين لأسباب مختلفة، منها أن يكون كل من الوالدين متحدثاً للغة مختلفة، أو وجود الأسرة في بلد أجنبي يحتم عليهم إتقان لغته، أو -كما هو منتشر اليوم في مجتمعنا- فيتوجه الوالدان لتعليم أبنائهم لغة أجنبية ثانية بجوار لغتهم الأم منذ نعومة أظافرهم، لأسباب متعددة منها التطور السريع الذي يشهده العالم اليوم، واحتياج الأفراد لغة ثانية لمواكبة هذا التطور. ونرى في كثير من المدارس المحلية إدخال لغة أجنبية للأطفال في سن الروضة أو ما قبلها.

وثنائية اللغة (Bilingualism) تعد موضع اهتمام لكثير من التربويين والباحثين، منهم من بين مخاطرها وأضرارها، ومنهم من دعا لاتخاذها منهجاً في الأنظمة التعليمية والحياتية، فيرى كلارك، (Clark) 2005 أن تعلم لغة ثانية يعزز النمو ويزيد من تطور الطفل ولا يعيقه، وحين نطلع على الدراسات السابقة نجد أن من الباحثين من أيد كلارك في رأيه هذا ومنهم إسماعيل، (1994) وكركز ((Kecskes, 1998) ونجد من خالفه فقال أن ثنائية اللغة تسبب تشتيتاً وإرباكاً للطفل فلا يتعلم أي من اللغتين على أكمل وجه، مثل خضر، (1986)، والمعموري، (1983).

وقد ظهرت بعض الاختلافات في تسمية هذه الظاهرة وتعريفها بين الدول العربية، ففي بلاد الشام ومصر تعرف ثنائية اللغة بأنها استخدام الفرد لأكثر من لغة واحدة، وهذا ما يطلق عليه باحثو المغرب العربي ازدواجية اللغة، أما ثنائية اللغة في المغرب العربي، فيقصد بها استخدام الفرد للغة العربية الفصحى بجوار اللهجة العامية الدارجة. (جبروني، 2016؛ أمحمد، 2021).

**الأهداف الرئيسية من البحث:** تهدف الدراسة إلى تبصر المعوقات اللغوية، والاجتماعية، والعاطفية، والذهنية التي يمكن أن تواجه الأطفال ثنائيي اللغة من وجهة نظر أولياء أمورهم

**الأسلوب المتبع:** المنهج الوصفي.

**النتائج:** أظهرت النتائج أن درجة المعوقات التي تواجه الأطفال ثنائيي اللغة من وجهة نظر أولياء أمورهم جاءت بدرجة متوسطة، وبنسبة مئوية (65.5%). وبيّنت النتائج وجود فروق ذات دلالة إحصائية في متوسطات استجابات أولياء الأمور تعزى لصلة القرابة، وعدم وجود فروق تعزى لمتغير مكان السكن أو الدرجة العلمية.

**الخاتمة:** في ضوء النتائج التي توصلت إليها الدراسة، توصي الباحثة بما يلي:

1. إجراء المزيد من الدراسات حول المعوقات التي تواجه الأطفال ثنائيي اللغة وطرق التغلب عليها.
2. تطوير برامج وأندية تهدف لرعاية الأطفال ثنائيي اللغة ومساعدتهم في التغلب على المعوقات التي قد تواجههم.
3. كتابة خطة تربوية لأولياء الأمور تساعد على تربية أبنائهم ثنائيي اللغة وتوضح طرق تقديم لغتين للطفل دون خلق أي مشكلات.

**الكلمات الرئيسية للبحث:** ثنائية اللغة، الأطفال ثنائيي اللغة إجرائياً، المعوقات إجرائياً

## فاعلية البرنامج التدريبي (أخ كبير- أخت كبيرة) في تحسين مهارات القراءة والكتابة والحساب لدى طالبات ذوات صعوبات التعلم (دراسة حالة)

آية برق، منى زلوم، لينة رويدات، سعيد عوض  
تربية خاصة، كلية العلوم التربوية، جامعة القدس، القدس.

**الخلفية:** برنامج أخ كبير، أخت كبيرة، يهتم في تحسين المهارات الأكاديمية والترفيهية لطلبة ذوي صعوبات التعلم، فهو يعتمد بالأساس على استقطاب الطلبة الجامعيين، وتوأمتهم مع الأطفال في علاقة مرافقة فردية ومهنية، أقرب ما تكون إلى العلاقة الأخوية، وذلك من خلال مسار أو رحلة من اللقاءات الأسبوعية الفردية أو الجماعية، التي تركز على مفهوم التعلم من خلال النمذجة، حيث تتم هذه اللقاءات داخل المراكز أو المساحات المتوفرة في المناطق المستهدفة، والمساحات المحلية، يتخللها فعاليات متنوعة، حوارات، نقاشات، لعب وتدريب.

وهذا ما تم التركيز عليه من خلال تطوعنا في برنامج أخ كبير، أخت كبيرة حيث تم التركيز على كل طالب على حدا، بحيث تم الاهتمام بالطفل من خلال الحوارات والنقاشات مع الطفل والأهل وكل ما نستطيع الوصول له لمعرفة المعلومات حول الطفل بمعرفة نقاط القوة ونقاط الضعف لدى الطالب، واستثمار نقاط القوة لتعزيز وتحسين نقاط الضعف لتحسين مهارات القراءة والكتابة والحساب، حيث يتم عمل أنشطة مع الطالب ونقاشات وحوارات بحيث تكون قريبة من الطالب وإعطائه المعلومات بطرق متعددة، كما أن النشاطات تراعي مستوى الطالب الأكاديمي، بحيث يتم مشاركة تجاربهم وقضاياهم وتعليمهم المهارات الحياتية التي تساعدهم في رفع مستواهم الأكاديمي وبالتالي فرصة زيادة بقاءهم دون تسربهم من المدارس ومن ناحية أخرى يحاول البرنامج تعزيز قيمة التطوع من أجل أطفالنا دون مقابل مادي كجزء من تحقيق الذات الإنسانية، والمهنية وبالتالي الارتقاء بمجتمعنا المحلي.

**الأهداف الرئيسية من البحث:** هدفت الدراسة الى الكشف عن فاعلية البرنامج التدريبي التوأمة (أخ كبير- أخت كبيرة) في تحسين مهارات القراءة والكتابة والحساب لدى طالبات ذوات صعوبات التعلم

**الأسلوب المتبع:** أسلوب دراسة الحالة\_ المنهج شبه تجريبي

**النتائج:** اشارت النتائج الى فاعلية البرنامج التدريبي التوأمة (أخ كبير- أخت كبيرة) في تحسين مهارات القراءة والكتابة والحساب لدى طالبات ذوات صعوبات التعلم خلال نتائج الاختبار البعدي التي تم تفريغها على المقياس، وكانت النتائج توضح وجود فروق بين المقياس القبلي والمقياس البعدي وكانت النتائج لصالح المقياس البعدي بشكل ملحوظ، وقد تأكد ذلك من خلال (الملاحظة، والمقابلة) الذين أشاروا من خلال المتابعة إلى وجود تحسن ملحوظ بعد تطبيق البرنامج التدريبي التوأمة (أخ كبير- أخت كبيرة)

**الخاتمة:** ضرورة العمل على نشر البرنامج في عدة مناطق حتى تعم فائدته وضرورة استخدام البرنامج التدريبي التوأمة(أخ كبير-أخت كبيرة) لتحسين مهارات القراءة والكتابة والحساب من خلال عقد ندوات ولقاءات توعوية حول موضوع صعوبات التعلم للأهل لضرورة معرفة كيفية التعامل مع الأبناء.

**الكلمات الرئيسية للبحث:** البرنامج التدريبي (أخ كبير \_ أخت كبيرة) ، التوأمة ، صعوبات التعلم.

## **The Various Activities Effectiveness in Developing both Language and Movement Skills for Children with Apraxia**

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**Background:** By following up on the researcher as a trained teacher, she noticed that there is great neglect and wrong methods followed with children of apraxia, especially in regular education schools, which lack not only the capabilities that contribute to helping children with special needs, but also special education teachers who can deal with these groups. The teachers of ordinary education, despite their experience in the field of education, they are completely lacking in dealing with children of apraxia inside and outside the classroom. On the other hand, there were schools concerned with apraxia children who follow standards, diagnoses, and programs to develop the performance of their students with special needs, among whom are apraxia students. Hence the problem of the study that looked into the effectiveness of a multi-activity program in the treatment of expressive and kinesthetic language among apraxia children.

**Objectives:** This study aims to identify the effectiveness of the various activities in developing both the language and movement skills for children with apraxia.

**Methods:** The quasi-experimental method was used to apply the activities to the study sample members.

**Results:** The study indicates the effectiveness of the various activities in developing the receptive language and expressive and verbal language skills. It has also revealed that all the participants in the study, including specialists and parents, agreed on the effectiveness of various activities in receptive language and expressive and verbal language skills.

**Conclusion:** The researchers recommend the necessity of providing a program that includes various activities in order to be used as an educational strategy for children who receive a special education. Moreover, there should be an active role for a team that consists of specialists and parents to improve the skills of children with apraxia.

**Research Keywords:** Apraxia, Various Activities, Receptive Language Skills, Expressive Language Skills,



## Genetics

### Dopamine Genetic Scores Modulate Positive Reinforcement Learning in Healthy Undergraduates

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**Background:** Dopamine has been implicated in modulating reinforcement learning from positive and negative feedback. Enhanced dopamine levels are linked to better learning from positive feedback, whereas decreased dopamine mediates learning from negative feedback. Naturally-occurring variations in dopamine genes contribute to individual differences in reinforcement learning. Dopamine exerts its actions via proteins located pre- (D2 receptors), within- (transporter), and post-synaptically (D1 and D2 receptors) to regulate dopaminergic function.

**Objectives:** In our study, we created a dopamine genetic score based on the effects of naturally-occurring functional polymorphisms in the aforementioned D1, D2, and dopamine transporter genes to highlight individual differences in dopamine functionality.

**Methods:** We recruited 423 healthy undergraduates from Al-Quds University. All participants completed a computer-based probabilistic reinforcement learning task that dissociates positive and negative feedback. We divided participants into low, medium, and high dopamine groups according to their dopamine genetic scores.

