



UNION OF THRACE UNIVERSITIES
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BOOK OF ABSTRACTS

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BOOK OF ABSTRACTS

MEDICAL SCIENCES

O-1

Types and Application Rate of Anticoagulants Used in COVID-19 Patients

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Aim: This study was conducted to investigate which anticoagulants and at what rates were used to prevent hypercoagulopathy in this pandemic.

Methods: Necessary permissions were obtained from the non-interventional ethics committee of the local university, the Ministry of Health and the local provincial health directorate. Until July/2021, approximately 64 thousand PCR positive Covid-19 patients were diagnosed in our province. Among these patients, with the Epi Info Stat Calc program, the expected prevalence was 50%, the margin of error was 5%, and the pattern effect was 1, and the smallest sample size was calculated as 659 at a 99% confidence level. A questionnaire was applied to them. 635 people completed the questionnaire.

Results: It was observed that the patients composed in our study were equally female (50.10%) and male (49.90%). The mean age was 44.26 (SD±15.69) years (min:18, Max:88). Most of them were university graduates (43.50%). Anticoagulants ((low molecular weight heparin (LMWH) (n:225; 35.4%)) or acetylsalicylic acid (ASA) (n:89; 14.0%) were used in 49.40% (n:314) of the patients. 73.57% (n:231) of the anticoagulant used was recommended by a doctor; 21.02% (n:66) of the people in their close circle (especially ASA) suggested; and 5.41% (n:17) reported long-term use.

Conclusion: Cytokine storm and coagulation tendency are important complications that can develop in Covid-19 infection. The use of anticoagulants is important to prevent this complication. In our study, it was seen that 21.02% of the patients applied this treatment to themselves without the recommendation of a doctor. Most of the anticoagulants used with recommendation are ASA. Such anticoagulant treatments should be recommended by a physician who is aware of the complications that may occur.

Keywords: Covid-19, pandemi, anticoagulant.

O-2

Is the Neutrophil-Lymphocyte Ratio an Indicator of Glucose Regulation in Patients with Type 2 Diabetes Mellitus?

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Aim: The global prevalence of diabetes in adults has increased from 4.7% in 1980 to 8.5% in 2014. 90-95% of adults with diabetes have Type 2 Diabetes Mellitus (T2DM). Hyperglycemia increases insulin resistance and oxidative stress, vascular inflammation, advanced glycation products, and causes the development of cardiovascular complications. Elevated number of leukocytes (WBC), an increased neutrophil-lymphocyte ratio (NLR) in patients with T2DM are a marker of cardiovascular disease and metabolic syndrome. In our study, we aimed to evaluate the relationship between NLR and different glycemetic control levels in patients with T2DM.

Methods: Demographic and laboratory data of 152 (male/female, 33/11) patients who were admitted to the internal medicine outpatient clinic of İstanbul Başakşehir Çam and Sakura City Hospital and diagnosed with Type 2 DM were evaluated. According to the glycosylated hemoglobin (HbA1c) levels, the patients were divided into two groups: group 1 (HbA1c ≤ 7%, n=75); group 2 (HbA1c > 7%, n=65). WBC, neutrophil and lymphocyte counts of the patients were retrospectively collected from the hospital information management system and the NLR values were calculated and evaluated.

Results: Glucose (201.81±75.97, 122.38±25.19, p <0.001, respectively), WBC (7.30±2.47, 6.26±2.80, p =0.034, respectively), NLR ratios (2.89±1.44, 1.96±0.64, p <0.001, respectively) were significantly higher and lymphocyte counts (1.92±0.61, 2.41±0.65, p <0.001, respectively) were significantly lower in the group of patients with high HbA1c levels compared to the group of patients with low HbA1c levels. There was a significant positive correlation between NLR and HbA1c in patients.

Conclusions: We determined increased leukocyte and NLR levels in patients with Type 2 diabetes. Increased NLR levels are associated with elevated HbA1c, and NLR can be considered as an independent predictive biomarker associated with poor glycemetic control. Therefore, NLR can be used as a marker of diabetic control level in addition to HbA1c in Type 2 diabetic patients.

Keywords: Tip 2 diabetes mellitus, neutrophil lymphocyte ratio, glycosylated hemoglobin

O-3

Is Vitamin D Deficiency Associated with Insulin Resistance?

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Aim: Vitamin D deficiency is an important global public health problem for developed countries as well as developing countries with a high prevalence. Since many cells express Vitamin D receptors, it has been shown that Vitamin D has effects on non-skeletal tissues as well, strengthening immune function, protection from cardiometabolic diseases, reducing cancer and inflammation. It has been stated that Vitamin D deficiency may be associated with the pathogenesis of insulin resistance and related diseases, including obesity and diabetes. In our study, we aimed to evaluate whether there is a relationship between vita Vitamin min D decieny and insulin resistance.

Methods: Demographic and laboratory data of 152 (male/female, 33/11) patients with and without D hypovitaminosis were evaluated. Vitamin D, insulin and glucose data of the patients were collected retrospectively from the hospital information management system and HOMA-IR was calculated and evaluated.

Results: Glucose, insulin, and HOMA-IR levels were significantly increased in the group of patient with D hypovitaminosis compared to the group of patient without D hypovitaminosis (105.21±23.14, 4.55±2.28, 4.64±2.4, p <0.001, respectively). There was a significant positive correlation between HOM-IR and Vitamin D levels in patients.

Conclusions: D hypovitaminosis is one of the factors that accelerate the formation of insulin resistance. Vitamin D has been shown to reduce disorders in insulin signaling and inflammation. Therefore, we think that reducing insulin resistance and, consequently, diabetes-related pathologies, ensuring metabolic control of diabetes, monitoring Vitamin D levels and providing Vitamin D support in necessary cases can be economical and safe therapeutic approaches.

Keywords: Insulin resistance, vitamin D, diabetes mellitus, HOMA-IR

O-4

The Role of Unfolded Protein Response in Neutrophils in Patients with Gentamicin-Resistant and Susceptible Coagulase Negative Staphylococci (MRCNS) Bacteremia

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Aim: This study was carried out to determine whether there is a difference in the mRNA expression levels of XBP1 unsplicing (XBP1u) and XBP1 splicing (XBP1s), which play a role in the unfolded protein response to endoplasmic reticulum stress in neutrophils of patients with gentamicin-resistant and susceptible coagulase-negative staphylococci bacteremia.

Methods: Blood samples were taken from patients with coagulase-negative staphylococci (MRCNS), whose gentamicin resistance and sensitivities were detected, bacteremia in their blood culture. Neutrophils were isolated from blood using density gradient centrifuge with in Ficoll-Paque PLUS solution and hypotonic lysis of erythrocytes. By mRNA extraction from isolated neutrophils, XBP1u and XBP1s mRNA expression levels were measured by RT-PCR. XBP1u and XBP1s mRNA expression levels in the patients of gentamicin resistant and susceptible groups were compared by independent sample T test.

Results: A statistically significant difference was observed both XBP1u and XBP1s mRNA expression levels between neutrophils in patients of the gentamicin resistant and susceptible groups. The mean expression levels of XBP1u mRNA were 2.6900 ± 0.27512 in the gentamicin-resistant group and 1.1280 ± 0.35243 in the gentamicin-susceptible group. The mean XBP1s mRNA expression levels were 1.0200 ± 0.22136 in the gentamicin-resistant group and 0.1600 ± 0.03834 in the gentamicin-susceptible group.

Conclusions: The significant difference in XBP1u and XBP1s mRNA expressions between neutrophils in patients with gentamicin-resistant and susceptible coagulase-negative staphylococci (MRCNS) bacteremia may contribute to the elucidation of the pathogenesis of sepsis in the gentamicin-resistant and the gentamicin-susceptible groups due to endoplasmic reticulum stress and its related unfolded protein response and to find alternative treatment pathways in antibiotic-resistant patients.

Keywords: Neutrophil, ER stress, XBP1, gentamicin, coagulase negative staphylococci

O-5

Effect of Type 2 Diabetes and Vitamin D Deficiency on Inflammatory Markers in Patients with COVID-19

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Aim: Coronavirus disease-2019 (COVID-19) may be more severe in patients with diabetes due to various factors. Our aim was to investigate the effect of type 2 diabetes mellitus (Type 2 DM) and vitamin D deficiency on COVID-19.

Methods: This study is single-center and cross-sectional. Patients admitted to a tertiary care hospital due to suspicion of COVID-19 were evaluated. The patients with diabetes mellitus and COVID-19 were included. Inflammatory markers of the patients were evaluated according to HbA1c levels, vitamin D levels, treatment modalities, and micro/macrovascular complications.

Results: Eighty-three patients with COVID-19 and type 2 DM were analyzed. Patients with vitamin D levels below 10 ng/mL had higher discharge C-reactive protein (CRP) and fibrinogen levels compared to patients with vitamin D levels above 10 ng/mL. The HbA1c of 53 (66.2%) patients was > 7.0 %, and 27 (33.7%) patients had HbA1c ≤ 7.0 %. No significant difference was found between groups (HbA1c level ≤ 7.0 % vs. > 7.0 %) in terms of admission and discharge CRP, ferritin, saturation, fibrinogen, procalcitonin, lymphocyte, D-dimer, and troponin. Also, there were no significant differences regarding intensive care admission, current age, and duration of diabetes. Patients who had been using any kind of insulin treatment had a longer history of diabetes, more severe diabetes, had higher discharge procalcitonin levels compared with patients who had been using only oral anti-diabetic agents. Duration of diabetes (p<0.001), admission CRP (p=0.016), procalcitonin (p=0.003), troponin (p<0.001), discharge CRP (p=0.002), procalcitonin (p<0.001), and troponin (p<0.001) values were significantly higher in patients with at least one micro/macrovascular complication.

Conclusions: In conclusion, the presence of diabetes and vitamin D deficiency are important risk factors in patients with COVID-19. Healthcare providers should also assess the level of vitamin D in patients with diabetes and COVID-19.

Keywords: COVID-19, vitamin D, type 2 diabetes mellitus, inflammation biomarkers

O-6

The Role of Endocannabinoids in Myoglobinuric Acute Kidney Injury

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Aim: In our study, we aimed to examine the time-dependent change of endocannabinoid levels in myoglobinuric acute kidney injury (AKI) and the relationship of this change with oxidative stress.

Methods: In our study, a total of 32 Wistar female rats were used in 4 groups. A model was created with saline (SF) for the control group and intramuscular injections of 50% glycerol to the other groups. The rats in the control and AKI24 groups were taken to the metabolic cage immediately after the im injection, the rats in the AKI48 group were taken into the metabolic cage 24 hours after the im injection, and the rats in the AKI72 group were taken into the metabolic cage 48 hours after the im injection. Under anesthesia, blood and both kidneys were taken from the heart. Endocannabinoids, malondialdehyde, glutathione, urea, creatinine, sodium levels were examined. In statistical analysis, One Way Analysis of Variance (ANOVA) was used for normally distributed data and Kruskal-Wallis test was used for other data.

Results: A significant increase in serum creatinine and urea levels was observed in all glycerol-administered groups compared to the control group, consistent with renal dysfunction. Renal dysfunction was most severe in the AKI72 group. Malondialdehyde, which is an indicator of oxidative stress, was higher in AKI48 and AKI72 groups compared to the control group. Anandamide level was lower in all glycerol-administered groups compared to the control group. It was also lower in the AKI72 group compared to the other glycerol groups. Palmitoyl ethanolamide level was higher in all glycerol-treated groups compared to the control group.

Conclusions: It was thought that cannabinoid system modulations could be a potential target to alleviate the effects of acute kidney injury.

Keywords: Acute kidney injury, endocannabinoid, oxidative stress, anandamide, palmitoylethanolamine

O-7

Analysis of the Association Between Hypocalcemia and COVID-19 Mortality in 1340 Inpatients

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Aim: Calcium is an essential ion in metabolic and signalling pathways that plays a vital role in cellular processes, virus survival and virulence. It has been reported to play a central role in viral infections and replicative mechanisms. There are conflicting results regarding the incidence of hypocalcemia and its effect on mortality in the COVID-19 patient population. This study was designed to examine the relationship between calcium level and COVID-19 in-hospital mortality.

Methods: Patients who were admitted to Çanakkale Onsekiz Mart University Hospital due to COVID-19 were retrospectively analyzed. Patients with chronic renal failure and hypercalcemia were excluded from the study. Hypocalcemia was defined as an Ionized Calcium (iCA) level $<1.16 \mu\text{mmol/L}$ and/or albumin-corrected serum calcium (corrected-CA) $<8.6 \text{ mg/dl}$. The patients were classified into two groups as hypocalcemia and normocalcemia. Risk factors associated with mortality were evaluated by Cox regression analysis.