**Results:** Dopamine scores exhibited a normal distribution in the recruited sample. For each participant, we analyzed learning accuracy and response time for positive and negative feedback, prior trial type (positive, negative), and prior trial feedback (positive, negative, no feedback). Consistently across all analyses, results indicate that participants with higher dopamine scores have the highest learning accuracy from positive feedback accompanied by the shortest response time for both positive and negative feedback. To rule out single gene effects we performed a leave-one-out analysis by removing one polymorphism at a time from the dopamine score; the results remained consistent. Thus, the observed effect of the dopamine score is not driven by a single polymorphism.

**Conclusion:** Our results highlight the importance of examining the collective variations in the dopamine circuitry as opposed to single nucleotide polymorphisms. Dopamine genetic scores can be significant in understanding the pathophysiology of psychiatric disorders that are related to dopamine, such as major depressive disorder and attention-deficit hyperactivity disorder.

**Research Keywords:** Dopamine, genetic score, naturally-occurring genetic polymorphisms, reinforcement learning, positive feedback, negative feedback.

## Predicting Serotonin Transporter Haplotypes Based on Reinforcement Learning

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**Background:** Serotonergic neurotransmission has been implicated in risk assessment, processing of negative feedback, and encoding value and time interaction. In humans, central serotonin signals are usually inferred from naturally-occurring polymorphisms in genes that encode key proteins for the synaptic reuptake of serotonin, namely the serotonin transporter (SERT). The SERT gene has two well-studied functional polymorphisms: (1) the 5-HT transporter-linked polymorphic region (5-HTTLPR; long allele (L) = low serotonin, short allele = high serotonin), and (2) the serotonin transporter polyadenylation polymorphism (STPP; C allele = high, A allele = low serotonin).

**Objectives:** In this study, we investigated the interaction between variations in synaptic serotonin and reinforcement learning. We used machine learning to predict serotonin availability based on the subject's reinforcement learning performance.

**Methods:** We examined 215 healthy subjects with the haplotypes denoting high serotonin (SS/CC) or low serotonin (LL/AA) in the 5-HTTLPR and STPP polymorphisms. Subjects completed a probabilistic reinforcement learning task that dissociates positive and negative feedback. We assessed learning accuracy and response time for positive and negative feedback, prior trial type (positive, negative), and prior trial feedback (positive, negative, no feedback).

**Results:** Although there were no significant mean differences between the subject groups in the aforementioned measures, their probability distributions revealed unique patterns of variance, skewness, and kurtosis according to the serotonin haplotype. To highlight individual differences underlying the distribution moments, we trained machine learning classifiers to predict individual serotonin haplotypes based on cognitive performance. Classification results identified the high serotonin haplotype (SS/CC) with 92% accuracy (specificity), and the low serotonin haplotype (LL/AA) with 65% accuracy (sensitivity), with a total area under the curve of 84%.

**Conclusion:** Despite the absence of group mean differences, mathematical and statistical constructs focusing on individual differences can be much more informative for understanding the cognitive effects of serotonin. Given the clinical significance of serotonin in mood and anxiety disorders, our work could start a new research direction to use machine learning to autofill necessary biological variables for fine-tuning of psychotropic treatments.

**Research Keywords:** Serotonin, reinforcement learning, central tendency, distribution moments, machine learning.

## The Effects of Naturally-Occurring Interactions of Dopamine Vs. Serotonin Levels on Reinforcement Learning in Healthy Individuals

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**Background:** The neuromodulators dopamine and serotonin play key roles in reinforcement learning. While dopamine modulates positive feedback processing, serotonin facilitates aversive learning and behavioral inhibition. The dopamine transporter (DAT), coded by the DAT1 gene, regulates synaptic dopamine levels in the brain. DAT1 exhibits a naturally-occurring variable number of tandem repeats polymorphism (VNTR) in its 3' untranslated region (3'-UTR). Similarly, the serotonin transporter (SERT) controls synaptic serotonin levels in the brain. SERT is coded by the SLC6A4 gene that has a polyadenylation polymorphism influencing the balance of two polyadenylation forms of SERT in the brain (STPP).

**Objectives:** Here, we investigate the impact of interaction between naturally-occurring dopamine and serotonin levels on reinforcement learning.

**Methods:** We examined the variable number of tandem repeats polymorphism (VNTR) in the 3' untranslated region (3'-UTR) of DAT1 alongside the serotonin transporter polyadenylation polymorphism (STPP) of SLC6A4 in 143 healthy volunteers. We grouped subjects into DAT1 VNTR 9-repeat homozygotes (high dopamine) and 10-repeat homozygotes (low dopamine), and SLC6A4 STPP C-allele homozygotes (high serotonin) and A-allele homozygotes (low serotonin).

**Results:** All subjects completed a probabilistic reinforcement learning task that dissociates learning from positive and negative feedback. Dopamine and serotonin levels affected learning from positive, but not negative, reinforcement. Dopamine levels modulated learning from positive reinforcement differently only in the context of low serotonin, with low dopamine under low serotonin being associated with better learning. Under high dopamine, subjects with high serotonin learned better from positive reinforcement. In the context of low dopamine, the opposite pattern ensued.

**Conclusion:** Our results argue in favor of an inverted U-shaped modulatory effect of serotonin on dopamine and reinforcement learning. Subsequent studies will investigate this gene-gene interaction in Parkinson's disease and major depressive disorder as it relates to cognitive function and response to treatment.

**Research Keywords:** Dopamine, serotonin, naturally-occurring genetic polymorphisms, reinforcement learning, inverted-U-shaped function

## **Methylenetetrahydrofolate Reductase C677t Gene Polymorphism and the Association with Dyslipidemia in Type 2 Diabetic Palestinian Patients**

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**Background:** Dyslipidemia in diabetes is common and characterized by hypertriglyceridemia with decreased levels of high-density lipoprotein. The objective of this study was to assess the prevalence of MTHFR C677T polymorphism in Palestinian T2DM patients and to investigate the association between this polymorphism and lipid profile in diabetic patients with and without dyslipidemia.

**Study Main Objectives:** 1-to assess the prevalence of MTHFR C677T polymorphism in Palestinian T2DM patients 2- to investigate the association between this polymorphism and lipid profile in diabetic patients with and without dyslipidemia

**Methods:** A total of 208 T2DM patients including 98 with dyslipidemia and 110 without dyslipidemia were enrolled in this study. The MTHFR C677T genotyping was conducted by PCR-RFLP followed by agarose gel electrophoresis.

**Results:** There were no significant differences in either the genotype distribution or allele frequency in T2DM patients with or without dyslipidemia (37.8% CC, 54% CT, 8.2% TT vs. 48.2% CC, 41.8% CT, 11% TT;  $p = 0.209$ ). However, among the dyslipidemic group, the TT carriers have a higher HDL level ( $46.8 \pm 17.8$ ) compared to (CC+CT) carriers ( $34.68 + 11.9$ ) ( $p = 0.01$ ). In the group without dyslipidemia, there was a significant elevation in diastolic blood pressure (DBP) among the CC carriers ( $83.6 \pm 10.6$ ) compared to those who carried at least one mutant allele (CT+TT) ( $78.1 \pm 11.1$ ) ( $p = 0.009$ ).

**Conclusion:** The study shows that in our Palestinian population the MTHFR 677TT genotype lowers DBP significantly in patients without dyslipidemia and is related to increased level of HDL in diabetic dyslipidemia patients.

**Keywords:** MTHFR; C677T SNP; T2DM; dyslipidemia; lipid profile.

## Applied Sciences

### **Arab and Islamic Anticancer Medicinal Plants from Tradition to Cellular Mechanisms: An in vitro study with THP-1 cell line**

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**Background:** Trigonella foenum-graecum L (TF), Ocimum basilicum L. (OB), and Arum palaestinum Boise (AP), are traditional Arab herbal medicine has utilized it to treat a variety of metabolic and inflammatory illnesses.

**Objectives:** No scientific evidence of their anti-inflammatory benefits has been published to our knowledge. The antioxidant and anti-inflammatory activities of Trigonella foenum-graecum L., Ocimum basilicum L., and Arum palaestinum Boise were investigated in this study.

**Methods:** Employing an in-vitro monoculture approach, by using THP-1-derived macrophages to see how the three plant extracts affected the production of pro-inflammatory (TNF-a) and anti-inflammatory (IL-10) cytokines and nitric oxide production levels in response to LPS.

**Results:** TNF-a and IL-10 secretion levels were found to be modulated by all three extracts at nontoxic concentrations, as indicated by MTT assay.

**Conclusion:** The information offered here form an interesting framework where these plants have the potential to be used as an anti-inflammatory due to their antioxidant capacity and ability to suppress pro-inflammatory and anti-inflammatory cytokine production.

**Research Keywords:** Cancer, Trigonella foenum-graecum L., Ocimum Basilicum L., Arum palaestinum Boise, Inflammation

## Evaluation of Radiation Doses for Patients Undergoing Lumbar Spine Computed Tomography Examination in Palestine

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**Background:** Technological advances in CT modality have dramatically increased the number of CT studies, with a significant increase in the radiation dose linked to CT imaging. This study aimed to assess the radiation effective dose and cancer risks for patients undergoing lumbar spine CT examination.

### **Objectives:**

- 1- To assess radiation effective dose for patients undergoing lumbar spine CT examinations.
- 2 -To assess cancer risks in routine clinical practice of Lumbar spine CT examinations

**Methods:** A retrospective study was conducted at Palestine Medical Complex hospital, radiology departments are equipped with 64-slice CT machines (Philips Brilliance). A total of 98 patients (56 female, 42 male) underwent lumbar spine CT examinations.

**Results:** The effective dose for female patients ranged from 7.53 to 14.93 (mSv) with an average of 11.65 (mSv). While the effective dose for male patients ranged from 8.3 to 24.66 (mSv) with an average of 12.29 (mSv). The highest effective dose was 24.66 mSv. It was found for a 65 year male patient with a DLP and CTDI<sub>vol</sub> of 1644.3 mGy\*cm, 26.25 mGy respectively. Cancer risk ranged from 0.02% to 0.23% with an average of 0.08 %. Cancer risk for the young female patients was higher than for young male patients. However, after the age of 65 cancer risk of male patients tend to be higher than female patients which needs more investigation.

**Conclusion:** The results on medical exposure from lumbar spine CT scans provided by this study are comparable with that reported from other countries. It is essential to enhance the radiologic technologist's knowledge of estimated radiation doses dosimetry with dose reduction strategies and optimization imaging to achieve the best patient protection. CT examinations must be done when it's referred by the physician to answer important clinical questions and aid in treatments.

**Research Keywords:** Radiation, Dose, Lumbar Spine, Computed, Tomography, Palestine.



## **Delayed Parenthood and the Importance of Assisted Reproductive Technology in Palestine**

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**Background:** The study discusses how delayed parenthood affects the reproductive capacity of middle-aged women (30-50 y.o). It also presents issues related to delaying parenthood such as the rise of effective contraception, housing conditions, educational attainment, labor force participation for women, and economic uncertainty.

### **Objectives:**

- 1-Identify the medical and socio-economic factors for infertility
- 2-Investigate how educational attainment and increased labor force participation for women affects delayed parenthood in Palestine.
- 3- Explain why assessing the reproductive reserve of middle-aged women and improving ARTs in Palestine is important
- 4-Collect clinical statistical data from an ART and IVF fertility center in Palestine and assess the difference in pregnancy success rates between young and middle-aged women.
- 5-Conduct a survey asking Palestinian undergraduate students about their views on marriage and having children in the future, and if they would be willing to seek ART incase their partner faces infertility.
- 6-Recommend and suggest policies for the policy making authorities to help infertile middle-aged Palestinian women conceive.

**Methods:** Quantitative and qualitative data were collected; a quantitative clinical statistical data from a Palestinian fertility center located in Ramallah. The aim was to measure how the number of eggs retrieved affects pregnancy success rates in three Age Brackets, and if the place of residence or household income of the couple has a relationship with pregnancy success rate, and a qualitative data from a survey distributed among university students to observe their views on marriage and having children, and if they would be willing to seek ART in case of primary or secondary infertility.

**Results:** In the clinical research, as the age of a woman increased, the mean number of her eggs retrieved decreased: Young  $15.00 \pm 9.52$ , Middle-age  $13.05 \pm 7.59$ , Old  $6.94 \pm 6.18$ .

Most of the women were housewives. Most husbands had a blue-collar job. Place of residence was not significant.

I also had unpredicted results; pregnancy success rate for Old women was higher than Middle-aged women, 38.9% vs 43.5% respectively. (61.3% in Young). Moreover, In the regression table, Age Bracket played a significance on the pregnancy success rate until the (Blue-collar Job) variable was added.

In the survey, the most preferred age for childbirth among all majors and genders was between 26-29. For women studying Medicine, the age was skewed older (30-34). Most students, especially females prefer both partners to invest in household income.

**Conclusion:** There is a negative correlation between age and pregnancy success rate. The regression analysis showed the following factors were independently and significantly related to higher pregnancy rates: younger age, White-collar Job of at least one of the partners, and a greater number of mature follicles. Increased infertility rates in the future should be expected as women delay parenthood to pursue their education and careers. On the basis of analysis, the major recommendations are: to allocate necessary resources to improve treatment facilities and ART in Palestine, particularly for middle-aged women; to advocate for the rights of sub-fertile couples to have appropriate access to infertility care; to support data gathering and research about infertility prevalence, risk factors, quality of services, and impact of ART on the public health system; to provide biomedical and socio-economic support for couples with primary and secondary infertility such as easier access to medical services, and insurance coverage for treatment.

## Social Sciences

### **The Effect of Income and Geopolitical Factors on Demand for Cars: Evidence from the West Bank**

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**Objectives:** Understanding the phenomenon of the increase of the demand for cars (geo-political factor & Income/price/substitute product/complementary products)

**Methods:** Primary data (empirical works based on a survey).Secondary data (PCBS, PMF, MT, PMA).

**Results:**

- Income predicts about 20% of the demand for cars
- Addition of the geo-political factor to the estimation model reduced the size of coefficient by approximately 50%

**Conclusion:**

- The addition of the geo-political factor decreased the demand significantly which affected many things.
- The responses of the survey questions clarified many things regarding the factors and revealed the most effective factors.

**Research Keywords:** Geo-political factor, Income, Price, Substitute product, Complementary product, Demand.

## **The Spatial and Geographical Transition of Arab Palestinian Lands to Jewish-Israeli National Lands & the Gradual Construction of an Israeli Legal Geography: From de facto Land Expropriation to de jure Land Expropriation**

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**Background:** Israeli territorial expansionism interlinked with territorial claims to historic Palestine shifted the aspirations for the establishment of a viable Palestinian state in historic Palestine towards a designated territory under the 1947 UN Partition Plan, which is constantly shrinking. The circumvention of the legal system to employ strategies for territorial gains and to counter the demographic majority of Palestinians conveys the settler-colonial ambitions of Israel to create an ethnic Jewish state in historic Palestine corresponding with the aspirations of the Zionist movement.

**Objectives:** This study's research question, 'How does the Israeli government's use of its land declaration policies and the local legislation prior to its occupation of the West Bank in 1967, generate legal structures to legitimize the dispossession of Palestinian Lands in Area C of the West Bank.

**Methods:** This study is based on the qualitative methods of research, which encompass a theoretical and a practical approach represented in secondary and primary sources towards uncovering the connection between the legacy of land status and the Israeli settler-colonial regime. The secondary sources cover two interrelated categories to provide a thorough understanding of this study's political, legal, geographical, spatial, and historical components. First, Palestinian, non-Palestinian and post-Zionist books, articles, and volumes to depict the Palestinian historical and geopolitical background and to focus on the Zionist enterprise that led to the establishment of Israel in 1948. Second, this study refers to provisions in the local land laws, the newly enacted laws by Israel, ordinances, and Military Orders utilizing the role of law in institutionalizing the illegal dispossession of Palestinian lands.

The primary sources of this study are based on my interviews with several members of the Nassar family as well as the Nassar family lawyer. The interviews were conducted between the period of January 2021 and March 2021 with a predominant focus on the Nassar family's legal battle to maintain ownership over the land, and the strategies that Israel employs to expropriate

more Palestinian lands to expand its sovereignty and territoriality in Area C of the West Bank. Moreover, this study provides the Nassar Family land documents and title deeds from different colonial eras, the declaration of the Nassar family land as ‘State Land’ by the Israeli authority, appeals to Israeli courts, maps, and demolition orders.

This study also extracts information from surveys and questionnaires distributed to Palestinians living in this context to incorporate the Palestinian national oral narrative deriving from personal

but common experiences. Eventually, by listing the primary and secondary sources relevant to the thematic area of research, this study will have provided a comprehensive analysis of the research question that is of contextual importance and relevance to the modern-day conflict.

**Results:** The chapters of this study provided an in-depth analysis of this study’s research question by exploring the strategies of legitimization promulgated by Israel to expand sovereignty and territoriality in the occupied territories, and its blatant role in turning the occupation into a permanent reality closer to sovereignty. The expansionist settlement policies of

Israel changed the political geography and demography of the West Bank undermining the possibility of applying the ‘two-state’ solution, which continues to dominate international debates. Considering the role of law in colonial expansionism, this study analyzed the Nassar family land case and examined the extraterritorial uses of the domestic law of the occupying power to legitimize territorial conquest and reconstruct the geographical space, which remains disguised by law. Moreover, this study focused on assisting Palestinian landowners to understand the problematic dimensions of Israeli land grabs, as well as the enhancement of the Israeli military-legal system subjugating Palestinian landowners and obstructing their access to justice eroding international legal principles to generate a pervasive authoritarian control and spatial domination in the occupied territories. Ultimately, the ambiguity of the legal landscape in the West Bank enabled Israel to entrench its settler-colonial project and assert control over Palestinian lands for (extra)territorial expansion.

**Conclusion:** Based on these findings, this study proposes alternative ways to examine these realities through a rights-based approach, which upholds respect for international law. This approach includes recognizing the right of Palestinians to self-determination, the rights of Palestinian refugees to reparation and property restitution, as well as the establishment of foundations essential for reconciliation achieved through implementing transitional justice by adopting legal mechanisms embodied in criminal prosecution and institutional reform, and ensuring rights for all parties without discrimination. However, this approach heavily relies on

addressing the root causes of the conflict by recognizing that settler-colonialism lies at the heart of it, and adopting the process of decolonization to restore the sovereignty of the indigenous population. In a classic settler-colonial struggle, the process of decolonization is a direct and an effective proposition to end settler entitlement, in which, “the colonial power leaves together with whatever agents and population it imported, and the political power is transferred to a new government of a postcolonial state governed by the indigenous population” (Abdelfattah and Halper, 2019). The process of decolonization is extremely complex and demands gradual constructive phases to replace “ethno-religious nationalism” with a “constitutional democracy based on common citizenship” in a shared geopolitical space. The main prospect is to constitute

a ‘society of equals’ with egalitarian cohabitation by ending settler hegemony over land and resources, freezing the settlement expansion project, dismantling all outposts, and offering constitutional guarantees and reparations to the expelled Palestinian population towards a post-colonial democratic and inclusive civil society. Notably, the process of decolonization is not explicit to ending the prolonged occupation of the West Bank as other mainstream paradigms like the ‘two-state’ solution suggest. In fact, it states that occupation is an alternate issue that needs to be proclaimed in a wider framework of decolonization including the right of Palestinian refugees to return. This framework addresses the origins of the colonial aspect of the conflict stemming from the 19th century, to restore the sovereignty of the indigenous Palestinian population to the entire area of historic Palestine, not just the occupied lands.

**Research Keywords:** Illegal Spatial Practices, Settler-Colonialism, Land Expropriation, Israeli Illegal Settlements, Nassar Family, Decolonization.

## Engineering

### **Carbon Nano-Dots from Natural Resources as Optical Sensors for Iron Ions/Fe<sup>3+</sup>: A Review**

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In this work, we searched for the different natural resources of CDs and identify their synthesis methods, properties and some of their applications, 69 natural sources of CDs were found. We found nearly 21 natural resources of CDs for sensing iron ions Fe<sup>3+</sup>, that has a great importance in monitoring iron levels in the water, whose excess may cause many diseases.

We noticed different natural sources of CDs detecting Fe<sup>3+</sup> Sensing with their synthesis method, application and parameters such as size, QY%, sensing range and LOD.

The main reason of these that these tiny CDs have attracted considerable attention at the moment is that they have a strong fluorescence renamed fluorescent carbon. Due the superior properties of CDs, they are used in many applications and field such as biomedical, optronics, Photocatalysis and sensing. Great improvement has been achieved in the synthesis, properties and applications of CDs. Several methods for preparing CDs have been published, which can be generally classified into "Top-down" and "Bottom-up" methods that can be adjusted during preparation or post-treatment. Most recent researches on CDs have focused on their fluorescence characteristics and photocatalytic properties. This review summarizes the primary synthesis method, physical and chemical properties, application and Fe<sup>3+</sup> sensing. In this review we came up with 69 natural resources to extract CDs for different applications. 21 resources of them are for Fe<sup>3+</sup> detection. As a result, the most commonly used in the synthesis of CDs is hydrothermal methods. The applications of CDs had been based on the principle that the interactions between analytes and CDs either limit the fluorescence by quenching, or increase fluorescence by suppressing the quenching effect.