Results: A total of 1340 patients, 59.9% (669) women, mean age 64.6 ± 12.7 years, corrected-CA level $9.09 \pm 0.58 \text{ mg/dl}$, iCA level $1.11 \pm 0.11 \mu\text{mmol/L}$ were included. Hypocalcemia was detected in 42.7% (572) of the patients. In our study group, the in-hospital mortality rate was 10.4%. In-hospital mortality (14% vs. 5.7%; $p = 0.001$) was higher in the hypocalcemic group. In the univariate analysis, 2.6-fold increased mortality was observed in the hypocalcemic group (Hazard Ratio (HR) 2.61(95% CI, 1.80-3.77, $p=0.0001$)). After adjusting for age, gender, creatinine, glucose, ALT, and comorbidities in the hypocalcemic group, mortality increased 2.2 times (adjusted HR 2.21(95% CI, 1.52-3.20, $p=0.0001$)).

Conclusions: Hypocalcemia is an independent risk factor for in-hospital mortality in patients hospitalized for COVID-19. It is recommended that hypocalcemic patients be followed more closely in terms of mortality.

Keywords: COVID-19, calcium, hypocalcemia, mortality

O-8

The Role of Serum Asymmetric Dimethylarginine Values in Predicting Intensive Care and Mortality in Patients with COVID-19

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Aim: This study aimed to investigate the role of asymmetric dimethylarginine (ADMA) level in predicting intensive care and mortality in patients affected with coronavirus disease 2019 (COVID-19).

Methods: We enrolled patients who were diagnosed with COVID-19 via real-time reverse-transcription polymerase chain reaction and admitted to the intensive care (S-COVID) or non intensive care (M-COVID). We then analyzed the relationship of the ADMA level with various parameters between S-COVID and M-COVID groups.

Results: This study included 87 patients, comprising 43 females and 44 males, with a mean age of 61 and 71.50 years, respectively. The male/female distribution was 22/25 (46.8%/53.2%) in the M-COVID group and 22/18 (55%/45%) in the S-COVID group. The hospitalization time, white blood cell count, neutrophil count, lymphocyte-to-albumin ratio, international normalization ratio, D-dimer, troponin, ferritin, lactate dehydrogenase, C-reactive protein, procalcitonin, erythrocyte sedimentation rate, fibrinogen, lactate, ADMA, and mortality rate were significantly higher ($p < 0.05$). In contrast, lymphocyte, total cholesterol, high-density lipoprotein, calcium, and albumin values were lower ($p < 0.05$) in the S-COVID group than in the M-COVID group. While the mortality rate was 55% in S-COVID patients, no mortality was detected in M-COVID patients ($p < 0.05$). Moreover, ADMA level was 6618 ± 3000 (6400) in S-COVID patients and 5365 ± 3571 (3130) in M-COVID patients, indicating a statistically significant difference ($p = 0.012$).

Conclusions: The ADMA level increases in severe outcomes; hence, it can potentially predict severity in patients with COVID-19.

Keywords: Asymmetric dimethylarginine, COVID-19, mortality rate, lymphocyte albumin ratio (LAR)

O-9

Vitamin D Levels in The Elderly Population

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Aim: Vitamin D is a vitamin that has an effect on calcium and bone metabolism. With increasing age; the need for vitamin D increases. Although the most important effect of vitamin D is on bone mineralization, studies have reported that vitamin D deficiency causes loss of muscle strength, an increase in the risk of falls, an increase in the frequency of cardiovascular diseases, and a predisposition to infections and autoimmune diseases. In our study, it was aimed to determine vitamin D insufficiency and deficiency in the elderly population.

Methods: A total of 1042 patient aged 45-89 years were included in our study whose Vitamin D levels were measured, who applied to the Başakşehir Çam and Sakura City Hospital. The individuals participating in the study were divided into 3 groups according to their age (middle age 45-59 years; old age 60-74 years; advanced old age 75-89 years).

Results: The average age of the individuals participating in the study; It was found to be 51.2±0.1 in the middle-aged group, 65.4±0.2 in the old age group, and 79.6±0.4 in the advanced-aged group. Vitamin D levels; It was found to be statistically decreased in the advanced age group compared to the middle age group (p<0.01) and the old age group (p<0.05).

Conclusions: In our study, we found that vitamin D levels were low in the advanced-aged group. Determining vitamin D deficiency in the elderly population and taking necessary precautions are important in terms of preventive and therapeutic health approaches.

Keywords: Vitamin D, old age, advanced-age, middle-age

O-10

Evaluation of the Impact of the Formation Mechanism of Variant Ph Translocations on Prognosis in CML Patients

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Aim: Chronic Myeloid Leukemia (CML), which originates from hematopoietic stem cells, is classified among myeloproliferative neoplasms according to the criterias of World Health Organization (WHO) revealed in 2016. CML is characterized by a reciprocal translocation between chromosomes 9 and 22 leading to the formation of the Philadelphia chromosome (Ph). Besides classic Ph translocation, 5-10% of patients with CML have variant Ph translocations. In addition to chromosomes 9 and 22, one or more chromosomes are involved in the formation of variant Ph translocations. The aim of this study is to evaluate the efficiency of the Fluorescence in situ hybridization (FISH) technique in determining the mechanism of formation of variant Ph translocations, which are reported to be effective on the prognosis of the disease.

Methods: Cytogenetic analysis was performed on bone marrow samples taken from patients who applied to our laboratory with a preliminary diagnosis of CML. FISH analysis using the BCR-ABL dual color dual fusion translocation probe was performed on 28 patients with variant Ph translocation.

Results: As a result of FISH analysis, 2 red, 2 green, 1 fusion signals were obtained in all patients in the study. This revealed that variant Ph translocations occurred with a single-step mechanism.

Conclusions: The FISH technique is effective in detecting the formation mechanism of variant Ph translocation. We think that the prognosis of CML depends on the additional chromosomes and breakpoints involved in variant Ph translocations as well as the mechanism of formation.

Keywords: Chronic myeloid leukemia, variant Ph translocation, FISH.

O-11

The Prognostic Importance of the Neutrophil/Lymphocyte Ratio and the Platelet/Lymphocyte Ratio in Childhood COVID-19

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Aim: Neutrophil/lymphocyte ratio (NLR) and platelet/lymphocyte ratio (PLR) have been helpful in predicting the prognosis of diseases in many studies. I aimed to evaluate the prognostic significance of these markers associated with systemic inflammation in childhood for COVID-19 disease, which has become a global public health problem that threatens the lives of many people.

Methods: A total of 76 cases, including 39 patients hospitalized with the diagnosis of COVID-19 disease between April 2020 and May 2021, and 37 healthy children who applied to our Pediatrics outpatient clinic on the same dates for routine controls, were included in the study. Demographic, clinical, laboratory data and length of stay of the patients were recorded retrospectively from the medical records of the patients. In order to find out NLR and PLR cut-off values, ROC curve analysis was used.

Results: The median age of the cases included in the study was 7 years (range 2-16 years). In the study; 54.1% of the cases were female and 45.9% were male. A statistically significant relationship was found between the case and control group in terms of NLR and PLR values. ($p<0,05$). NLR and PLR values of the case group were higher than those of the control group. A positive correlation was found between the NLR value of the case group and the length of hospital stay, erythrocyte sedimentation rate (ESR), D-dimer and C-reactive protein (CRP) ($r=0,904$; $r=0,706$; $r=0,885$; $r=0,614$ $p<0,05$). Similarly, a positive correlation between PLR value and length of hospital stay, ESR, D-dimer and CRP was statistically significant ($r=0,839$; $r=0,598$; $r=0,812$; $r=0,551$, $p<0,05$). Length of the hospital stay, ESR, D-dimer and CRP values were found to be lower in the $NLR<1.72$ group than in the $NLR >1.72$ group ($p<0,05$). Length of the hospital stay, ESR and D-dimer values were found to be lower in the $PLR<140.47$ group than in the $PLR>140.47$ group ($p<0,05$). While more lung involvement was observed in the group with high NLR and PLR values (52.8%; 59.4%), this relationship was also statistically significant ($p<0,05$). In terms of diarrhea, there was no statistically significant relationship between the two groups ($p>0,05$).

Conclusions: This study supports that NLR and PLR values are inexpensive and easily calculated parameters that can be applied to determine the severity of childhood COVID-19 disease. These results should be confirmed by prospective studies and multivariate analyses including more patients and other prognostic factors.

Keywords: Child, COVID-19, neutrophil/lymphocyte ratio, platelet/lymphocyte ratio

O-12

Assessment of COVID-19 Perception and Fear in Adults

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Aim: To evaluate the COVID-19 disease perceptions and fear levels of adults in Turkey.

Methods: This cross-sectional study was conducted between 01.03.2021 and 01.04.2021. The questionnaire form, prepared using current literature, was transferred to an online setting. The form was disseminated with convenience sampling using the snowball method, and individuals aged 18 and over from 78 of 81 provinces of Turkey participated in the study. COVID-19 Disease Perception Scale (CDPS) which has two sub-dimensions called danger and contagiousness, was used to evaluate the perception of COVID-19. The Fear of COVID-19 Scale (FoCS) was used to determine the COVID-19 fear levels. Mann Whitney U test, Kruskal Wallis analysis, and Spearman Correlation Analysis were used. The significance value was accepted as $p \leq 0.05$.

Results: The study group consisted of 4011 people, 56.4% (n=2261) were females. Their ages ranged from 18 to 67, with a mean of 26.22 ± 10.59 years. The median (min-max) scores obtained from the danger and contagiousness sub-dimensions of the CDPS were 4.0 (1.0-5.0) for both dimensions and 17.0 (7.0-35.0) for FoCS. The perception for both dimensions was higher in females, those who did not work, those who did not drink alcohol, and those whose family/close relatives died due to COVID-19. The perception of danger was higher in those with an education level above high school, those who don't perceive their income as bad, those who did not smoke, and those who had COVID-19. A weak positive correlation was found FoCS scores and the scores from the perception of danger ($r=0.318$, $p<0.001$) and contagiousness ($r=0.306$, $p<0.001$) sub-dimensions of CDPS.

Conclusions: It was seen that the COVID-19 disease was perceived as quite dangerous and contagious, and the level of fear was moderate. Organizing information programs in order to raise awareness about the danger and contagiousness of COVID-19 would be beneficial.

Keywords: COVID-19 perception, fear of COVID-19, Turkey

O-13

Therapeutic Effects of Transcranial Direct Current Stimulation on Learning and Memory After Experimental Cerebral Ischemia

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Aim: In our study, we aimed to investigate the effects of Transcranial Direct Current Stimulation(tDCS) application on learning and memory and molecular mechanisms of rats with focal cerebral ischemia.

Methods: 100 male Wistar rats, each of which weighs 290-310 g, were divided into five groups as Sham, tDCS, Ischemia/Reperfusion(IR), IR+tDCS and IR+E(arly)-tDCS groups, with 20 rats in each group. The IR model was created by MCA's 90-minute occlusion. tDCS treatments were applied 0.5 mA 30 minutes a day for 6 days after IR. Novel object recognition, object localization and Y-maze tests were used to evaluate learning and memory, and open field test was performed to evaluate locomotor activity. Glutamate and glutamine levels, Alpha-Amino-3-Hydroxy-5-Methyl-4-Isoxazole Propionic Acid(AMPA), N-Methyl-D-Aspartate(NMDA) and Vesicular Glutamate Transporters(VGLUT-1), Excitatory Amino Acid Transporters(EAAT)-1-2-3 mRNA expressions in hippocampus tissues were evaluated. Ischemic areas were analyzed by triphenyltetrazolium chloride(TTC) staining. Statistical analyzes were performed by One-Way ANOVA test.

Results: Increase was observed in IR+tDCS and IR+E-tDCS groups compared to IR group while significant decrease was observed in IR group compared to Sham in the behavioral experiments data($p<0.05$). While glutamate and glutamine levels, AMPA and NMDA receptor expressions and VGLUT1 and EAAT1 mRNA expressions were significantly higher in IR group compared to Sham group($p<0.001$), it was found to be significantly lower in IR+ tDAS and IR+ E-tDAS groups compared to IR group($p<0.05$). In IR group compared to Sham group EAAT2 mRNA expression was significantly decreased($p<0.05$), while EAAT3 mRNA expression did not change. EAAT2 and EAAT3 expressions were significantly higher in IR+tDCS and IR+E-tDCS groups compared to the IR group($p<0.05$). Ischemic areas were significantly decreased in IR+tDCS and IR+E-tDCS groups compared to IR group($p<0.001$).

Conclusions: In our study, it has been shown that post-IR tDCS application improves learning and memory disorders and tDCS achieves these effects through the carriers that regulate glutamate level.

Keywords: Glutamate, ischemia reperfusion, learning and memory, tDCS

O-14

Evaluation of the Effect of Carbamazepine Therapy on Serum Lipid Levels

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Aim: It was aimed to evaluate the effect on serum lipid profile in patients who used carbamazepine (CBZ).