**Research Keywords:** carbon nanodots, fluorescence, synthesis methods, hydrothermal, natural resources, bio-imaging, sensing.

## Schools

### المشاريع الصغيرة ودورها في تعزيز مكانة المرأة في المجتمع

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**الخلفية:** تشكل المشاريع الصغيرة موردا مهما في الاقتصاد الوطني من خلال مساهمتها في تغطية احتياجات السوق وفي الناتج المحلي الإجمالي، وتقليل نسب البطالة لاستيعابها للأيدي العاملة الفلسطينية وتعتبر المشاريع الصغيرة فرصة لتوفير مصدر دخل خاصة لذوي الدخل المتدني. وقد تم تسليط الضوء عليها حديثا نظرا لاستغلال المرأة لحاجة المجتمع التنموية فعملت على إبراز دورها في ابتكار المشاريع الصغيرة من العدم والعمل بها وإدارتها على مستوى معين. كما أن المشاريع الصغيرة هي فرصة تساعد المرأة في الاعتماد على نفسها ماديا ومعنويا وأثبتت ذاتها في المجتمع وزيادة ثقتها بنفسها وهي فضاء يُطلق العنان لإبداعات المرأة وابتكاراتها ويُعينها في قضاء حاجاتها بنفسها .

وبالرغم من هذا الاهتمام بالمشروعات الصغيرة في كل من الدول النامية والمتقدمة إلا أن هناك اختلاف في الهدف من إقامة المشروعات الصغيرة في تلك البلدان ففي الوقت الذي ترى فيه الدول المتقدمة أن المشروعات الصغيرة تزود المشروعات الكبيرة بالمنتجات ترى الدول النامية أن إقامة المشروعات الصغيرة هي البدايات لعمليات الإصلاح الاقتصادي وتقليص دور الدولة في الاستثمار لكونها لا تقدر على توفير فرص عمل لكافة الراغبين به (الحموري 2016).

ويعود تدني نسبة مشاركة المرأة في القوى العاملة إلى عدة أسباب اقتصادية منها قدرة سوق العمل الفلسطيني على استيعاب العرض من القوى العاملة النسوية، وعوامل الطرد للمرأة، وبخاصة تدني الأجور وانخراط النساء في العمالة المهمشة، وأسباب اجتماعية مرتبطة بدخول المرأة إلى سوق العمل في سن متأخر بالمقارنة مع الذكور وأسباب ثقافية تتمثل في محدودية المهن والأنشطة الاقتصادية التي تتنافس المرأة عليها (مركز الإحصاء الفلسطيني)

فالنساء يشكلن مصدر عظيم القيمة في مجتمعات الشرق الاوسط وهو مصدر لم يتم استثماره بالشكل الأمثل مما يؤثر على النمو الاقتصادي ونتيجة لذلك فإن لدى العديد من الدول دوافع اقتصادية بحتة لجعل النساء يشاركن في سوق العمل والهدف ليس ادخال المزيد من النساء الى سوق العمل بل ايضا اعطائهن مزيدا من النفوذ في صنع القرار (كوجمان 2010)

#### الأهداف الرئيسية من البحث:

- التعرف على دور المشاريع الصغيرة في تمكين المرأة في المجتمع الفلسطيني.
- تحديد أبرز دوافع المرأة لإنشاء مشروعها الخاص.
- التعرف على أهم التحديات والصعوبات التي تواجه المرأة في سوق العمل الفلسطيني.
- التعرف على أسباب نجاح المشاريع الصغيرة من وجهة نظر الرياديات في ذلك.

**الأسلوب المتبع:** اتبعت الباحثة المنهج الوصفي التحليلي. حيث قامت بمقابلة ثلاثة من الرياديات في مجال المشاريع الصغيرة من مدينة الخليل للحصول على تصور أوضح حول دوافع المرأة لإنشاء المشاريع الصغيرة وأبرز التحديات والصعوبات التي



تواجهها في سوق العمل الفلسطيني. واستخدمت أداة البحث الاستبانة وقامت بتوزيعها على مجموعة متخصصة بالمشاريع الصغيرة وكان عدد المستجيبات للاستبانة (20) سيدة من صاحبات المشاريع الصغيرة في فلسطين.

**النتائج:** عند تحليل النتائج تبين أن أبرز دوافع المرأة لفتح المشاريع الصغيرة فجاء تحقيقاً للذات وتطويراً للمجتمع بالمرتبة الأولى بنسبة 65% تلاها مباشرة استثمار الوقت وممارسة العمل كهواية بنسبة 60% ثم الحاجة الاقتصادية بنسبة 45%، و25% كانت دوافعهم لتحسين الوضع الاجتماعي، أما 20% كانت جائحة كورونا سبباً في إنشاء مشاريعهم. وبيّنت النتائج أن من أكثر التحديات التي تواجه المرأة هو صعوبة التسويق والإشهار بنسبة 60% ثم غلاء أسعار المواد الخام بنسبة 50% وانعدام دعم المؤسسات والمنظمات بنسبة 40%. أما عن أسباب نجاح مشاريعهم فكان بالرتبة الأولى مواكبة الأفكار العصرية بنسبة 60%، وثانياً آراء المستهلكين المشجعة بنسبة 60% ومن ثم الموهبة بنسبة 50% وبنسبة 30% إقبال الأفراد على شراء المنتجات المصنعة يدوياً. أما عن الفرص التي تتمنى أن تتاح لزيادة نجاح مشاريعهم الصغيرة فإن وجود منصة حاضنة لمنتجات المشاريع، ودعم المجتمع، ووجود رأس مال أكبر لشراء المكملات الثانوية جميعها كانت بذات النسبة 40%.

**الخاتمة:** بعد الاطلاع على نتائج البحث توصي الباحثة بضرورة الاهتمام بدعم المرأة في تكوين مشروعها الخاص من ناحية التدريب والتطوير والاحتضان إلى التمكين في المجتمع. وأن يكون هناك موقعا وطنيا رسميا عبر الانترنت لتسويق المشاريع الصغيرة.

**الكلمات الرئيسية للبحث:** المشاريع الصغيرة، تمكين المرأة

## هجرة العقول الفلسطينية، وأثرها على اقتصاد الوطن (دراسة حالة)

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**الخلفية:** إن ظاهرة هجرة العقول العربية بشكل عام، والعقول الفلسطينية بشكل خاص أخطر مشكلة على الأفراد وعلى المجتمع العربي بأكمله، وإن لم نجد سبلاً مخططة ومدروسة للقضاء عليها، سندخل في دوامة الخطر الإنساني، والفقر المدقع أكثر فأكثر، والاقتصاد السيء، وضياع التراث لهذه البلاد، ولكن إن صحت كل جهة مسؤولة عن هذه المشكلة المدمرة، تُحل المشكلة، وعليه ما هي الأسباب والمسببات لهجرة العقول الفلسطينية؟ وما تأثير ذلك على بلدانهم؟ وتعرف هجرة العقول أو هجرة الأدمغة: بأنها ظاهرة اجتماعية، تخضع لظروف إنسانية غالباً، وهي انتقال وحركة الأفراد أو الجماعات، وخصوصاً ذوي الكفاءات والقوى العاملة من الدول النامية أو المناطق المقفرة للعمل إلى الدول المتقدمة والأماكن المليئة بفرص العمل، وذلك بهدف تحسين الظروف، ونظراً إلى أن أخطر المشاكل في المجتمعات العربية، وخاصةً بفلسطين هي البطالة والفقر، كان لا يوجد حلاً أمام شباب الوطن إلا اللجوء إلى ما يسمى بهجرة العقول الفلسطينية. (عبد الحميد، 2019) وحسب منظمة اليونسكو فقد سُميت هجرة العقول بمصطلح النقل العكسي للتكنولوجيا، وذلك لأن هجرة الأدمغة تعتبر نقل للعنصر البشري، وهو أحد أهم العناصر التي يركز عليها الإنتاج الناجح. (الاتحاد البرلماني العربي، 2001) عندما اتجهت دولة فلسطين إلى باب الخطر بسبب ارتفاع معدل البطالة فيها، حيث بلغت في عام 2021 حوالي 62%، بواقع 366 ألف عاطل عن العمل فيها، فكان سبباً مباشراً ودافعاً للهجرة، وأيضاً مستويات الاقتصاد المتدني، وزيادة الفقر وتفاقم يوماً بعد يوم مع وجود الاحتلال الإسرائيلي، وإجراءاته التعسفية بحق أبناء فلسطين كان وسيكون السبب الأساسي لهجرة العقول. (مركز الإحصاء الفلسطيني، 2021)

**الأهداف الرئيسية من البحث:** يهدف البحث إلى تسليط الضوء على ظاهرة استنزاف و هجرة الأدمغة الفلسطينية الى الدول المتقدمة، وهل لهذا علاقة في اقتصاد الوطن؟ ويتفرع عنه الأسئلة الفرعية التالية:

- \*هل يعود سبب هجرة العقول الفلسطينية إلى عدم توافر مراتب توظيفية لهؤلاء الكفاءات، أو رغبتهم في الحصول على دخل أعلى مما هو متوافر؟
- \*هل يعزى سبب هجرة العقول الفلسطينية إلى ارتفاع مستوى الفقر ونسب البطالة في المجتمع الفلسطيني؟
- \*هل يرجع سبب هجرة العقول الفلسطينية إلى الرغبة في عيش أطفالهم حياة آمنة وبأفضل الرفاهية؟
- \*أيعزى سبب هجرة العقول الفلسطينية إلى عدم الاحتضان والتقدير داخل البلد لهؤلاء الكفاءات؟

**الأسلوب المتبع:** اعتمدت الباحثة في منهجية البحث على مرحلتين من الإجراءات الأولى تمثلت بمقابلة فلسطيني مهاجر من مدينة الخليل، وهو مهندس، يحمل درجة الدكتوراه، يقيم في بريطانيا منذ عدة سنوات، ويعمل هناك في جامعة بريطانية في لندن، ثم الحوار معه حول سبب هجرته إلى هناك، وهل يفضل الاستمرار في العمل في مكانه في بريطانيا أو في وطنه إن سئحت له الفرص الممكنة؟ وهل هجرته كانت اختيارية، أم إجبارية، وتحت الظروف الراهنة؟

وفي المرحلة الثانية قامت الباحثة ببناء نموذج باستخدام نماذج Google، يتضمن عدة أسئلة حول ما هي الأسباب والمسببات التي على أثرها لجأ الفلسطيني صاحب الكفاءة والقدرة إلى الهجرة بالعقول الفلسطينية. من ثم تم إرسال النموذج إلى عدة

مهاجرين فلسطينيين تم التوصل إليهم عبر مجموعات الفيس بوك الخاصة بالمهاجرين الفلسطينيين المتواجدين في دول أجنبية عديدة، ودول الخليج العربي.

**النتائج:** بينت نتائج الاستبيان أن نسبة المهاجرين بشكل إجباري 62.5%، وأن نسبة من أجاب بأنه سيعود للوطن قرابة 54.83% مقابل 45.16% من أجاب بأنه لن يعود للوطن إذا سُنحت له الفرصة، وتعزو الباحثة عدم رغبة المهاجرين العودة إلى الوطن، إما لأنه لم تتوفر أهداف الهجرة، وعدم الحصول على فرصة عمل بوطنه، أو توفرها بدخل أقل بكثير، أو عدم القدرة على العودة برفقة الأطفال، أو لعدم تحقق الأمان هنا، أو لأنه استقر هناك، واعتبره وطناً له، بل الملجأ الآمن له، فلا يعود يعد امتلاكه للخبرات والكفاءات وهذا يتعلق بالمخاطر التي أودت بها هجرة الأدمغة للخارج، فكل هذه الأسباب وغيرها التي منعت الفلسطينيين من العودة، أثرت وما زالت تؤثر للمستقبل على اقتصاد وازدهار المجتمع الفلسطيني، فخُرمت البلاد من الاستفادة من هؤلاء أصحاب الكفاءات في الرفع من حركة التقدم والتطور، وأصبحت كارثة اقتصادية ووطنية . كما أشارت النتائج أن معظم العقول الفلسطينية المهاجرة هي من مدينة غزة حيث بلغت نسبتهم 32.5%، وهذا يعود إلى ما تعانيه مدينة غزة ومحيطها من الحصار الناجم عن اعتداءات الاحتلال الصهيوني، والقيود الموضوعية من قبل الاحتلال، والقصف والتدمير، وتخريب أماكن العمل بأكملها، وحالة الفقر الشديدة.

وبينت النتائج أن نسبة 45% من هاجر رغبة في دخل أفضل، أو مرتبة وظيفية أفضل. وأن هناك النسبة الأكبر لمن هاجر رغبة في الأمان، وطلباً لعيش أطفالهم حياة الرفاهية والأمان. والعدد الأكبر من المهاجرين الفلسطينيين إلى الخارج قد هاجر بحثاً عن الاحتضان والتقدير. وحول ما يتعلق بإجابات أسئلة المقابلة التي تم إجراؤها، فقد تُعمد تركها بعد نتائج الاستبيان، لأنه كان من المتوقع لأن تدعم هذه المقابلة نتائج الاستبيان، وسنتبين من ذلك، فقد تم سؤال المهاجر عبر مقابلته شخصياً عدة أسئلة، كما ذكر سابقاً، وهي:

\* ما هو سبب هجرتك الى بريطانيا؟

إن سبب الهجرة هو كحال 45% تقريباً ممن أكدوا أن هجرتهم كانت رغبة في الحصول على دخل أفضل، بالإضافة إلى عدم توافر فرص عمل مناسبة له في مدينته الخليل، فواجه ذلك بهجرتة.

\* هل تفضل الاستمرار في العمل في مكان إقامتك بريطانيا أو في وطنك ان سُنحت لك الفرص الممكنة؟

كانت الإجابة أعود للعمل في وطني عند توفر فرصة عمل تتناسب مع كفاءتي، وبأجر مناسب، وكما كان متوقع، فالوطن هو الاستقرار مهما صَعُب، وهذا اتفق مع 54.8% تقريباً ممن يفكرون في العودة يوماً ما.

\* وهل هجرتك كانت اختيارية، أم اجبارية، وتحت الظروف الراهنة؟

كانت الإجابة، لم أجبر كنزوح أو لجوء، بسبب الاحتلال، أو ظروف سياسية، لكنني كنت مجبراً على الهجرة، وإلا من أين نفقة العيش؟ هل سنموت من الفقر والبطالة، لم نخرج بإرادتنا كما يظن البعض، نعم الظروف كانت منحازة للاقتصادية، ولكننا لم نخرج من وطننا بمحض إرادتنا، وقناعتنا.

**الخاتمة:** إن هذه الدراسة تمكن من استيعاب عقول المهاجرين الفلسطينيين، ومحاكاة قهرهم، وصبرهم على القسوة التي يتلقونها، وسعيهم منذ فترة طويلة إلى النهوض بحقوقهم وأرواحهم وعقولهم بأنفسهم، وتعريفهم للوطن بأنه الاستقرار والأمان، وهذا غير متوافر في بلادهم.

بناء على ما تم التوصل إليه من نتائج فقد أوصت الباحثة إلى اقتراحات منها تقديم الاحترام و الاهتمام لأصحاب العقول والكفاءات الفلسطينية، التي عانت وما زالت تعاني من عدم توفير الامتيازات لهم، فهم بحاجة إلى امتيازات عالية تليق بهم، وبجهودهم، وفيما يستحقونه، ودعم الجمعيات والمؤسسات الوطنية والعلمية الفلسطينية بالتمويل الدائم لها لدعم هذه الفئة، و

إعطاء أصحاب العقول فرصة تجربة ما هو أفضل، بتقديم لهم دورات تدريبية متميزة ومُتَقَنَّة، سعي المسؤولين لضم جميع الخريجين الذين يستحقون، وتقديم فرص عمل مناسبة لهم، وبأجور مناسبة، للقضاء على البطالة، وإصدار قوانين من قبل منظمة العمل الدولية تحت على ضمان حق العمل للخريج الفلسطيني، وحمايته من الوصول لخط الفقر.

**الكلمات الرئيسية للبحث:** هجرة العقول الفلسطينية.

## فاعلية "الفيديوهات القصيرة" في تحسين مهارة التحدث في اللغة الانجليزية

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**الخلفية:** تعتبر مشكلة مهارة التحدث الأقل تطوراً أثناء تعلم لغة ما. فعلى سبيل المثال، يجد الإنسان نفسه في بعض الأحيان قادراً على أن يفهم سياق الحديث لكنه لا يستطيع الرد. كما أشارت بعض الدراسات إلى أن مهارة التحدث هي الأسهل من بين المهارات الأخرى من حيث إمكانية فقدانها (أو نسيانها إن جاز التعبير). فلو كان الإنسان في غرفة صف أو في اجتماع أو ما شابه ذلك فإن احتمال أن يمارس مهارة التحدث يصبح قليلاً جداً لكنه يمكنه أن يمارس مهارة الاستماع طوال الوقت. والحل لهذه المشكلة يكمن في توفير بيئة مناسبة تسمح لجميع متعلمي اللغة من ممارسة مهارة التحدث بشكل كافٍ يضمن تطويرهم لتلك المهارة.

وأشارت أيضاً بعض الدراسات أن مهارة التحدث من أهم المهارات التي يجب أن تكون في المتعلم للغة الإنجليزية أو أي لغة أجنبية أخرى، وهي المهارة التي تساعد على إتقان اللغة مع الوقت، وهي التي تعتمد على التحدث باللغة الإنجليزية جيداً مع الأشخاص الذين يجيدون هذه اللغة، أو إمكانية عمل مجموعات من الأشخاص الذين يرغبون في تعلم اللغة الإنجليزية وبالتالي القيام بالتحدث أمام بعضهم البعض والتعبير عن المشاعر المختلفة والمواقف التي يمرون بها في حياتهم اليومية. وبالتالي مع الممارسة تساعد هذه المهارة على إتقان اللغة الإنجليزية ومعرفة المفردات الهامة التي تعبر عن هذه المواقف. كما تبين بعض الدراسات على أن قدرة الطالب على التحدث باللغة الإنجليزية بطلاقة يعتمد على مستوى إستماعه للمفردات من متحدثين آخرين ومحاولة ترديد الكلمات والنطق بها أيضاً، كما تعتمد على حصيلته من المفردات اللغوية التي يمكن إكتسابها عن طريق القراءة أو السمع. أضف إلى محاولة إستخدامها في مواقف مشابهة من خلال تعاملاته مع زملائه أو معلميه أثناء الحصة داخل الصف أو خارج غرفة الصف. إلا أن الواقع غير ذلك بحيث تنتهي اللغة بإنهاء الحصة الدراسية، وقد تنتهي أيضاً بانتهاء العام الدراسي. فلا يكون لدى الطالب الدافع أو هدف لإستخدامها خارج الصف.

**الأهداف الرئيسية من البحث:** تهدف الدراسة الى التعرف على مدى فاعلية حلقات التعلم باستخدام الفيديوهات القصيرة والحوار والنقاش في تطور مهارة المحادثة باللغة الانجليزية عن طالبات الحادي عشر في مدرسة وداد ناصر الدين الثانوية للبنات، والى تحديد اثرها على دافعية الطالبات نحو التعلم.

**الأسلوب المتبع:** استخدمت الباحثة المنهج شبه التجريبي حيث قامت باستطلاع رأي حول أكثر مهارات اللغة (الاستماع، القراءة، التحدث، الكتابة) التي تحتاج الى تطوير لعينة استطلاعية مكونة من 49 طالبة من طالبات الحادي عشر العلمي في مدرسة وداد ناصر الدين الثانوية للبنات: فكانت النتائج أن أكثر المهارات احتياجاً لدى الطالبات هي مهارة التحدث بنسبة 41.8%، ثم مهارة الكتابة بنسبة 25.3%، ثم مهارة الاستماع بنسبة 17.9%، وأخيراً مهارة القراءة بنسبة 14.9%. علاوة على ذلك، أجرت الباحثة بعض المقابلات مع متخصصين في تعليم اللغة الإنجليزية وخلصت إلى اعتماد طريقة (الفيديوهات القصيرة) للمساهمة في معالجة الضعف في مهارة التحدث باللغة الإنجليزية، وقامت بتجهيز مصادر التعلم المتمثلة بمجموعة من الفيديوهات الهادفة لمتحدثين باللغة الإنجليزية والتي بدأت الطالبة باختبارها مع بداية حصة اللغة الإنجليزية.