Methods: Medical biochemistry laboratory data between January and May 2021 were analyzed retrospectively. Between these dates, serum carbamazepine levels of 135 patients were measured. Patients (n=20) who used monotherapy and at least 2 years of CBZ were included in the study. Patients under 18 years of age are not included. In the control group, 20 healthy people with normal blood parameters, who applied to outpatient clinics for different reasons at the same age, did not have a disease that would affect the lipid profile, were selected.

Results: The mean age of the patients was 34 ± 8.06 years. LDL levels were found to be higher in patients treated with carbamazepine compared to the control group ($p < 0.05$). There was no significant difference in serum total cholesterol (TC), triglyceride (TG) and HDL levels in the patient and control groups ($p > 0.05$). There was no gender difference in the effect of carbamazepine on LDL ($p > 0.05$).

Conclusion: High serum total cholesterol and LDL levels definitely cause atherosclerosis and coronary artery disease. The lipid profile of carbamazepine, which is used regularly at the therapeutic level, changes. Due to the association of high LDL and TC levels with atherosclerosis, it is important to monitor lipid levels in patients using CBZ, especially considering the long duration of use of this pharmacotherapy.

Keywords: Carbamazepine, cholesterol/blood, lipid/blood

O-15

Parental Views on Education, Amplification and Communication in Children with Hearing Loss Before and During the COVID-19 Pandemic

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Aim: The aim of this study is to evaluate the views of parents with children who have hearing loss regarding their children's education, hearing aid/cochlear implant use and communication before and during the COVID-19 pandemic.

Methods: The study was carried out with the general screening model of the quantitative research method. The study data was collected through an online Q&A form prepared by researchers that consisted of 75 questions excluding demographic information. The online form was delivered to parents via social media by administrators of special education and rehabilitation centers that provide support education to the children with hearing loss. 135 parents answered the questions in the form about the education, hearing aid/cochlear implant use and communication of their children with hearing loss before and during the pandemic. Responses to questions before and during the COVID-19 pandemic were categorized using percentile method and compared using non-parametric analysis techniques.

Results: The responses given by parents were compared as before and during COVID-19 pandemic. There was a significant difference between before and during the COVID-19 pandemic in responses to the question assessing the situation of getting adequate technical support for hearing aid/cochlear implant and the question assessing the adequacy of the auditory rehabilitation program ($p < .05$). However, there was no significant difference between the before and during COVID-19 pandemic in responses to the question assessing the economic difficulty experienced when meeting repair costs for hearing aids/cochlear implants and the question assessing the child's communication problems with their hearing friends ($p > .05$).

Conclusions: During the COVID-19 pandemic, curfews resulted in a lack of continuity in education and limited services for hearing aids/cochlear implants. This has negatively affected the auditory rehabilitation process and the parents' situation to receive technical support for the hearing aid/cochlear implant.

Keywords: COVID-19 pandemic, pediatric hearing loss, parental views, rehabilitative audiology

O-16

School and Special Education Status of Children with Autism Spectrum Disorder During the COVID-19 Pandemic

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Aim: Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by social communication problems and repetitive behavior patterns that hinders the individual's social interaction, and the symptoms usually appear in early childhood. While drug treatments are used for behavioral problems and psychiatric comorbidities in the treatment of the children with autism, special educational treatments are used for the core deficits of the ASD. Therefore it is important to sustain these children's special education treatment in Covid-19 pandemic where many changes in education system occur. In this study, we aimed to investigate the education status of the children with ASD.

Methods: Parents filled out an online survey consisting of 19 questions investigating sociodemographic and educational status of their children in the pandemic.

Results: Data were available on 59 children. The mean age of children was 10 (4-18). 51,3% of children's school education and special education services had been negatively affected (closure or cancellation), only 38,5% of families had continued education at home. %52,5 of children had reached distance education and most of them (%51,9) had participated very little in the lessons. %54,2 of the parents reported that there was little or no benefit of distance special education practices in the pandemic. Most of the families (%71,2) stated that they send their children to school when face to face education is opened.

Conclusions: The Covid-19 pandemic has resulted in increased difficulties in the education and therapy system of children with ASD. Strategies to support the educational needs of this vulnerable group should be developed and implemented in the ongoing pandemic.

Keywords: COVID-19 pandemic, Autism Spectrum Disorder, distance education, special education

O-17

Ossification of the Sacrotuberous Ligament and Its Importance

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Aim: To investigate the presence of ossified sacrotuberous ligament.

Methods: Hip bone specimens at the Department of Anatomy were evaluated for the presence or absence of ossification of the sacrotuberous ligament. The dimensions of the ossified sacrotuberous ligament were measured with a digital caliper.

Results: A case of ossified sacrotuberous ligament was found in the right hip bone. The length of this structure was 5,3 cm when measured from the lateral side and 5,7 cm when measured from the medial side. Its width at the distal baseline was 0,6 cm and its thickness was 1,15 cm. As the bony prominence progressed proximally, its thickness was thinning and its width was increasing. Its width was 1,25 cm at its widest proximally, and its thickness was 0,4 cm.

Conclusions: There is a need for cadaver studies, radiological anatomy studies and perhaps fetal studies in different races and populations for the presence of the ossified sacrotuberous ligament.

Keywords: Sacrotuberous ligament, ossification, pudental nerve, lesser ischial foramen.

O-18

The Relationship Between Pediatric Allergy Outpatient Follow-up and Asthma Control in Children with Asthma During the COVID-19 Pandemic Period

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Aim: The aim of this study is to evaluate asthma control in children with asthma according to whether they visit to the pediatric allergy outpatient clinic during the Covid 19 pandemic period.

Methods: This retrospective study, 116 patients between the ages of 12-18 who were diagnosed with asthma and followed up in the pediatric allergy outpatient clinic were divided into two groups according to visit during the pandemic period. Group 1(n=59) were the patients who visited the pediatric allergy outpatient clinic for regular examination and Group 2(n=57) were the patients who did not come for examination during the pandemic period. Patients in Group 2 were reached by phone and their information was recorded and the information of the patients in Group 1 was recorded from their files.

Results: The mean age of the patients evaluated in the study was 12.5±1.9(12-18) years, 50.9%(n=59) were female. Asthma symptoms were fully controlled in 25.9% of patients. There was no difference between the groups according to age, gender, presence of concomitant allergic disease, and passive smoking exposure(p>0.05).The patients in Group 1 had a longer disease follow-up period (5±3,3 years;3.3±3 years, respectively,p<0.01) and higher the asthma control test score than the patients in Group 2(21.5±4.5; 18.6±4.7, respectively,p<0.01) .

Conclusions: In this study, we found that the asthma control score of the patients who came to the regular follow-up higher than the patients who did not come to the control during COVID-19 pandemic in children with asthma. We think that patient follow-up is important in disease control during the pandemic period.

Keywords: Asthma, children, asthma control, COVID-19, pandemic

O-19

Clinical Features of COVID Patients with Gastrointestinal System Involvement

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Aim: Covid-19 disease is caused by SARS COV-2 virus; this virus primarily affects the respiratory system. However, gastrointestinal (GI) system involvement may also occur. Therefore, we aimed to perform epidemiological and clinical analysis of 50 Covid-19 positive patients with GI symptoms.

Methods: We retrospectively screened 254 COVID-19 cases from March 18 to September 30, 2020, in Fatih Medicalpark Hospital of Istanbul, Turkey; those with an incomplete medical history, duplicated, and insufficient data were excluded from the study. Descriptive analyses of the variables were reported as mean (Mean \pm SD) or percentage (%). All analyses were performed with SPSS 25.0 statistics software. $p < 0.05$ was considered as significant.

Results: The analysis of 123 patients revealed that 50 patients presented GI symptoms at admission (40.6%) (Table 1). Comparison of age and gender of the patients revealed that there was not any difference between the two groups. A detailed review of these patients revealed that (40/50) (40%) patients had anorexia, 16 (16/50) (32%) patients had nausea, and 25 (25/50) (50%) patients had diarrhea. 73 patients (59.3%) presented with only classic symptoms (fever, cough, sore throat, shortness of breath, muscle soreness, and fatigue). Our study showed that shortness of breath was significantly higher ($p = 0.03$) in GI symptom-free patients; also, it was revealed that muscle soreness and fatigue were significantly higher ($p = 0.19$ and < 0.0001 respectively) in patients with GI symptoms. The severe COVID disease was more frequent among the patients without GI symptoms ($p = 0.002$).

Conclusions: This study suggested that GI symptoms in COVID-19 are frequent but are not associated with the severity of the disease.

Keywords: Anorexia, COVID, diarrhea, gastrointestinal, nausea.

O-20

Evaluation of the Effects of Adult Attachment Styles, Perceived Social Support and Childhood Traumas on Anxiety, Depression and Stress Among Healthcare Professionals During the COVID-19 Pandemic

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Aim: The aim of this study was to investigate the symptoms of anxiety, depression and stress in healthcare workers during the COVID-19 pandemic and to evaluate the possible effects of adult attachment styles, perceived social support and childhood traumas on these symptoms.

Methods: A total of 113 volunteer healthcare workers were included in this cross-sectional study conducted between September 2020 and February 2021. Sociodemographic data form, Depression Anxiety Stress Scale-21 (DASS-21), Adult Attachment Style Scale (AAS), Multidimensional Scale of Perceived Social Support (MSPSS) and Childhood Trauma Questionnaire (CTQ) were administered to the participants.

Results: It was determined that the total score of the CTQ was positively correlated and the total score of the MSPSS was negatively correlated with all sub-dimensions of the DASS-21. In attachment styles, it was found that there was a negative correlation between the secure attachment score and all sub-dimensions of the DASS-21. A positive correlation was found between all sub-dimensions of the DASS-21 and the anxious/ambivalent attachment and the avoidant attachment scores. In regression analyzes, total scores of secure attachment, anxious-ambivalent attachment and MSPS were influential on the DASS-21 depression sub-score, total scores of anxious-ambivalent attachment and CTQ were influential on the DASS-21 anxiety sub-score and it was determined that only the anxious-ambivalent attachment score was influential on the DASS-21 stress sub-score.

Conclusions: Our results indicate that anxious/ambivalent attachment style and the history of childhood trauma negatively affects on mental health in healthcare workers during the COVID-19 pandemic, while high perceived social support has a protective effect on mental health. In cases who are seeking professional help with the psychological stress burden brought by the COVID-19 pandemic, considering these clinical features will be beneficial particularly in psychotherapy practices.

Keywords: COVID-19, attachment styles, mental health

O-21

Evaluation of Methyl Alcohol Intoxication Cases During the Pandemic Period

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Aim: In the COVID-19 pandemic, decrease in income, social isolation and increase in psychological problems increased alcohol drink consumption. In this study, it was aimed to examine medical characteristics of patients who applied to medical care for methyl alcohol poisoning.

Methods: In this study, the medical records of patients, who applied to emergency services with methyl alcohol poisoning during the COVID 19 pandemic in Kırklareli, were examined.

Results: Seventeen patients who admitted to hospitals due to methyl alcohol intoxication during the pandemic period were included in the study. 82% (n=14) of the patients were male and 18% (n=3) were female. The mean age was 49.3±15.9 (min 22, max 74). It was observed that the patients applied with complaints of headache, nausea, vomiting, temporary loss of vision, and blurred consciousness between 10-24 hours after consuming methyl alcohol. It was determined that 70.6% (n=12) had alcohol poisoning before, 23.5% (n=4) had health problems due to drug use, 52.9% (n=9) had chronic diseases, 35.3% (n=6) had oral diseases, 35.3% (n=6) had stomach diseases, 23.5% (n=4) had psychiatric disorders, 64.7% (n=11) applied to hospitals due to trauma, and 41.2% (n=7) used drugs continuously. It was determined that ventilator support were applied to all patients in the intensive care unit, and 47% (n=8) died.

Conclusions: It was determined that methyl alcohol intoxication was observed more frequently in males and those with a history of chronic alcohol consumption. Relatively more methyl alcohol intoxications were recorded during the COVID 19 Pandemic period than in previous years, so this could be described as an epidemic.

Keywords: COVID 19 Pandemic, methyl alcohol intoxication, public health

O-22

**Diagnosis-Related-Groups Applications
in Kırklareli in 2020**

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Aim: To ensure uninterrupted data flow from our hospitals, understand which types of cases are treated, increase efficiency by establishing monitoring systems, and monitoring physician and facility-based performance are aimed with the DRG studies carried out in our province.

Methods: The data of our hospitals for the relevant period are followed every month on the DRG Decision Support System screen. To monitor their performance, the relative value and case-mix indexes (CMI) produced by all hospitals and physicians in the same specialties are calculated by using the inpatient and outpatient data in the system.

Results: According to the data of our hospitals in 2020 on the DRG Decision Support System Screen, the monthly average total number of inpatients and outpatients in State Hospital 1 (SH1) was 870.25, and the relative value is produced was 1004.86 and CMI was 1.15. The monthly average number of patients at State Hospital 2 (SH2) was 898.66, and the relative value it produced was 1013.28 and CMI was 1.12. The top 3 specialties with the highest number of patients in 2020 in SH1 were General Surgery 1813, Chest Diseases 1210, Internal Medicine 1111. The top 3 specialties in SH2 with the highest number of patients were Obstetrics and Gynecology 1693, Internal Medicine 1660, and Orthopedics and Traumatology 1381.

Conclusions: COVID-19 pandemic increased chest diseases department inpatient numbers making it second in the pandemics hospital (SH1) and decreased inpatient numbers of most of the other specialties compared to SH2.

Keywords: Diagnosis-related-groups, case-mix indexes, relative value, COVID-19, hospital efficiency

O-23

Comparison of the Services Provided by Kırklareli 112 Emergency Healthcare Services in the New Coronaviruse Disease (COVID-19) Pandemic with the Pre-Pandemic Period

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Aim: Comparing the ambulance services provided by 112 Emergency Health Services (EHS) during the Covid-19 pandemic with the pre-pandemic period, showing the changes in the number of cases and the reasons for ambulance calls.

Methods: The applications made to the 112 Emergency Call Center (ECC) by telephone, and the ICD10 diagnoses used by ambulance teams most frequently in transferring cases were included in the present study after simplifying. The same period before the pandemic was compared with the period of April 2021 when applications to our hospitals increased at significant levels in our city.

Results: Most of the applications made to 112 EHS in April 2019 were traumas and injuries. It was found that the number of cases with fever, cough, and shortness of breath was especially higher in applications made during the peak of Covid-19 cases in 2021. When the symptoms of the citizens who requested ambulances from 112 ECC were compared with the pre-pandemic period, it was found that the symptoms of fever, cough, and shortness of breath increased, the number of cases with initial important interventions such as heart attack and stroke did not change, and the number of injuries, and the rate of the overall number of services with traffic accidents decreased.

Conclusions: We believe that it would be useful to increase the number of spare ambulances, keep the teams which can be called for duty in the field ready when necessary, and update the training of the staff on protection from infection to ensure the confidence interval, even if adequate response was provided to the increasing number of cases.

Keywords: Covid-19 cases, pandemic, 112, symptoms

O-24

**The Effect of Covid 19 Infection on Fibromyalgia Patients,
A Literature Review**

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Aim: Fibromyalgia is a chronic centralized pain-sensitivity disorder characterized by diffuse, migratory, waxing, and waning pain; fatigue; sleep disturbance; mood symptoms; and many other somatic complaints. It's known that clinical outcomes of covid-19 are significantly worse in persons with advanced age and those with medical comorbidities like cardiovascular disease, pulmonary disease, diabetes, malignancy, and immunosuppression. What about central sensitization and fibromyalgia syndrome? The aim of this study is to examine the relationship between covid-19 and pain in patients who applied to the algology outpatient clinic with the diagnosis of fibromyalgia.

Methods: In this study, we evaluated the articles published between 2020-2021 in Pubmed and Web of Science using the key words of chronic pain, fibromyalgia, covid-19, chronic fatigue syndrome. Finally, this special issue were reviewed with fifteen article.

Results: The additional covid-19 associated stressors are likely to affect the underlying central sensitization negatively, leading to worsening symptoms in persons with fibromyalgia and chronic fatigue syndrome. Central sensitization is the pathophysiological process underlying many different conditions in which structural, functional, and chemical changes in the central nervous system lead to alterations in how the brain and spinal cord process pain and other sensory stimuli. Fibromyalgia can be more affected by psychological stress and this situation negatively affects the symptom severity in fibromyalgia patients, so these patients should be closely monitored in terms of psychological stressors and their effects during pandemics.

Conclusions: In all studies the mean total severity of symptoms are significantly higher in the patients with covid-19 and fibromyalgia which suggests that global fibromyalgia symptoms are more severe in patients with covid 19. Further studies of the post-covid 19 patients are being carried out in order to discover whether the worsened symptomatology continues. Patient training and improving telematics access to health services are very important for symptoms therapy.

Keywords: Chronic pain, fibromyalgia, covid-19

O-25

Comparison of the Parents of Children with Autism and Communication Disorders in the Pandemic Period in Terms of COVID-19 Anxiety Levels

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Aim: The aim of this study was to investigate the fear of covid-19 and generalized anxiety levels in parents of children with autism spectrum disorder (ASD) and parents of children with communication disorders (CD) during the pandemic period.

Methods: The parents of children aged 6-18 years diagnosed with ASD or CD voluntarily participated in the study. The study sample consist of 24 parents of children with ASD (group 1) and 26 parents of children with CD (group 2). Sociodemographic data form, Fear of Covid-19 scale and Generalized Anxiety Disorder-7 (GAD-7) scale were used in the study. Scales were filled in as self-report.

Results: There was no significant difference between group 1 and group 2 in terms of ages both children and parents. No significant difference was identified between groups in terms of GAD-7 scores ($p>0.05$). The Fear of Covid-19 scale scores of group 1 were found to be significantly higher than group 2 ($p<0.05$). After controlling GAD-7 score, the group 1 had higher scores than group 2 in terms of Fear of Covid-19 Scale scores.

Conclusions: According to the results of this study, it was determined that the Covid -19 fears of the parents of children with ASD were higher than the children with other special needs during the pandemic period. This may be caused that the children with ASD can not take Covid-19 precautions as much as other children. In clinical practice, especially parents of children with autism need to be considered and evaluated in terms of rising concerns.

Keywords: Covid-19, anxiety, autism, mental health

O-26

**Evaluation of Depression and Anxiety in Multiple Sclerosis Patients During Covid-19
Pandemic: A Comparison with the General Population**

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Aim: COVID-19 pandemic can increase anxiety and depression in multiple sclerosis (MS) patients. To evaluate the predictors of anxiety and depression in MS patients during the COVID-19 pandemic compared with general population (GP).

Methods: The study was conducted in an MS clinic in Istanbul. Data were collected online using a form including sociodemographics and questions regarding knowledge on COVID-19 and the Hospital Anxiety and Depression Scale.

Results: Eight-hundred participants (GP:421, MS:379) were included. Anxiety (42.3% vs 32.2%, p=0.002) and depression (53.9% vs 39.6%, p<0.001) were more common, COVID-19 knowledge was lower (9.1±1.5 vs 9.9±1.2, p<0.001) and rate of COVID-19 infection was higher (% 15.4 vs % 6.9, p<0.001) in the GP than MS patients. Among other factors, knowledge of COVID-19 was a common predictor of anxiety and depression in both GP and MS groups (OR:0.8, 95% CI 0.7-0.9, p=0.007 and OR:0.7, 95% CI 0.7-0.9, p=0.020, for anxiety; OR:0.7, 95% CI 0.7-0.9, p=0.001 and OR:0.8, 95% CI 0.7-1.0, p=0.023 for depression, respectively).

Conclusions: Our study revealed that MS patients have less anxiety and depression than the GP. Knowledge regarding COVID-19 was a predictor of both anxiety and depression. Our study emphasizes the importance of providing psychological support and information about COVID-19.

Keywords: Multiple sclerosis, COVID-19, anxiety, depression, knowledge of COVID-19

O-27

Comparison of the Fear of COVID-19 between Mothers of Children with Specific Learning Disorder and Intellectual Disability

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Aim: The aim of this study was to compare the fear of COVID-19 and general anxiety symptoms in mothers of children with specific learning disorder and intellectual disability during the pandemic period.

Methods: This cross-sectional study was conducted including 15 mothers of children with specific learning disorder (M-SLD) and 24 mothers of children with intellectual disability (M-ID). All the children were between the ages of 6-18 years and were diagnosed and followed by child and adolescent psychiatry clinic. All participants were interviewed by the researcher and were assessed with sociodemographic data form, The Fear of COVID-19 Scale (FCS) and Generalized Anxiety Disorder-7 Scale (GAD-7).

Results: The mean age of children with specific learning disorder and with intellectual disability were 9.66 ± 2.12 and 7.62 ± 2.51 , respectively. The mean age of M-SLD (n=15) and M-ID (n=24) were 39.53 ± 6.71 and 33.58 ± 6.41 , respectively. The ages of M-SLD were higher than M-ID (p=0.011). Similarly, the ages of children with specific learning disorder were higher than children with intellectual disability (p=0.004). M-ID group had higher scores than M-SLD group in terms of FCS (p=0.023), while no difference was identified between groups in terms of GAD-7 (p=0.977). Linear regression analyses showed that after controlling GAD-7 score, M-ID group had higher scores than M-SLD group in terms of FCS (p=0.022, B=4.83)

Conclusions: Our results indicate that, M-ID had more fear of COVID-19 than M-SLD. Difficulties complying with COVID-19 precautions in children with intellectual disability may contribute for mothers fear of COVID-19. The interventions to improve adaptation of precautions may decrease the fear of COVID-19 in mothers of children with intellectual disability.

Keywords: Covid, anxiety, specific learning disorder, intellectual disability

O-28

The Effect of Health Literacy on the View of Vaccination in the COVID-19 Pandemic

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Aim: In this study, it was aimed to evaluate whether the COVID-19 pandemic process affected the attitude of people living in our society to vaccines, and if so, in what way.

Methods: In this descriptive cross-sectional study, a questionnaire form and the Single-Item Health Literacy Screening Question (SILS) were used to determine the views on vaccination practices.

Results: The mean age is 45.28 ± 17.14 (min:18, Max:83). When all vaccines are considered, 313 of the participants (83%) thought that vaccination should be administered, 10 (2.7%) should not, while 54 (14.3%) were undecided. While 273 (72.4%) people stated that they could get the COVID-19 vaccine, it was 295 (78.2%) who could get another vaccine other than COVID-19. After the COVID-19 pandemic, 103 (27.3%) people had a change in the opinion of vaccination compared to before, and 274 (72.7%) people did not change. It was found that the positive change (63.1%) in the opinion of vaccination was higher than the negative change.

It was determined that 65% (n=245) of the participants had difficulty in reading written health materials (SILS+). It was found that 34.1% (n=45) of those with SILS(-) and 23.7% (n=58) of those with SILS(+) had a change in their opinion of getting vaccinated after the COVID 19 pandemic compared to before. ($\chi^2=4.688, p=0.03$).

Conclusions: The risks posed by the epidemic have caused both positive and negative changes in vaccination opinion. However, the positive change is more than the negative change. The pandemic process can be considered as an opportunity to turn it into an advantage in vaccination.

Keywords: Covid-19, pandemic, vaccination

O-29

Radiological and Health Assessment of Indoor Radon

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Aim: Radon (²²²Rn) is a radioactive gas formed by the decay of ²²⁶Ra in the ²³⁸U chain found in all terrestrial materials. Radon gas is also a dangerous radionuclide that causes lung cancer, making up the total dose of ionizing radiation from all known natural and man-made sources. This study presents an evaluation of the indoor radon spatial variation within offices in the university buildings.

Methods: The ²²²Rn activity concentration measurements were performed for 19 different offices in winter and summer. ²²²Rn was determined by AlphaGUARD PQ 2000 radon monitor. In addition, the annual effective dose rates were estimated based on the measured ²²²Rn activity concentration.

Results: According to measurements in the university building, the highest indoor ²²²Rn activity concentration was found as 104±18 Bq/m³ in winter and found as 78±17 Bq/m³ in summer. The annual effective dose rate ranged from 0.12 to 1.08 mSv y⁻¹ in winter and ranged from 0.12 to 0.81 mSv y⁻¹ in summer.

Conclusions: The radon concentrations were found higher in winter than in summer due to lack of ventilation. The mean ²²²Rn activity concentration level is below the Turkey average (35 Bq/m³) and the world average (40 Bq/m³) in winter and summer. It has been found that the all estimated values of the annual effective dose rates are below the recommended action level of 3–10 mSv y⁻¹ by International Commission on Radiological Protection (ICRP).

Keywords: Radon, activity concentration, annual effective dose rate, health

O-30

Effects of Distance Education Method on Health Technician Education in the COVID-19 Pandemic

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Aim: The aim of the study is to evaluate the effects of the distance education model, which emerged due to the COVID-19 pandemic, on health technician education.

Methods: The study included 336 health technician students who received at least 1 academic year distance education from 10 different health technician programs of Trakya University Health Services Vocational School. The effect of distance education on health technician education was questioned with a five-point Likert-type questionnaire prepared by the researcher with literature support. Students' experiences and problems in the process of distance education were questioned.

Results: It was observed that 91% of the participants were connected to distance education by phone, 61% had problems with internet access, 70% had problems logging into the system, and 11% had problems with the device they used. 61% of the participants stated that the distance education method was not suitable for health technician education, 45% stated that their interest in the lessons decreased, and 38% stated that the distance education course materials were sufficient. 38% of the participants stated that online exams with distance education method were sufficient to measure success, and 51% stated that giving homework instead of exams would be more effective in measuring success. 50% of the participants stated that their lives became more unplanned during the distance education process, 62% stated that they could not socialize enough due to being away from the university environment, 64% stated that they would have problems in finding a job after graduating with distance education.