**النتائج:** بينت النتائج الى تحسن في مهارة الطالبات في المحادثة بدرجة كبيرة وبنسبة 90% ، كما بينت النتائج زيادة في دافعية الطالبات لتعلم اللغة الانجليزية بدرجة كبيرة ايضا وبنسبة 92%. وأن 85% من الطالبات أصبحت لديهن الشجاعة لبدء نقاش باللغة الانجليزية حيث قللت حلقات النقاش باستخدام الفيديوهات القصيرة من توترهم في المحادثة.

**الخاتمة:** لقد أظهرت النتائج تحسنا ملحوظا في مهارة المحادثة عند الطالبات عينة البحث وعليه توصي الباحثة بضرورة تضمين استراتيجية البرنامج المقترح والمعتمد على الفيديوهات القصيرة كاستراتيجية أساسية في تعليم اللغة الانجليزية. كما توصي بضرورة إعداد أبحاث مشابهة استخدام ذات الطريقة للجنسين ولفئات عمرية مختلفة.

**الكلمات الرئيسية للبحث:** مهارة المحادثة باللغة الانجليزية، الدافعية نحو التعلم.

## أسباب العزوف عن التبرع بالدم

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**الخلفية:** يعتبر الدم مادة حيوية لا يمكن تصنيعها، ولا بد أن تأتي من الإنسان السليم صحياً للإنسان المريض المحتاج إليها من أجل العلاج، ويعتبر التبرع بالدم الوسيلة الوحيدة لحصول المرضى على ما يحتاجونه للبقاء على قيد الحياة، حيث يتم سحب كمية من دم المتبرع تقدر بنحو 450 مل أي ما يعادل (7%) من دم الإنسان الطبيعي، وهذه العملية تستغرق ما بين خمس دقائق إلى ربع ساعة، وكما أن التبرع بالدم قيمة إنسانية نستعرض أهميتها في إنقاذ أرواح المرضى والمصابين في دول العالم بشكل عام وفي فلسطين بشكل خاص، فأفراد الشعب الفلسطيني معرضون في كل لحظة لاستنزاف دماهم الطاهرة بسبب الانتهاكات الصهيونية المتكررة.

قال الله تعالى: { ومن أحيائها فكأنما أحيى الناس جميعا }

أن للدم أهمية خاصة في العمليات الجراحية، وخاصة عند حدوث مضاعفات، حيث يكون هو الفيصل الأساسي في نجاح الجراحة، وبقاء المريض على قيد الحياة، فضلاً عن أهميته القصوى في الحوادث التي ينتج عنها نزيف يمكن أن يؤدي إلى الوفاة، إن نصف لتر فقط من الدم يمكن أن تنقذ حياة إنسان مسؤول عن أسرة كبيرة، وعن مستقبل له ولأطفاله وعائلته. بحسب تقارير وزارة الصحة الفلسطينية بأن فلسطين تحتاج سنوياً إلى 100000 وحدة دم، من مختلف الأنواع، إلا أن هناك نقصاً مستمراً في توفير الكميات فما هي أسباب العزوف عن التبرع بالدم؟

**الأهداف الرئيسية من البحث:** يهدف البحث الى التعرف على أسباب عزوف الأفراد في المجتمع عن التبرع بالدم سواء في الظروف الاعتيادية أو الظروف غير المستقرة التي تعاني منها فلسطين.

الأسلوب المتبع: اتبعت الباحثتان المنهج الوصفي التحليلي، واستخدمت أداة البحث الاستبانة التي تم توزيعها إلكترونياً وبشكل عشوائي، وكان عدد المستجيبين (312) فرداً والذين يشكلون عينة البحث 74% من المستجيبين من الذكور و26% من الإناث تراوحت أعمارهم بين 18 و 54 عاماً

**النتائج:** وبينت النتائج أن نسبة 36.9% سبق لهم التبرع بالدم 98% ممن سبق لهم التبرع بالدم من الذكور و2% فقط من الإناث. كما أشارت النتائج إلى أن التبرع بالدم قلّ بشكل ملحوظ خلال جائحة كورونا حيث بلغت نسبة المتبرعين 2% فقط من عينة البحث. أيضاً بينت النتائج أن أكثر الأسباب التي تمنع الأفراد من التبرع بالدم هو قلة الوعي بأهمية ذلك حيث بلغت النسبة 31%، وجاء الخوف من وخزة الابرة بالمرتبة الثانية كدافع رئيسي للعزوف عن التبرع بالدم وبنسبة 28% بينما 8% يمنعهم الخوف من انتقال العدوى بالأمراض من التبرع بالدم.

وبينت النتائج أن 88% يفضلون الوسائل المرئية للتوعية حول أهمية التبرع بالدم بينما 7% يفضلون الوسائل المسموعة أما 5% مهتمون بوسائل التوعية المقروءة.

**الخاتمة:** ومن أهم التوصيات التي خرجت بها الباحثتان:

- ضرورة تكثيف التوعية حيال أهمية التبرع بالدم والتوجه نحو طرق التوعية المرئية مثل الجداريات الدلالية وشاشات الإعلام.
- تخصيص يوم من كل شهر للقيام بحملة تبرع بالدم في مكان معين على أن يتم تجميع وحدات الدم المتبرع بها ونقلها إلى غرف بنك الدم حتى يتم استعمالها عند الحاجة بسرعة فائقة.
- تنظيم الأنشطة [الافتراضية] للاحتفال باليوم العالمي للمتبرعين بالدم والمشاركة فيها بتشجيع التبرع بالدم طوعاً ودون مقابل على مستوى الحكومة والقطاعات ، دعوة شخصيات سياسية بارزة ومشاهير الفن للمساهمة بمقاطع مصورة بشأن أهمية التبرع بالدم .
- توجه بنك الدم لعمل قاعة خاصة في بعض جامعات الوطن لتسهيل عملية التبرع بالدم لطلاب الجامعة وحثهم على مدى أهميتها

**الكلمات الرئيسية للبحث:** العزوف عن التبرع بالدم.



## ضعف الذاكرة لدى الطالبات في المرحلة الثانوية

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**الخلفية:** ما زالت الذاكرة البشرية معجزة بكل المقاييس، بالرغم من التقدم العلمي الكبير في الطب، إلا أننا ما زلنا نجهل الكثير عن الجهاز العصبي المركزي (الدماغ) وكيفية عمله، وكذلك الذاكرة، وما نعرفه عنها هو النذر اليسير، فنحن نشاهد ظواهرها ولكن لا نعرف ماهيتها ولا كنهها.

الأداء الذهني بسرعة يصبح مفتاحا ليس فقط للنجاح الشخصي والمهني، ولكن أيضا لجودة الحياة. الذاكرة القوية والنشطة هي الركيزة لكل أدائنا الذهني وهي غالبا ما تشير إلى المقدرة على التذكر وهي جزء مهم من التعلم. إن البحث في تحسين الذاكرة يأخذنا في رحلة لاستكشاف أنفسنا، فلا بد لنا من معرفة كيف تعمل الذاكرة وكيف نستطيع تطويرها لتصل إلى القدرة الكاملة، وكيف نستعملها بفعالية في حياتنا اليومية. تقنيات تدريب الذاكرة تكشف مستوى الأداء الذي يمكننا ان نصل اليه، اما التطبيقات تعطينا نظرة على كيفية استعمال مهارات الذاكرة في جميع نواحي الحياة وتمارين التقييم الذاتي تمكننا من تقييم أدائنا، وتحسين إمكانيات ذاكرتنا سوف تعزز ثقتنا وتوسع ابداعاتنا وتحسن أدائنا يوم بعد يوم في العمل والدراسة واللعب.

**الأهداف الرئيسية من البحث:** يهدف البحث الى معرفة الاسباب الرئيسية المؤدية لضعف الذاكرة لدى طالبات المرحلة الثانوية، والى تحسين إمكانيات الذاكرة والتوعية بأهميتها.

**الأسلوب المتبع:** اتبعت الباحثة المنهج الوصفي التحليلي، وقامت ببناء أداة البحث وهي الاستبانة المكونة من (12) فقرة تمت الإجابة عليها من قبل عينة البحث المكونة من (49) طالبة من طالبات المرحلة الثانوية.

**النتائج:** بينت النتائج أن نسبة الطالبات اللواتي يعانون من الشعور بالقلق والتوتر كانت ٦٧.٦٪، وكانت نسبة الطالبات اللواتي يعانون من الاكتئاب كانت ٤٣٪، وتشير هذه النسب المرتفعة أن عينة البحث تعاني من اضطرابات في الحالة النفسية وهذا من أحد الأسباب الرئيسية لضعف الذاكرة لدى الطلاب.

كما بينت نتائج الاستبيان أن نسبة الطالبات اللواتي لديهن اضطراب في النوم كانت ٧٥.٧٪، ونسبة الطالبات اللواتي يحتوي غذائهن اليومي على سكريات كانت ٧٣٪ ونسبة الطالبات اللواتي لا يمارسون الرياضة بشكل روتيني كانت ٩١.٩٪، أيضا نسبة الطالبات اللواتي يجهدون أجسادهن في عمل شيء ما لساعات طويلة دون استراحة كانت ٦٧.٦٪، ان النسب مرتفعة جدا ما يدل أن الطالبات لديهن نظام روتيني غير صحي حيث ان اهم الاسباب المؤدية الى ضعف الذاكرة ممارسة روتين غير صحي بعد إجابة عينة البحث على إذا كانوا يشعرون بالضعف في الذاكرة كانت النسبة ٦٢.٢٪ وهذا يؤكد النسب الأخرى .

**الخاتمة:** توصي الباحثة بضرورة التوعية بأهمية تحسين الذاكرة لدى الطلاب من خلال استراتيجيات وتمارين مناسبة واتباع نظام غذائي صحي، والالتزام بالرياضة سيؤثر ايجابا على التحصيل الدراسي والوقاية من الأمراض التي بدايتها خمول وضعف الذاكرة.

**الكلمات الرئيسية للبحث:** ضعف الذاكرة، المرحلة الثانوية

## دور مواقع التواصل الاجتماعي في تعزيز ظاهرة العنف ضد المرأة

ندى علي الحداد، مريم شادي عواد، أ.عبير رشدي قنبيبي.

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**الخلفية:** تشير الاحصائيات ان عدد الاناث في فلسطين في عام 2021 بلغ 2.57 مليون أنثى بنسبة 49% وهذا يؤكد أن المرأة هي نصف المجتمع فلماذا نعرض قسم من هذه النسبة للعنف؟ لماذا لا تستغل المرأة قدراتها التي تخفيها بسبب تعنيفها في بناء المجتمع؟ يعرف العنف لغوياً بقلّة الرفق بأمر معين، والتعنيف هو الترقيع واللوم والعنف اصطلاحاً هو استخدام الشدة والقسوة في محيط بني الإنسان، العنف ضد المرأة (تعريف الجمعية العامة للأمم المتحدة، 2006): أي فعل عنيف تدفع اليه عصبية الجنس ويترتب عليه أو يرجح ان يترتب عليه أذى أو معاناة للمرأة سواء من الناحية البدنية أو الجنسية أو النفسية. تتعدد أشكال ومفاهيم العنف في المجتمع، والعنف يمكن أن يتبناه شخص ما، أو جماعة، أو حتى مجتمع تجاه مجموعة من الأشخاص، أو حتى فرد واحد. حيث يلعب العنف دور كبير في تدمير المجتمعات، والأشخاص، نتيجة لما يسببه من دمار للأخلاق والقيم المجتمعية.

ويعد العنف ضد المرأة شكل من أشكال التمييز ضدها، إذ يعطل بصورة جديّة قدرتها على التمتع بحقوقها وحرّياتها أو يلغيها، بوصفه مظهراً من مظاهر الاختلال التاريخي في علاقات القوى بين الرجل والمرأة لذلك لم يتوقف الأمر عند الإعلان العالمي لحقوق المرأة وإنما اعتبر مؤتمر فيينا جزء لا يتجزأ من الإعلان العالمي لحقوق الإنسان ولعل ذلك يشير لمدى تحول قضية حماية المرأة من العنف إلى واحدة من أبرز المواضيع الاجتماعية. (مسار، 2020).

**الأهداف الرئيسية من البحث:** يهدف البحث الى التعرف على دور مواقع التواصل الاجتماعي في تعزيز العنف ضد المرأة في فلسطين. وتحديد الدوافع والأضرار والآثار النفسية الناجمة عن العنف ضد المرأة.

**الأسلوب المتبع:** اتبعت الباحثتان المنهج الوصفي التحليلي حيث قامتتا باستطلاع للرأي حول أكثر مواقع التواصل استخداماً من قبل الأفراد واستجاب (50) شخصاً. وعند تحليل النتائج تبين أن: أكثرها استخداماً هو (تيك توك)، يليه (الانستغرام) ثم (الواتس اب) و(السناب شات) وأخيراً (الفيسبوك).

وبناءً عن النتائج قامت الباحثتان بالتركيز على موقعين رئيسيين هما: انستغرام وتيك توك. قامت الباحثتان برصد منشورات ثلاثة وكالات محلية في المواقع المذكورة خلال أسبوعين كاملين على مدار شهرين تشرين أول وتشرين الثاني لتحديد نسب المنشورات التي تساهم في زيادة ظاهرة العنف ضد المرأة والفتيات.

**النتائج:** بينت النتائج في موقع انستغرام أن نسبة المنشورات المعززة لظاهرة العنف ضد المرأة خلال أسبوع من شهر تشرين أول كالآتي: 13%، 11%، 5%. وأن نسبة المنشورات المعززة لظاهرة العنف ضد المرأة خلال أسبوع من شهر تشرين ثاني كالآتي: 12%، 6%، 2%. بناءً على النتائج السابقة نستنتج ان نسبة العنف في شهر تشرين أول مرتفعة أكثر من شهر تشرين ثاني. وتعزو الباحثتان السبب الى أن اليوم العالمي للمرأة والذي يندرج تحت شعار (لَوْنِ العالم برتقاليًا: فلننهِ العنف ضد المرأة الآن) والذي يكون في شهر تشرين ثاني.

أما بالنسبة لموقع تيك توك وعند متابعة أحد الفيديوهات لمسلسل تركي محوره تعزيز العنف ضد المرأة فكانت عدد المشاهدات أكثر من 1.7 مليون وعدد الإعجابات 162.9 مليون. وفيديو اخر كانت عدد مشاهداته 20 ألفاً، وعدد الاعجابات 16 ألف. وهذا يؤكد أن ظاهرة العنف ضد المرأة موجودة ومنتشرة في مواقع التواصل الاجتماعي بنسبة كبيرة.

ولتحديد الدوافع والأضرار الناجمة عن العنف ضد المرأة صممت الباحثتان استبياناً عبر جوجل وتم توزيعه إلكترونياً وبعد جمع البيانات وتحليلها تبين أن أكثر الأسباب المعززة للعنف ضد المرأة هو عدم وجود عقاب رادع لمن يقوم بارتكاب العنف ضد المرأة حيث بلغت نسبته 90.4%. وجاء في المرتبة الثانية الإنخفاض في المستويات التعليمية أدت لحدوث العنف ضد المرأة بنسبة 57.3%، ثم الزواج المبكر بنسبة 48.3% يليه الفقر وضعف المستويات المادية بنسبة 43.8% وأخيراً قلّة مشاركة المرأة في الفعاليات الإجتماعية بنسبة 33.7%.

وفي مجال: الأضرار والآثار النفسية للعنف ضد المرأة. فبينت النتائج أن الأضرار النفسية كالاكتئاب والقلق والتفكير في الانتحار، والعواقب المترتبة على العلاقات العائلية والاجتماعية مثل الانفصال والعزلة وقطع العلاقات العائلية كانت الأعلى وبذات النسبة 70.4%. يليها في الرتبة الثانية الإصابات الجسدية مثل الحروق والكدمات وغيرها، ثم فقدان السكن والتشرد بنسبة 60.5% وأخيراً تأثيرات سلبية على السلوك الصحي مثل شرب الكحول أو الإدمان على الادوية او تعاطي المخدرات بنسبة 43.8%.

**الخاتمة:** توصي الباحثتان بضرورة زيادة الرقابة على مواقع التواصل الاجتماعي للتقليل من ظاهرة العنف ضد المرأة، وتفعيل دور وسائل الإعلام ومؤسسات المجتمع من خلال إعداد دورات وورشات عمل للتوعية حول ظاهرة العنف ضد المرأة.

**الكلمات الرئيسية للبحث:** العنف ضد المرأة، مواقع التواصل الاجتماعي

## سرطان الثدي ورسالة توعية للكشف المبكر

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**الخلفية:** إن سرطان الثدي ورم مصدره في نسيج الثدي حيث هناك عدة أنواع منه لكن في جميعها هناك أهمية حاسمة للكشف المبكر لأن الكشف والعلاج المبكر يزيدان جدا من احتمالات الشفاء من المرض حيث يسجل العالم سنويًا نحو 1.38 مليون حالة جديدة للإصابة بسرطان الثدي، و458 ألف حالة وفاة، وفقًا لتقديرات الوكالة الدولية لبحوث السرطان. وأشارت تقارير وزارة الصحة الفلسطينية إلى أن الثدي هو أكثر أنواع السرطان شيوعًا بين النساء في جميع بلدان العالم، وفي فلسطين يأتي سرطان الثدي في مقدمة السرطانات التي تصيب الإناث وبنسبة 31.1% من مجموع السرطانات المُبلغ عنها لدى الإناث، وبمعدل حدوث يبلغ 40 حالة جديدة سنويًا في كل 100,000 (مئة ألف) من الإناث. وأن سرطان الثدي يأتي في مقدمة الأمراض المؤدية إلى وفيات الإناث وبنسبة تصل إلى 24% من مجموع وفيات الإناث بالسرطان في فلسطين. إن الاكتشاف المبكر لسرطان الثدي بواسطة التصوير الإشعاعي للثدي بالمماموغرام يزيد وبشكل كبير -بفضل الله -من نسبة الشفاء والبقاء على قيد الحياة كما ويزيد من خيارات وفعالية العلاج.

**الأهداف الرئيسية من البحث:** يهدف هذا البحث إلى تحديد مدى وعي النساء في مدينة الخليل إلى أهمية الفحص المبكر لسرطان الثدي.

**الأسلوب المتبع:** اتبعت الباحثة المنهج الوصفي وقامت ببناء إدارة البحث وهي الاستبانة وتوزيعها الكترونياً، وبلغ عدد المستجيبات للاستبانة (61) امرأة أعمارهن بين 30 و 60 عاماً. 56.1% أعمارهن من (30-40)، 35.1% أعمارهن من (41-50)، و 8.8% أعمارهن فوق الخمسين عاماً.

**النتائج:** بينت نتائج البحث أن 64.4% من عينة البحث لم يسبق لهن إجراء الفحص المبكر لسرطان الثدي وأن 35.6% كانت لهن تجربة سابقة للفحص المبكر عن سرطان الثدي. أما عن عدد مرات إجراء الفحص 64.5% قمن بإجرائه لمرة واحدة فقط في حياتهن، 9.7% لمرتين، 22.6% خضعن للفحص أكثر من مرة. 54.2% يقمن بالفحص الذاتي 25.4% بشكل متقطع، 20.3% نادراً ما يقمن به، 45.8% لم يقمن بالفحص الذاتي ولم يجربنه مسبقاً.

كما أظهرت النتائج أن 49.2% شاركن بحضور حملات توعية عن سرطان الثدي، 50.8% لم يشاركن بأي حملة للتوعية بسرطان الثدي. حول وجود داعم أجابت 65% بأنه لا يوجد داعم. وأفادت المستجيبات أن أبرز العوائق التي تمنعهن من إجراء الفحص المبكر هو الخوف من النتيجة، وقلة الوعي بأهمية الفحص، الانشغال وكثرة الأعباء خاصة المنزلية، والإهمال والتكاسل.

**الخاتمة:** في ضوء نتائج البحث توصي الباحثة بضرورة تنفيذ حملات توعية للنساء حول أهمية الفحص المبكر لسرطان الثدي وأن لا تقتصر على شهر أكتوبر ومعالجة الخوف النساء من الفحص وتيسير وتسهيل الفحص بعمل حملات فحص مجاني مستمرة.