Conclusions: The results of our study show that health technician students who received distance education during the COVID-19 pandemic did not adopt the distance education model in health technician education, they experienced various technical problems related to distance education, and they had professional concerns for the future.

Keywords: COVID-19, health technician, distance education

O-31

Rates of COVID-19 in Nursing Homes in the English Literature: A Meta-Analysis Study

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Aim: To conduct a meta-analysis of the publications containing the COVID-19 positivity and death data of individuals living in nursing homes in the English literature in the first year of the pandemic.

Methods: The PRISMA 2020 reporting guide checklist was used. The study protocol was recorded in PROSPERO. Pubmed, Web of Science, Google Scholar, Scopus and Cochrane databases were searched until 01.03.2021 with “COVID-19”, “death”, nursing home”, “rest home”, “home for aged”, “eventide home” and “elderly care home” keywords by two researchers, and as a result, 408 studies were reached. Among them, 96 studies for being repetitive, and 290 studies for not including the number of patients diagnosed with COVID-19 and the number of deaths due to COVID-19 at the discretion of the physician in nursing home residents were excluded. The remaining 22 studies were found adequate using the Newcastle-Ottawa quality assessment scale. Open Meta Analyst demo program was used.

Results: COVID-19 attack rate in the elderly living in nursing homes was 37.3% (95% CI: 34.3-40.3) with 21,056 cases out of 228,998 residents and it ranged from 7.2% to 77.7%. Fatality rate was 25.7% (95% CI: 22.6-28.7) with 6,257 deaths out of 26,219 cases and it ranged from 11.8% to 43.4%. Mortality rate was 8.3% (95% CI: 7.4-9.2) with 5,128 deaths in 227,964 residents and it ranged from 1.4% to 27.4%.

Conclusions: The high rates of COVID-19-related rates in nursing homes have shown that they are an important risk group. In the later stages of the pandemic, re-evaluations should be made in this risky group and serious protective measures should be taken to ensure that they are less affected.

Keywords: COVID-19, nursing home, death, meta-analysis

O-32

Determination of Fear of COVID-19 and Levels of Anxiety and Hopelessness in University Associate Degree Students

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Aim: Covid-19, which was defined in 2019, spread rapidly all over the world and the disease it caused was declared as a global epidemic. Covid-19 can create acute or chronic effects by threatening the physical and mental health of people. It has been stated that people experience high levels of fear, anxiety, and stress during the times when Covid-19 cases and deaths increase. This study was carried out with the aim of determining the fear of Covid-19, anxiety, and hopelessness levels in university associate degree students.

Methods: The research was conducted in a cross-sectional-descriptive type with the students of Vocational School of Health Services of a university located in the Eastern Anatolia region between 26-27 October 2021. 970 students participated in the study. The data of the study were collected through web-based filling of the scale questions prepared by the researchers in line with the literature.

Results: The results revealed that the students were afraid of the coronavirus at a moderate level (17.01 ± 6.97) and had a low level of anxiety (1.24 ± 3.15). It was determined that Covid-19 fear and hopelessness levels differed significantly according to gender. The fear and anxiety levels of the students who lost a relative due to the coronavirus were found to be significantly higher than the students who did not experience the loss. A positive, moderate, and highly significant correlational relationship was determined between Covid-19 fear and anxiety levels and hopelessness scores.

Conclusions: The findings of this study reveal that students experience anxiety and fear due to Covid-19. It is thought that this situation causes hopelessness for the future. It is predicted that not knowing how long the disease will continue and the absence of a treatment option other than vaccination will further increase the anxiety, fear, and hopelessness experienced.

Keywords: Anxiety, covid-19, fear, hopelessness, pandemic

O-33

The Relationship Between Health Literacy Levels and Cancer Screening Behaviors of Women Aged Thirty and Over

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Aim: In this study, the was aimed determine relationship between health literacy levels and cancer screening behaviors of women aged 30 and over living in the central district of Edirne during the COVID-19 pandemic process.

Methods: This study, which was planned as a cross-sectional epidemiological study, was carried out in the central district of Edirne province between July and September 2021. The research consists of 301 participants aged 30 and over who agreed to participate in the study. As data collection form, an Information Request Form for sociodemographic characteristics and Turkey Health Literacy Scale-32 (THLS-32) were used.

Results: The mean age of the research group was 43.66±9.02 (min:30, max:70). The health literacy general evaluation score of the participants was found to be 28.18 ±7.55. When examining the health literacy status scores; the vast majority of the participants (80.7%) were in the insufficient-limited health literacy category.

The most known and applied screening by the majority of women is breast self-examination (75.4%). This is followed by breast examination under physician control (32.2%), pap smear test (21.9%), fecal occult blood examination (19.9%), mammography (13.6%) and colonoscopy (10.0%). Only 25.2% of the participants had at least one or more screening tests done during the COVID-19 pandemic period. Carrying out cancer screening tests; Age, education, employment status, family history of cancer and health literacy affect the mean scores (p<0.05). Also, a statistically significant difference was found between the mean health literacy score and self-examination and regular pap smears (p<0.05).

Conclusions: The research group's participation in cancer screening tests was low, and those with high health literacy were more likely to participate in screening tests. The Covid-19 pandemic period has affected participants' participation in screening tests. To encourage people to participate in screenings and to improve their health literacy, awareness-raising attempts for target groups should be increased.

Keywords: Covid-19, early diagnosis, women, cancer screening, health literacy

O-34

Evaluation of Hybrid Learning System by Medical Students in COVID-19 Pandemic

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Aim: Van Yüzüncü Yıl University is one of the few universities giving hybrid training in the Faculty of Medicine during Covid-19 Pandemic. In this process our students that are in 1,2,3,4 and 5. period were able to continue their education both online and the face. Intern students did their internship face to face. The aim of this study is to evaluate hybrid learning system from the perspective of medical school students during the pandemic process.

Methods: The questionnaire that contains 16 questions was prepared to evaluate the views on hybrid learning system of the students. The survey consists of age, gender, faculty proficiency, quality of the course, efficiency of the instructors, easy learning and permanence, fast solution, social environment and behavioral effect, technology availability etc. questions. Descriptive statistics of the data collected from the students by means of survey were calculated. In addition, the answers received from the students who are in preclinical(1-2-3) and clinical period(4-5) were compared.

Results: The number of responses from preclinical and clinical period students are 335(n=183 male, n=152 female), 140(n=80 male, n=152 female), respectively. "Face to face training is an advantage for us in pandemic process." The response percentage of those who agreed and strongly agreed with this statement in the preclinical and clinical period's students was 49.2 and 80 respectively. "I think the pandemic process is part of medicine training." The response percentage of those who agreed and strongly agreed with this statement in the preclinical and clinical period's students was 49.2 and 80 respectively.

Conclusions: Students are generally considered to be satisfied with this system. Also most of the students in the preclinic period expressed that the courses must be recorded in the online environment in the following years while most of the students in the clinical period have stated that physical conditions for face-to-face education are not sufficient.

Keywords: Feedback, hybrid, medical education

O-35

Investigation of Health Students' Levels and Attitudes to the COVID-19 Vaccine

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Aim: This study was planned to examine coronaphobia levels of students studying in field of health and their attitudes towards COVID-19 vaccine.

Methods: The universe of the descriptive study consists of all students studying at Sakarya University Vocational School of Health Services. In the study, it was aimed to reach entire universe without choosing a sample and a total of 734 people were included in the study. Descriptive Characteristics Information Form for the participants, Coranavirus Phobia Scale (CFO) and Attitudes towards the COVID-19 vaccine scale were used to collect the data.

Results: As a result of analysis of data, mean total score of KFD was 52.14 ± 13.52 , mean score of positive attitude towards COVID-19 vaccine was 2.92 ± 1.01 , and mean score of negative attitude towards vaccine of COVID-19 was determined as 3.07 ± 3.00 . In addition, women who are afraid of injections/vaccines have higher mean scores of KFS sub-dimensions and total scores than those who are not afraid of injections/vaccines ($p < 0.05$). When positive and negative attitudes of participants towards COVID-19 vaccine are compared, those who believe in effectiveness of COVID-19 vaccine compared to those who do not believe in effectiveness of vaccine; According to those who want to be vaccinated against COVID-19 and those who do not want to be vaccinated; compared to those who are not afraid of injections / vaccines; According to those who do not believe in traditional solutions and believe in these solutions; Positive and negative attitude scores for COVID-19 vaccine were found to be higher and statistically significant for those who did not decide on the basis of their religious beliefs and thought about getting vaccinated compared to those who did not think about getting vaccinated because of their religious beliefs ($p < 0.05$).

Conclusions: As a result, students' coronavirus phobia scale scores were above average and their coronaphobia levels were high. In addition, it was determined that participants had more positive attitudes towards COVID-19 vaccine and less negative attitudes. In this context, it is thought that it will be extremely important to develop strategies to increase level of knowledge, awareness and psychological well-being of the students so that they can cope with COVID-19 phobia.

Keywords: Health Students, coronaphobia, COVID-19, attitude

O-36

Post COVID 19 Syndrome and Musculoskeletal Problems

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Aim: In December 2019, a viral pneumonia cases of unknown causes was detected in Wuhan, China with symptoms as cough, fever, shortness of breath, sudden onset of an abnormal smell, loss, or impaired taste Coronaviruses disease 2019 (COVID-19). The longstanding effects of COVID-19 disease are still investigated. The main purpose of this study to inform post COVID 19 syndrome and musculoskeletal problems

Methods: This study was based on literature using secondary sources.

Results: COVID 19 has spread across the world, as of 25 October 2021, more than 243 million confirmed cases of COVID 19 and 4.9 million deaths had been recorded. The clinical features are variable from asymptomatic infection to fatal disease. Severe acute respiratory syndrome corona virus 2 (SARS CoV-2) is the responsible of COVID-19 disease. Fever, sore throat, cough and dyspnea are the most common symptoms of COVID-19. The incidence of myalgia arthralgia and fatigue was determined as %40, %15 and %85 respectively. The exact mechanism of SARS-CoV2 effects on musculoskeletal system is unknown. However, cytokine storm which is responsible of acute respiratory syndrome may be important factor for rheumatologically relationship with COVID-19 and muscle dysfunction. There are few studies about musculoskeletal problems in post COVID 19 patients. One study was reported most frequent symptom as fatigue and back pain. On the other hand, a study showed that the most common symptom as pain in the lower limb. The suitable rehabilitation program for patients with post-intensive care unit related includes exercise-based interventions such as muscle stretching, and joint range of motion. Education, pharmacological and non-pharmacological approach are the components of pain management. Physical rehabilitation programs are applied usually 6-12 weeks after discharge.

Conclusions: Early rehabilitation is known as important factor for plenty diseases. Early rehabilitation is necessary for post-acute COVID 19 patients to raise functional outcomes.

Keywords: Post-COVID 19, musculoskeletal problems, myalgia, rehabilitation

O-37

Determination of COVID-19 Awareness Levels and Implementation of Protective-Preventive Measures in University Associate Degree Students

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Aim: The world has once again witnessed a major health crisis due to an infectious viral disease reaching pandemic proportions. After the first case detected in Wuhan, China, it spread rapidly between continents. The new coronavirus disease (Covid-19) has affected the world with its contagiousness. Many measures have been taken to prevent the spread of the virus, and people's daily lives have changed suddenly and unexpectedly. Within the scope of the measures, the universities were closed and the distance education system was started. This study was carried out in order to determine the covid-19 awareness levels and the application status of protective and preventive measures in university associate degree students.

Methods: This cross-sectional-descriptive study was conducted with the students of Vocational School of Health Services of a university located in the Eastern Anatolia region between 27-28 October 2021. 714 students participated in the study. The data of the study were collected through web-based filling of the scale questions prepared by the researchers in line with the literature.

Results: The results showed that the Covid-19 awareness levels of the students differed significantly according to gender. Awareness level was not found to be significant in terms of having had the disease before. However, the awareness of students who had the Covid-19 vaccine was found to be higher.

Conclusions: The findings of this research revealed that female students had higher Covid-19 awareness levels. It is expected that this research will contribute to the existing literature and be a guiding reference for policy makers by determining the situation of applying protective-preventive measures in university students of the Covid-19 pandemic.

Keywords: Awareness, covid-19, prevention, protection

O-38

Detailed Characterization of 541 Anatomy Master Theses Between 1985-2021

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Aim: Anatomy is a science involved in medical education investigating normal shape and structure of human body, organs, and their relation with each other. The science of anatomy has passed through different stages throughout history, and has developed through the ages. The aim of this study is to guide young academicians who do research in the field of Anatomy in Turkey.

Methods: In this study, 514 anatomy master's theses published in Turkey from 1985 to 2021 through the National Thesis Center (Ulusal Tez Merkezi) were examined in detail. Theses were examined according to the characteristics such as permission status, the university in which they were published, the animal the research was conducted, the system used in the study, the gender of the author, and the title of the supervisor.

Results: In our ongoing study, it was determined that 471 of the high theses examined (9.8%) were with permission and 42 of them (8.2%) were unauthorized. According to the results, it was determined that the thesis authors were female with 63.2% and male with 36.8%. While 506 (98.6%) of the anatomy master's theses published to date were in Turkish, only 7 (1.4%) were written in English. In addition, according to the data obtained from this study, it was seen that only 51 universities published master's theses in the field of Anatomy in Turkey. According to the results of detailed analysis, 51.8% of the thesis studies were conducted on the musculoskeletal system. Additionally, 18.1% of the studies were carried out in animal experiments and 7.4% on cadavers. Other results will be shared with the participants at the congress.

Conclusions: This study has a statistical significance limited by being a quantitative study. Data obtained from the analysis will contribute to future qualitative studies.

Keywords: Anatomy, master's, thesis, quantitative study

O-39

Investigating Disinfectant Efficacy of Liquid Laundry Detergents Used in Infants

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Aim: As we know, babies are the most sensitive age group. Parents, especially mothers manage to care about their needs with care. One of the most important needs is cleaning of the laundry. Laundry detergents are expected to contain natural features such as being natural, free from harmful chemicals, and free from dirt and microorganisms. This study aimed to investigate the most widely used 12 different manufacturer's baby liquid laundry detergent disinfectant activities in Turkey.

Methods: Disinfectant efficacy was investigated by a qualitative suspension method using 4 different microorganisms obtained from Trakya University Faculty of Pharmacy, Pharmaceutical Microbiology Department culture collection.

Results: According to the results obtained, only D6 had an effect on *Enterococcus faecalis* in clean conditions at a concentration of twice there commended concentration in 15 minutes and at there commended concentration in 30 and 60 minutes. D7 was effective on *Staphylococcus aureus* in 15 minutes at 2 times the concentration recommended in clean conditions and 120 minutes at 2 times there commended concentration in moderate clean conditions.

Conclusions: Apart from these effects, liquid baby detergents were found not to be effective on standard bacteria. In the absence of chemicals, it is observed that the antimicrobial effect decreases when only organic and natural ingredients are used. Baby clothes; feces, urine, vomit, etc. such as laundry that can be quitedirty in terms of organic load. However, there is also a need for application tests, in which parameters such as temperature and washing time, which can increase detergent effectiveness, are also tested.

Keywords: Baby liquid laundry detergents, qualitative suspension test, antimicrobial efficacy

O-40

Antimicrobial Activity of Some Fungal Metabolites against Bacterial Strains

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Aim: Fungi are eukaryotic organisms that can produce different amounts and varieties of metabolites according to environmental conditions. Some of these metabolites are known to have anticancer, antioxidant and antimicrobial effects. In recent years, studies on the use of different metabolites and extracts obtained from microorganisms are important in breaking antibiotic resistance and preventing bacterial growth.

Methods: In this study, *Penicillium chrysogenum*, *Penicillium purpurogenum* and *Talaromyces funiculosus* were incubated in different environmental conditions and the metabolites formed; it was aimed to investigate the antimicrobial activities of *Staphylococcus aureus* ATCC 29213, *Enterococcus faecalis* ATCC 29212, *Escherichia coli* ATCC 25922, *Pseudomonas aeruginosa* ATCC 27853 and *Candida albicans* ATCC 10231 standard strains. The obtained fungal metabolites were coded using the medium from which they were produced and the fungal names. According to this; *P. chrysogenum* extracts obtained from media containing 2%-5%-7.5% sucrose were named as X1-X2-X3, respectively, *P. purpurogenum* extracts as Y1-Y2-Y3 and *T. funiculosus* extracts as Z1-Z2-Z3.

Results: As a result of our study, no antimicrobial activity was detected against the standard bacterial strains used in the study of X1-X2-X3 metabolites obtained from *P. chrysogenum*. Y1-Y2-Y3 metabolites obtained from *Penicillium purpurogenum* and Z1-Z2-Z3 secondary metabolites obtained from *T. funiculosus* were found to be effective on standard bacterial strains.

Conclusions: It is thought that the study can be a guide for further studies in this field and a resource that can be used in terms of detecting antimicrobial activity.

Keywords: *Penicillium chrysogenum*, *penicillium purpurogenum*, *talaromyces funiculosus*, metabolite, antimicrobial activity

O-41

Protective Effect of 8-Hydroxyquinoline-5-Sulfonic Acid on U87 Cell Lines Induced by Beta-Amyloid

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Aim: 8-hydroxyquinoline-5-sulfonic acid (8-HQS) is a small planar molecule with a lipophilic effect and its derivatives hold rich biological activities such as antimicrobial, antioxidant, anticancer, anti-inflammatory, and anti neurodegenerative activities. The present study was conducted to investigate the antioxidant activities of 8-Hydroxyquinoline-5-Sulfonic Acid.

Methods: In the study; the control group, the A β group, and the A β + 8-HQS group were obtained by adding 8-HQS to the A β group. Firstly, the cytotoxic potential of 8-HQS in U87 cells was investigated by the colorimetric MTT (3-4,5-dimethyl-thiazolyl-2,5 diphenyltetrazolium bromide) test. To determine the antioxidant status in the cell line treated with 8-HQS, examine the effects of total oxidant status (TOS), and total antioxidant status (TAS) were measured by the ELISA method.

Results: When compared to the control group, the TOS level was significantly decreased in the U87 cell line exposed to A β ; TAS levels were found to increase significantly. However, the application of 8-HQS to the A β -U87 cell line significantly increased TAS level; It was found that it decreased the TOS level.

Conclusions: In in vitro experiments, we determined that 8-HQS has a protective effect by increasing antioxidant parameters in the amyloid beta-induced cell line.

Keywords: 8-hydroxyquinoline-5-sulfonic acid, total oxidant status (TOS), total antioxidant status (TAS)

O-42

The Effect of the Rose Essential Oil Aroma on University Students' Learning and Short-Term Memory: A Randomized Controlled Trial

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Aim: This randomized controlled experimental study analyzes the effect of the rose essential oil aroma on university students' learning and recalling of information in short-term memory

Methods: The study sample consisted of 131 students who had never attended hypoglycemia management education (first year), who had recently attended this education (sophomore), and who had attended this education a long time ago (third year). The experimental group was administered a pre-test before the education, and rose essential oil aroma was administered for all tests during and after the education. The control group only received the education and was administered the tests.

Results: No statistically significant differences were found between the pre-test and post-test mean scores of the experimental and control groups in third year students but the differences between the mean scores on the tests administered on the 7th and 30th days were statistically significant. A statistically significant difference was found between the post-test mean scores obtained by the experimental group students who had (second and third year) and had not (first year) attended this education on the 7th day.

Conclusions: This study found that the smell of rose extract did not affect immediate learning (working memory). However, it also indicated that people can remember previously learned information more easily when they repeat it using the essential oil of *Rosa damascena*. The study results suggest that students should review their studies between the 7th and 30th days after learning information in order to benefit from the effect of the odor of rose extract.

Keywords: Odor, rose essential aroma, learning, memory

O-43

A Brief Overview of the Current State of Interaction between Bacteriophage (Phage) Therapy and Microbiota

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Aim: Microbiota dysbiosis is increasingly linked to microbiota-related disorders, according to recent research. To modify the microbiota, current treatments such as Fecal microbiota transplantation (FMT), the use of probiotics, diet management, and bacteriophages (phages) therapy have been investigated. Phages are natural predators of bacteria that infect bacteria by recognizing receptor proteins on the bacterial surface and having a high selectivity for certain bacteria. They play a crucial role in improving the microbiota's imbalance by regulating bacterial community balance. Due to the coat protein of phages, preclinical and clinical research have shown that phages can increase both immunity and act as an alternative and/or adjuvant to antibiotic therapy. The aim of this paper is to briefly summarize the interaction between phage and microbiota and the feasibility of phage therapy to cure illnesses by altering the microbiota.

Methods: The current relevant publications were searched using the keywords “Bacteriophage (phage) and Microbiota, Phage therapy, Microbiome therapy” in PubMed, Scopus, and Google Scholar database.

Results: In recent years, there has been an overwhelming interest in investigating the relationship between phage and microbiota. The use of lytic or temperate phages, in particular, might be an effective strategy for treating microbiota dysbiosis and microbiota-related disorders due to phages' innate capacity to target highly specific bacteria.

Conclusions: Novel therapeutic methods that may modify microbiota diversity, such as phage treatment, will play a key role in most microbiota-host interactions. In the future, the relationships between phages, microbiota, and hosts will need to be analyzed.

Keywords: Human microbiota, microbiome therapy, phage, phage therapy

O-44

Bibliometric Analysis of Publications in the Literature of Anthropometric Anatomy

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Aim: In this study, it is aimed to present a bibliometric analysis of the publications in the common field of "human anatomy" and "anthropology" disciplines.

Methods: In this analysis, publications on the Web of Science Core Collection between 1975 and August 2021 were evaluated. The publications were filtered to include binary combinations of the terms "anatomy-anatomical-anatomical" for human anatomy and "anthropometry-anthropometric-anthropometrical" for anthropometry. For the articles that fell into the search results more than once, one of them was included in the analysis. Publications on the veterinary anatomy excluded.

Results: A total of 2122 publications, in which 8984 researchers acted as authors, were included in the study. With 43 publications, "Chiarella Sforza" was identified as the author with the most publications. The most cited author was "Virgilio Ferrario" with 918 citations. The University of Milan has been identified as the institution with the most research with 54 publications. The most cited institution was Duke University with 1440 citations. Çukurova University from Turkey is in the 6th place of the list with 17 publications. USA with 401 publications, Italy with 177 publications and Turkey with 150 publications are in the top three countries. In these studies where 8183 different keywords were used, the 5 most frequently used keywords were "anthropometry"(435), "obesity"(185), "anatomy"(158), "growth"(122), "children"(116). The journal with the highest number of publications is "International Journal of Morphology" with 61 publications and 204 citations.

Conclusions: Bibliometric analysis can enable researchers to identify researchers, trends, research groups, journals and citation groups in their field of study. The data obtained through these analyzes can help researchers to get in touch with the right people and institutions, and to establish effective partnerships. It can also be a guide for states or institutions for the planning of scientific research or the effective use of resources.

Keywords: Anatomy, anthropometry, bibliometric analysis, web of science

O-45

Evaluation of the Relationship between Carrying Angle and Anthropometric Indices

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Aim: It was aimed to evaluate the relationship between right-left carrying angles and body mass index, body adiposity index and body shape index values known as anthropometric indices.

Methods: In our study, the carrying angle of the right-left upper extremities was measured directly with an anthropometric goniometer in 47 subjects (17 males, 30 females) aged between 18-30 years. Height, weight, hip and waist circumference measurements of the subjects were taken and body mass index, body adiposity index and body shape index, which were previously described in the literature, were evaluated. The statistical significance of the difference between the means of carrying angle and indices was evaluated.

Results: The mean values of the right and left carrying angles were determined as $160.3 \pm 5.5^\circ$ and $162.6 \pm 4.9^\circ$, respectively. A statistically significant difference was found between the right and left sides ($p=0.000$). There was no statistically significant difference between the right and left side in terms of gender. No statistically significant relationship was found between the carrying angles and the morphometric indices. The mean value of the left side carrying angle was found to be $156.3 \pm 4.0^\circ$ in individuals defined as obese according to body mass index, and $163 \pm 4.7^\circ$ in non-obese individuals. The difference between these measurements of the obese and non-obese groups was statistically significant ($p=0.029$). However, there was no significant difference between the right side carrying angles in terms of obesity.

Conclusions: It was observed that the left carrying angle related to obesity but the number of obese individuals in our study was low. As a result, it was confirmed that the evaluation between the genders and the sides will be more beneficial if more individuals are measured.

Keywords: Carrying angle, obesity, morphologic index, body mass index

O-46

Individuals' Knowledge of the Novel Coronavirus (SARS Cov-2) and COVID-19 Disease and Their Level of Fear of COVID-19

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Aim: This study was conducted to examine knowledge and fear levels of COVID-19 about the novel coronavirus (SARS CoV-2)/COVID-19 disease of individuals in the first period of the COVID-19 epidemic.

Methods: The study was carried out with individuals who agreed to participate in the study in Sakarya province through google survey after obtaining ethics committee permission from Sakarya University Faculty of Medicine Ethics Committee between 1 June-1 July 2020. Interview form consisted of three parts: demographic data, questions about COVID-19 disease and COVID-19 fear scale.