**الكلمات الرئيسية للبحث:** سرطان الثدي، توعية الفحص المبكر

## صعوبات التعليم التي تواجه الطالب الفلسطيني

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**الخلفية:** يحتل التعليم الجيد الهدف الرابع من الأهداف المستدامة لبرنامج الأمم المتحدة الإنمائي، بحيث كلما زاد العلم بين الأمم انعكس ذلك على حضارتهم ورفيهم وزاد من قدرهم. وتزامنا مع الانفجار المعرفي الذي بدأ في أواخر القرن الماضي وأصبح يتسارع بخطى لم يتصورها أحد، شملت مختلف نواحي الحياة العلمية والتقنية والاجتماعية، ظهرت الحاجة إلى خلق الإنسان القادر على ركوب هذه العجلة المتسارعة، مما سلط الضوء على إعادة النظر في دور المدرسة والكلية والجامعة، وضرورة الاهتمام بالجانب النوعي من التعليم، والخروج من الصورة التقليدية للمدارس والاعتماد على الطاقات البشرية من الموهوبين.

التعليم هو الطريق الصحيح التي تسلكه الشعوب عند الرغبة بالتقدم والتطور، فعلى سكب اهتماماتنا كلها لتطوير وازدهار تعليمنا فتعلمنا يواجه بعض المشاكل كطريقة طرحنا للمناهج التي يسودها أسلوب التلقين الذي له عائد سلبي على نفسية الطلاب وحتى بتراجع تحصيلهم الدراسي وبعد جائحة كورونا والانتقال الى التعليم عن بعد الذي ترك آثار وفجوة تعليمية كبيرة في نفوس الطلبة ومما سبب لهم بفاقد تعليمي ولم يكن عادلاً لجميع الطلاب ومنهم ذوي الاحتياجات الخاصة، أيضاً كثرة الواجبات والامتحانات في المدارس الفلسطينية مقارنة مع المدارس الفنلندية التي تصدر قائمة أفضل تعليم في العالم .

**الأهداف الرئيسية من البحث:** تسعى الباحثتان من خلال هذه الدراسة الى تسليط الضوء ولفت الانتباه الى مدى استخدام أسلوب التلقين في طرح المناهج الفلسطينية ومدى تأثيره على تحصيل ونفسية الطالب، وتشخيص واقع التعليم خلال جائحة كورونا، وتحديد بعض الفروق بين التعليم الفلسطيني والتعليم الفنلندي لتحديد أهم الصعوبات التي تواجه التعليم في فلسطين.

**الأسلوب المتبع:** اتبع البحث المنهج الوصفي التحليلي، وتم استخدام أداة البحث وهي الاستبانة من إعداد الباحثتين التي تم طرحها بشكل الكتروني بعد تحكيمها من قبل أساتذة وتربويين. واختيرت عينة البحث بطريقة قصدية حيث بلغت ( 114 ) طالب/ة من مختلف المدارس الثانوية في مدينة الخليل.

**النتائج:** بينت النتائج أنه يتم اهمال المختبرات والأنشطة التي تقام بها في المرحلة الثانوية وفقاً لسؤال عدة طلبة من مختلف المدارس الثانوية لمدينة الخليل عن كم معدل مرات دخولك للمختبر خلال السنة الدراسية للمرحلة الثانوية فقد تراوحت الإجابات بين 0\_5 مرات بنسبة 64%.

وبينت النتائج أن كثرة الواجبات المنزلية تؤثر سلباً على نفسية الطالبات حيث 94% من عينة البحث وجدوا أن الواجبات تؤثر سلباً على صحتهم النفسية كما تزيد من توترهم وقلقهم.

وأن نسبة 70% من الحصص الدراسية يعتمد أسلوب التلقين من خلال التردد والحفظ وإعطاء المعلم فكرة معينة ولا يعطي مجالاً للنقد والتفكير والتجريب فتطمس شخصية الطالب وتهدم كيانه ويكون الدور والصوت بالكامل للمعلم، ويسود بين الطلاب روح المنافسة والأنانية لا التعاون والتقبل للآخرين.

وبينت النتائج أن جائحة كورونا فاقمت من صعوبات التعليم في فلسطين حيث تراجع تحصيل ما نسبته 61.6% من عينة البحث.

أما عن تحديد بعض الفروقات بين التعليم الفلسطيني والتعليم الفنلندي، يمكننا الاستفادة من التجربة الفنلندية في التعليم التي أصبحت محط أنظار باقي دول العالم لحصولها على المركز الأول من حيث التعليم والتي امتازت بعدة أمور من أهمها :  
**أولاً:** الحرص على انتقاء المعلمين بعناية حيث أن وظيفة المعلم تعتبر من إحدى المهن رفيعة المستوى ومهمة في الحياة الاجتماعية كأهمية الطبيب والمهندس وعلى الجانب الآخر يمكننا ملاحظة وجود فئة من المعلمين غير الكفو للتعامل مع الطلاب أو حتى إيصال المعلومات بطريقة سليمة فيصبح هنالك ثغرة تعليمية لدى الطلبة بسبب هذه المشكلة،  
**ثانياً:** جودة التعليم العالية لجميع مدارس فنلندا حيث أن التعليم مجاني وجميع المدارس ذات جودة ومستوى عالي في التعليم فيضمن ذلك حصول جميع الطلاب في شتى أنحاء فنلندا على مستويات عالية ويصبح من السهل على الآباء ضمان أن أطفالهم يحظون بتعليم ممتاز وهذه نقطة نفتقر لها في بلدنا.

**ثالثاً:** تهتم فنلندا بسعادة الطالب وصحته النفسية حيث أنها تحرص على عدد ساعات الدراسة القليل في البيت وشبه انعدام الواجبات المنزلية للطلاب لأنه برأيهم يحق للطلاب الاستمتاع والترفيه عن نفسه في المنزل بدلاً من حل الواجبات المنزلية أما على مستوى فلسطين فيعاني الطالب من كمية واجبات منزلة ضخمة قد تكون مسبباً بمشاعر سلبية للطلاب تؤثر سلباً على صحته النفسية نتيجة الضغط الدراسي في البيت والمدرسة في الوقت ذاته فيصبح أنه لا يوجد وقت للمتعة والترفيه عن الذات وهذا ما توافق ضمن مع الإحصائية عند سؤالنا لبعض طالبات مدرسة و داد ناصر الدين عن مدى تأثير الواجبات على تأزم صحتهم النفسية كانت النتيجة أن 94% يعانون نفسياً من كثرة الأعباء والواجبات .

**رابعاً:** وتبعاً لسعادة الطالب فإن وقت الاستراحة بين الحصص والأخرى في فنلندا يعد طويلاً نسبياً مقارنة في فلسطين حيث تكون مدة الاستراحة في فنلندا ما يقارب الخمسة عشر دقيقة بينما هي خمس دقائق هنا حيث لا يكاد الطالب من أخذ قسط بسيط من الراحة حتى تبدأ الحصص التي تليها وفي بعض الحالات يأخذ المعلم هذه المدة الزمنية القصيرة التي هي حق للطلاب! وأخيراً لا يأخذ الطالب أي امتحان مهم حتى المرحلة الثانوية لأن التعليم من وجهة نظرهم هو تعاون وتطبيق لا تنافس وتقييم.

**الخاتمة:** وبعد دراسة الصعوبات التي تواجه الطالب الفلسطيني وعمل إحصاءات وبعد كل ما توصلنا إليه من نتائج ولأن التعليم الجيد هو أساس في بناء وازدهار والتطور الاقتصادي للدول وهو حق لكل طالب، لذا نوصي بإعادة النظر بطريقة طرح المناهج للطلبة، وإيجاد طريقة أخرى لتقييم الطالب تكون عادلة للجميع، واستنباط بعض من منهجية التعليم من التعليم الفنلندي وبشكل عام من الدول الأولى في التعليم في العالم، وتعزيز جانب الأنشطة والمختبرات في المدارس.

**الكلمات الرئيسية للبحث:** صعوبات التعلم، المرحلة الثانوية.

## داء فرايبيرغ "Freiberg's disease" وتأثيره على الصحة النفسية

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**الخلفية:** يعتبر السبب الرئيسي وراء تطور داء فرايبيرغ مبهم وغير مفهوم حيث يعتقد العديد من العلماء أنه ناتج عن عدة عوامل مرتبطة على الأغلب بتأثير عدد من الجينات مع نمط حياة المصاب والعوامل البيئية، بينما ترى اغلب النظريات الحديثة أن تطور المرض ناتج عن الصدمات أو عن الاضطرابات الدموية الوراثة الناتجة عن النخر اللاوعائي الذي يسبب خللاً في التروية الدموية إلى الجزء المصاب من القدم. يتميز داء فرايبيرغ بوجود الألم مرتبطة بالحركة في مقدمة القدم المصابة وتكون الأعراض ظاهرة كآلتي: -غالبا ما يكون المشي لوحدة كافياً ليسبب بالألم، وقد يصف المصابون بهذا المرض الألم الذي يشعرون به أنه مزمّن يستمر لشهور أو حتى سنوات مع حدوث نوبات شديدة من الألم بينما تظهر الآلام الحديثة عند الآخرين نتيجة حادث أو إصابة معينة.

**الأهداف الرئيسية من البحث:** يهدف هذا البحث إلى التوعية حول مرض فرايبيرغ أسبابه ومسبباته من جهة وتأثيره على الصحة النفسية للمصابين به من جهة أخرى.

**الأسلوب المتبع:** اعتمدت الباحثة المنهج الوصفي، واستخدمت أداة البحث المقابلة للبحث في تأثير داء فرايبيرغ على الصحة النفسية للمرضى.

**النتائج:** بينت نتائج مقابلة الطبيب أن مرض فرايبيرغ يصيب الإناث أكثر من الذكور، وأن شخص من كل مائة مصاب بالمرض، وأن المرض يؤثر على الصحة النفسية للمصاب بشكل سلبي خاصة إذا كان في المرحلة الثانية أو الثالثة من المرض الذي يستوجب التدخل الجراحي . كما بينت النتائج أن تأثير المرض على الفتيات يكون مضاعفا بسبب عدم قدرتهن على ارتداء الأحذية التي يرغبن بها وحدث بعض الحالات كصعوبة المشي يفقد المصابة الثقة في نفسها.

**الخاتمة:** بعد الاطلاع على النتائج توصي الباحثة وهي احدى المصابات بالمرض الى ضرورة نشر التوعية حول مرض فرايبيرغ وعدم إهمال أي إصابة والفحص المبكر والتغذية السليمة كحلول للتخفيف من الآثار السلبية للمرض وتحسين الصحة النفسية.

**الكلمات الرئيسية للبحث:** مرض فرايبيرغ، الصحة النفسية.