Results: 789 of the participants were women and the mean age was 32.75±10.33(18.00-75.00) years. While 61.9% of the participants reported that there was no change in the amount of cigarette and 59.7% alcohol consumption during COVID-19 pandemic period; 43.0% spent more time on social media and 45.2% spent more time on television and computer than usual. Increase in kitchen shopping in 65.1% of individuals, increase in eating habits in 50.8%, weight gain in 41.6%, decrease in physical activities in 68.4%, increase in sleep duration in 30.6%, decrease in sleep time in 26.4%, It was determined that 76.4% had an increase in their cleaning habits. As of June 2020, 1.5% (n:17) of the individuals were diagnosed with COVID-19 and 16.8% of them were found to have died due to COVID-19. Internet (68%), TV (61.2%) and social media (58.7%) were the leading sources of information about COVID-19. 86.3% of the individuals reported that they comply with quarantine rules, and 12.7% of them partially comply with rules. The mean score of the participants on the COVID-19 anxiety scale was found to be 18.52±6.13(7.00-35.00).

Conclusions: It is thought that the individuals who stay at home due to restriction measures during the pandemic period should develop healthy living habits permanently and develop strategies to increase the methods of coping with anxiety psychologically.

Keywords: COVID-19 pandemic, COVID-19 disease, fear of COVID-19, society, knowledge level

O-47

Evaluation of the Level of Knowledge and Consumption of Probiotics Knowledge Level and Consumption Status of Patients Who Applied to the Gastroenterology Outpatient Clinic

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Aim:The aim of this study is to evaluate knowledge level and consumption of probiotics knowledge level and consumption status of patients who applied to gastroenterology outpatient clinic.

Methods:The study was carried out in the gastroenterology outpatient clinic of Sakarya University Training and Research Hospital between September-November 2020. Ethics committee approval was obtained from Sakarya University Faculty of Medicine. An interview form was filled by researcher for the patients. The interview form consisted of questions containing demographic data and information about probiotic knowledge and consumption habits of the patients.

Results:66%(n:230) of the patients who participated in the study were female and the mean age was 44.4 years. 83% were primary school graduates, 15% were university graduates, and 2% were postgraduate degrees. 32% of the patients had at least one chronic disease and 38% of them smoked an average of 15 cigarettes per day. When the questions such as “*What is a probiotic? Do you know?*” were asked, 70% of the patients said that they heard this concept for the first time and 30% of them did not know what probiotics were. Only 22% of the patients were using probiotics. 12% of the patients received information from a specialist doctor, 8% of patients from friends and family acquaintances, 26% from advertisements, 7% from training-seminars, 11% from pharmacies, 36% from internet-social media. 27% of the patients thought that probiotics had positive effects on health. 88% of patients using probiotics reported that they benefited from probiotics.

Conclusions:In our study, we observed that probiotic knowledge levels and consumption habits of the patients who applied to gastroenterology outpatient clinic were low. Probiotics are important microorganisms for intestinal health and maintaining a healthy microbiota. Lack of information in patients causes low-consumption of these beneficial microorganisms. Multidisciplinary studies are necessary to improve level of knowledge and consumption habits.

Keywords: Probiotic, knowledge level, consumption situation, patient, gastroenterology outpatient clinic

O-48

**Open Heart Operations and Their Results in Bursa City Hospital, Which Was A
Pandemic Hospital During the COVID 19 Pandemic Period**

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Aim: We aimed to present the results of the operations performed in our clinic during the Covid 19 pandemic period for patients with coronary artery disease, heart valve diseases, and aortic vascular diseases.

Methods: All patients who underwent open heart surgery in our clinic during the Covid-19 pandemic period were included in this retrospective study. Demographic characteristics of the patients, operations performed, and intensive care processes were evaluated. Cardiac protection was performed using del nido cardioplegia multiple perfusion catheter in all patients in our open heart operations.

Results: 390 patients who underwent open heart surgery were analyzed retrospectively. During the pandemic period, isolated coronary bypass surgery in 318 patients, isolated aortic valve in 9 patients, isolated mitral valve in 10 patients, coronary and valve in 22 patients, cardiac myxoma in 4 patients, and aortic dissection in 27 patients were performed. The age range of the patients is between 34-94 and the mean age is 58 years. 317 cases were male and 73 cases were female. The operation of the patients who were diagnosed with Covid -19 before the operation was postponed until the completion of the treatment and isolation periods. We did not have any patient with Covid pneumonia in the postoperative period. Only one patient was diagnosed with Covid -19, the patient without lung involvement was transferred to the infection service for treatment.

Conclusions: Due to the progression of heart diseases, cardiac surgery can be performed with similar postoperative risks as in the pre-pandemic period, by taking necessary preventive measures during the Covid-19 pandemic process.

Keywords: Covid-19 virus, coronary artery diseases, heart valve diseases, aortic dissections

O-49

Phlegmasia Cerulea Dolens on COVID-19 Patient

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Aim: Numerous complications related with severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) have been observed during the worldwide pandemic. Physicians have observed considerable increase in thromboembolic events. The aim of this study is to alert physicians for a devastating complication of venous thromboembolism.

Case Presentation: A 62-year-old caucasian 62kg female with known diabetes for the past 20 years has presented with swelling, pulselessness and purplish color in her right leg. She was intubated for 6 days and right femoral vein catheterization was performed 2 days previously. Subcutaneous enoxaparine-sodium treatment for thromboembolism prophylaxis 4000 IU/ 0.4 ml once daily and 100 mg acetylsalicylic acid once daily via nasogastric tube. Physical examination showed only femoral artery pulse was palpable, popliteal and distal pulses were not palpable. Duplex ultrasonography showed iliofemoral deep vein thrombosis.

Results: As treatment enoxaparine dosage was increased to 6000 IU/ 0.6ml twice daily, femoral catheter was removed and leg was elevated. Next day distal pulses (tibialis posterior and tibialis anterior) were palpable and there was a significant decrease in swelling. Treatment was continued until discharge and patient was perscribed with DOAC (direct oral anticoagulant). At 6th month follow-up only slight swelling existed and in control duplex ultrasonography small amount of residual thrombosis with recanalization was present in deep crural region but no thrombus was present in popliteal, femoral and iliac region.

Conclusions: Phlegmasia cerulea dolens is a serious complication related with deep venous thromboembolism. Physicians in charge of treatment should always be alerted for venous thromboembolic events especially on intensive care unit patients. Due to early diagnosis and treatment no complications related to phlegmasia cerulea dolens such as pulmonary embolism or loss of limb was observed.

Keywords: COVID-19, phlegmasia cerulea dolens, thrombosis

O-50

An Emergency Surgical Pathology in A Patient Examined with A Pre-Diagnosis of COVID-19 Pneumonia in Different Centers for High Fever During the Pandemic Period: Gallbladder Perforation

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Aim: The impact of the Covid-19 pandemic on the health system has been evident for the last two years. The fact that one of the main symptoms of people infected with the virus is high fever, causes covid-19 infection to be considered primarily in patients with high fever symptoms at hospital admissions. In this article, it was aimed to present the emergency surgical pathology of the patient, who applied to different centers due to high fever and was examined by considering covid-19 pneumonia in the preliminary diagnosis.

Methods: The patient, who applied to different health centers with high fever and was thought to have covid-19 pneumonia within a week, applied to our clinic with the same complaints. After the physical examination, routine surgical laboratory tests and thoracoabdominal computed tomography(CT) were performed. As a result of the examinations, gallbladder perforation was detected. After starting antibiotherapy patient was admitted to the clinic to performed a colostomy catheter.

Results: Laboratory findings of the patient, who did not have the expected physical examination findings in gallbladder perforation and only high fever, had CRP elevation and a shift to the left in the hemogram. No findings compatible with covid-19 pneumonia were found in thorax CT. There were findings of closed gallbladder perforation in abdominal CT and no additional pathology was observed. The patient, who had purulent swelling for 2 days after catheterization, was discharged immediately after the laboratory values returned to normal, with the recommended antibiotics.

Conclusions: Although high fever suggests viral infection during the Covid-19 pandemic, intra-abdominal pathologies that may cause septic symptoms should not be forgotten in the preliminary diagnosis.

Keywords: Covid-19 pandemic, high fever, gallbladder perforation

O-51

Organ Transplant in the COVID-19 Pandemic; Single Center Experience

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Aim: COVID-19 is caused by infection with severe acute respiratory syndrome coronavirus 2 (SARSCoV-2) virus strain. It was reported to cause a pandemic by the World Health Organization in March 2020. In this study, it was evaluated that patients who underwent liver and kidney transplantation in our hospital during the pandemic were affected by COVID-19 disease.

Methods: Patients who underwent liver and kidney transplantation at Eskişehir Osmangazi University Medical Faculty Hospital between March 2020 and September 2021 and were followed up were included in the study.

Results: During this process, solid organ transplantation was performed in 26 patients, aged between 18-65 years. Liver transplantation was performed in 17 patients and kidney transplantation was performed in 9 patients. Tacrolimus and mycophenolate mofetil were started as immunosuppressive therapy. We did not have a patient with a positive polymerase chain reaction (PCR) test in the early post-transplant period. COVID-19 PCR positivity was detected in 4 of our patients, 1 of whom had kidney transplant and 3 of whom had liver transplant. The earliest PCR positivity was detected in the postoperative third month. Our COVID-19 positive kidney transplanted patient was followed up at home asymptotically. One of our 3 patients who underwent liver transplantation was followed up at home asymptotically, and two of our patients were followed up in the hospital. While there was a slight increase in liver enzyme values, no significant change was detected in bilirubin and INR values. Oxygen support was given to only one of our two patients who were followed up in the hospital. None of our patients required intensive care, invasive or noninvasive mechanical ventilation.

Conclusions: Decisions about how to manage and treat transplant patients with COVID-19 and whether to assume the risk of vaccination will become clearer as the case series grows and the evidence develops.

Keywords: Immunosuppressive, pandemic, transplantation

O-52

Intravenous Thrombolytic Therapy and Mechanical Thrombectomy in Pregnant Stroke Patients

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Aim: Pregnancy is a hypercoagulable state because of an increased production of endogenous clotting factors and reduced proportion of naturally occurring anticoagulants. Because of these conditions are increasing the risk of thrombotic events. Pregnancy is not a absolute exclusion criteria in the guideline for intravenous thrombolytic therapy in stroke. But there is currently no consensus on the use of thrombolytics in acute ischemic stroke in pregnancy. The aim of this study is to review the literature about thrombolytic therapy during pregnancy in the last three years.

Methods: In this study, we evaluated the articles published between 2018-2021 in Pubmed and Web of Science using the key words of pregnancy, intravenous thrombolytic therapy and stroke. Finally, this special issue were reviwed with ten article.

Results: There have been no randomized trials involving the use of thrombolytics in pregnancy. One of the articles was systemic review, published in 2020, consisting of literature up to 2017. One of them was retrospective study of The National Inpatient Sample from 2012 to 2018.

One of them was case series and 7of the articles were case reports. None of this article reported mortality or miscarriage during hospitalization.

Conclusions: Intravenously administered rt-PA has a short half-life of 4-5 minutes. The outcome of case reports in pregnant patients with stroke supports intravenous thrombolytic therapy is an effective treatment after consideration of the risk/benefit ratio. Both mechanical thrombectomy and IVT should be considered in patients with large vascular occlusion. There is a growing evidence about the issue.

Keywords: Pregnancy, stroke, intravenous thrombolytic therapy

O-53

Investigation of the Relationship Between Anxiety Levels and Postural Control and Balance in Meniere's Patients

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Aim: Patients with vestibular disorders are more likely to experience anxiety, which has been shown to influence postural stability. In this study, it was aimed to investigate the relationship between anxiety level and postural control and balance in Meniere patients and to compare the results with the control group.

Methods: In the study, there is an experiment group (Meniere patients) and control group (healthy individuals). Computerized dynamic posturography test was performed on both groups. Beck Anxiety Inventory was also applied to the experiment group.

Results: A total of 30 participants, 15 (7 men, 8 women) in the experimental group and 15 (8 men, 7 women) in the control group, took part in the study. The mean age of the experimental group was 45.13 ± 5.08 , and the mean age of the control group was 44.13 ± 4.45 . As a result of computerized dynamic posturography test, statistically significant correlation was found between control and experimental groups in terms of SKG area and right-left tendencies variables ($p < 0.05$). No statistically significant correlation was found between the computerized dynamic posturography test result and age, severity of attacks, duration of diagnosis and beck anxiety scores of the experimental group ($p > 0.05$).

Conclusions: The results of our study indicate that anxiety level alone will not affect postural control and balance in Meniere's patients. When compared to Healthy controls, Meniere patients have worse postural performance which is influenced by the presence of peripheral vestibular function.

Keywords: Anxiety, computerized dynamic posturography, meniere, vertigo

O-54

Overcoming Gastrointestinal Bleeding by Surgical Intervention in A Patient Infected with COVID-19

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Aim: The Covid-19 pandemic has affected the functioning of the surgical departments as well as the entire health system. In this article, it is aimed to explain the surgical treatment process after gastrointestinal system(GIS) bleeding in a patient who was operated for a right colon tumor and infected with the covid-19 virus in the postoperative period, and the difficulties encountered due to pandemic conditions.

Methods: A 67-year-old female patient was operated under elective conditions for a right colon tumor. He was examined due to high fever and respiratory distress on the 9th postoperative day and was transferred to the pandemic service after the covid-19 PCR test was positive. The patient, who did not have any postoperative problems for 9 days after the operation, was asked to be re-evaluated by us because she had hematochezia during her follow-up in the pandemic service. Active bleeding was detected in the ileocolic anastomosis line on the 17th postoperative day, and the patient was operated after taking the recommended precautions for emergency surgery.

Results: The surgery was performed successfully. The surgery was performed in the operating room specially prepared to perform the operations of patients infected with covid-19 and in conditions where all recommended protective equipment was used. In the retrospective evaluation made on the 14th postoperative day and no viral infection was detected in the team involved in the operation.

Conclusions: The Covid-19 pandemic causes serious concerns in all healthcare professionals about contact with infected patients. An emergency surgical intervention to an infected patient is very risky in terms of viral transmission. However, intervention is inevitable in life-threatening emergency surgical situations. As reported in the article, with special precautions to be taken, it is possible for patients infected with covid-19 to overcome major surgical interventions without transmission.

Keywords: Covid-19, gastrointestinal bleeding, emergency surgery

O-55

Routine Breast Check-Ups' Waning against the Covid – A Small but Significant Part of the Collateral Damage

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Aim: Hospital anxiety reached new heights during the pandemic. As a result; our already suffering breast check-up's took a heavy hit. This single center, low volume, descriptive study tried to illuminate the impact on general practice.

Methods: A total of 50 patients who applied to our clinic with breast symptoms or for routine breast check-up were surveyed with 6 questions including descriptive data as their age and education level, and also if they had postponed their routine visits or have they ever overlooked a breast symptom. The data was then processed with descriptive statistics and χ^2 test.

Results: Majority of patients claimed that they were reluctant for the routine visit with a percentile of %84. The cause of reluctance was explained by %60 as "being afraid of getting sick", %18 by "Covid Restrictions", and %22 by "others". A decisive number of patients (%54) admitted they have postponed their visits for more than 6 months. %46 were applying due to new onset symptoms while the rest were in for routine check-ups. Visiting patient's median age was 56; and the median education level was university graduate. Admitting patients were significantly more educated ($p<0,001$). %22 of the patients were on the high risk group. Sadly; 2 of the patients were diagnosed with breast malignity (%4) and 1 was metastatic (%2).

Conclusions: This survey, as very shallow, tries to enlight the depths of this pandemic's collateral damage. Our routine breast check_up numbers are down to nearly %40; and due to that low ratio, our detected malignity percentiles skyrocketed. We fear many patients will be diagnosed in the late stages.

Keywords: Covid-19, pandemic, routine, breast, check-up

P-1

Comparison of Inpatient Child and Adult Patients Diagnosed with COVID-19 in Kırklareli Province in 2020

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Aim: It is aimed to provide information about the course of COVID-19 infection in children by comparing the hospitalization rates of adult and pediatric patients (under 18 years of age) who were diagnosed with COVID-19 in Kırklareli in 2020.

Methods: The number of patients diagnosed with COVID-19 and hospitalized in 2020 in Kırklareli and State Hospitals were examined.

Results: In the center of Kırklareli, 26.8% of 4392 adult PCR positive patients in the district were hospitalized in Kırklareli Training and Research Hospital (KEAH); It was seen that 10.1% of 641 pediatric PCR-positive patients were admitted to KEAH. In Lüleburgaz district, 7.9% of 7159 adult PCR-positive patients were admitted to Lüleburgaz State Hospital (LDH); It was seen that 0.1% of 939 pediatric PCR-positive patients were hospitalized for LDH. In Babaeski district, 4.6% of 1707 adult PCR-positive patients were admitted to Babaeski State Hospital (BDH); It was observed that 0.7% of 153 pediatric PCR-positive patients were admitted to BDH. In Vize district, 7.7% of 1045 adult PCR positive patients were admitted to Vize State Hospital (VDH); It was seen that 5.9% of 85 pediatric PCR-positive patients were hospitalized for VDH. In Pınarhisar district, 9.8% of 631 adult PCR-positive patients were admitted to Pınarhisar State Hospital (PDH); It was observed that 1.7% of 58 pediatric PCR-positive patients were admitted to PDH.

Conclusions: It appears that children with Covid-19 show milder symptoms compared to adults and require less hospitalization and hospitalization.

Keywords: COVID-19, hospital, child, adult, hospitalization

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Subepithelial Connective Tissue Graft: A Case Report

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Aim: Gingival recessions are a common condition in periodontology clinics. Miller class I and II gingival recessions show a complete closure prognosis under appropriate clinical conditions. Subepithelial connective tissue graft can show full success under adequate nutritional conditions. The purpose of this case report is to present a case with complete closure with subepithelial connective tissue graft.

Methods: A 37-year-old female patient without any systemic disease; She applied to the periodontology clinic with complaints of sensitivity and gingival recession. In the intraoral examination, gingival recession was observed in the left mandibular premolar region. No periodontal bone defect was found in the radiographic examination of the patient. Subepithelial connective tissue graft surgery was decided 4 weeks after the initial periodontal treatment. The half-thickness flap is lifted by making a horizontal incision passing 2 mm apical to the papillae and two vertical incisions passing 1-2 mm away from the gingival margin of the adjacent teeth. The flap is raised beyond the mucogingival fold. Root fix is done. To take a graft from the palatal region, a horizontal incision is made at a distance of 5 mm from the gingival margin in the molar and premolar region. connective tissue is removed, adipose tissues are cleaned. The graft is adapted to the root surface and sutured to the periosteum with a resorbed suture. The previously raised flap is placed over the graft and sutured with an interdental suture. periodontal paste is placed. Stitches are removed after 10 days.

Results: Class I and II Miller gingival recessions due to different causes can be closed with a subepithelial connective tissue graft.

Conclusions: In this case with Miller Class I gingival recession, it was reported that the patient's complaints (aesthetic deficiency and dentin hypersensitivity) were treated with subepithelial connective tissue graft surgical technique.

Keywords: Subepithelial connective tissue graft, marginal tissue recession, root coverage

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**COVID-19 Associated Pulmonary Embolism in Pediatric Patient:
A Case Report**

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Aim: Coronavirus disease 2019 (COVID-19) is associated with pulmonary embolism in adults, but the clinical circumstances surrounding its presence are unknown in children.

Methods: We describe a case of a teenager with pulmonary embolism with COVID-19, evaluate patient characteristics and describe treatments applied.

Results: 15 years old obese female with a measured weight of 109 kg (body mass index 35,59 kg/m²) with no other underlying diseases was applied to hospital with headache, dizziness, weakness, loss of taste and smell, cough, nausea, and fever ongoing for 20 days. Nasopharyngeal swab for SARS- COV-2 RT-PCR was positive. (Delta variant) Patient was discharged without any medication, 12 days after discharge, she was admitted to the hospital with complaints of chest and back pain. Patient's family history was positive for thromboembolism. Contrast-enhanced thorax computed tomography showed pulmonary embolism. She was hospitalized with low molecular weight heparin, cefotaxime, clindamycin, favipravir, proton-pump inhibitor treatments. Thrombophilia panel tests were performed.

Conclusions: This case highlights the relationship between COVID-19, obesity and thrombotic complications. Thrombotic complications in children with COVID-19 are not as well described as in adults, perhaps due to the less severe nature of the disease in younger patients. This case had a particular set of known risk factors that likely contributed to her thrombotic complications, particularly obesity.

Keywords: COVID-19, coronavirus, pneumonia, pulmonary embolism



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BOOK OF ABSTRACTS

NURSING

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The Effects of The Covid-19 Epidemic on Turkish Nurses

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Aim: In this study, it was aimed to determine the emotional state and diversity experienced by nurses during the Covid-19 process, their reactions to uncertainty and the level of stress they perceived, and to determine some socio-demographic and personal variables affecting this situation.

Methods: It is a descriptive-cross-sectional study. Data were collected digitally via Google Form between June and October 2020. The questionnaire used in the study; socio-demographic, personal and work-related information form, "The Intolerance of Uncertainty Scale", "The Perceived Ability to Cope with Trauma Scale", "The Perceived Stress Scale" and "The Emotion Thermometer". Descriptive, difference and correlation analyzes were used in data analysis. Ethics committee and Ministry of Health approval were obtained for the study to be conducted.

Results: 110 nurses participated in the study and the mean age of the nurses was 29.83 ± 6.51 and 74.5% of them were women. 46.4% completed their undergraduate education formally. 53.6% had "partial" knowledge about Covid-19. 65.5% had contact with a Covid-19 patient. While the level of finding the profession as risky before the epidemic was 6.71 ± 1.97 , it was 9.21 ± 1.64 during the epidemic period. Those who thought to quit their job "quite often and very often" were 21.0%. In the process of data collection, it was found that there was a negative correlation between the thought of continuing to work as a nurse and the Perceived Stress Scale and its sub-dimensions, and a positive correlation between the total score of the Perceived Ability to Coping with Trauma Scale and the Trauma Focus sub-dimension. There was a positive correlation between thinking about leaving work in the last month and the Perceived Stress Scale and its sub-dimensions, a negative correlation between the Perceived Ability to Coping with Trauma Scale total score and the Trauma Focus sub-dimension, and a positive correlation with the Intolerance of Uncertainty Scale total score and Prospective Anxiety sub-dimension found.

Conclusions: It was found that nurses were in an above-average sense of uncertainty, anxiety and stress during the Covid-19 pandemic, awareness of the risks of the profession increased, and they reviewed their status in continuing the profession or quitting the job.

Keywords: Covid-19, intolerance to uncertainty, coping with trauma, nurse, emotion

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The Relationship Between Nurses' Levels of Knowledge, Perception and Belief About Covid-19 and Intent to Left the Work: A Study in Turkey

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Aim: In this study, it was aimed to determine nurses' knowledge, perceptions and beliefs about Covid-19, intention to leave and related factors.

Methods: It is a descriptive-cross-sectional study. Data were collected digitally via Google Form between June-August 2020. The prepared questionnaire was used in conjunction with the literature on socio-demographic, work, personal characteristics, knowledge, perceptions and beliefs about Covid-19. Descriptive, difference and correlation analyzes were used in data analysis. Ethics committee and Ministry of Health approval were obtained for the study to be conducted.

Results: 153 nurses participated in the study. It was found that 73.9% of the nurses were female, mean age was 28.69 ± 6.33 , and 47.1% had a formal undergraduate degree. 61.4% were not willing to care for a Covid-19 patient. 54.2% thought they had enough information about Covid-19. The mean score of the information form was 8.82 ± 0.40 , and 83.0% answered the whole form correctly. 42.5% had the perception that they were not adequately informed during the pandemic. 78.4% thought the rapid test kit was unreliable. 60.8% had a belief that Covid-19 was a biological weapon and 54.2% had a belief that Covid-19 was related to the diet of the Chinese. 39.2% believed that Covid-19 was a punishment from God/Allah and 29.4% believed that it could be protected by prayer. The anxiety level of the nurses was 7.06 ± 2.40 and the level of self-confidence was 3.90 ± 2.70 . It was determined that the turnover intention and the anxiety and fear score levels were positively correlated with the hope, self-confidence and non-scientific belief scores.

Conclusions: In the light of these findings obtained in the early days of the pandemic, it was found that uncertainty and constantly changing information caused concern for nurses and they did not trust the information they had enough. It was found that this gap could be filled with unscientific beliefs. It is thought that a positivist perspective should be gained in the education of nurses and solutions should be produced for infodemic.

Keywords: Nurse, Covid-19, knowledge, belief, turnover intention

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Health Perception of Individuals Between 20-64 Years in the Covid-19 Pandemic

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Aim: In this study, it was aimed to determine the health perception of individuals aged 20-64 in the Covid-19 pandemic.

Methods: Individuals aged 20-64 who lived in Istanbul and agreed to participate in the study, were literate, answered the questions completely, and were aged 20-64 were included in the study. Data were collected questionnaire form and Health Perception Scale (SAS). In the evaluation of the data; independent groups t-test, One-Way ANOVA test and Pearson Correlation Analysis were used.

Results: The mean age of the individuals participating in the study was 27.85 ± 9.86 years, the mean body weight was 65.40 ± 15.20 kg, and the mean height was 166.84 ± 9.17 cm. It was stated that 64.9% of the participants stated their general health status as good, 89.2% did not have any chronic diseases, 49.2% did not do physical activity during the pandemic, and 61.9% stated that the pandemic changed their eating habits. It was concluded that the individuals' total mean score of SAI was 43.80 ± 6.30 , and the highest mean score of the sub-dimensions was 11.79 ± 4.14 , which belonged to the control centre sub-dimension. A statistically significant difference was found between the precision sub-dimension according to the general health status variable and the importance of health sub-dimension according to the current weight assessment variable ($p=0.001$).

Conclusions: As a result of this research, it was determined that the health perceptions of individuals in the Covid-19 pandemic were also at a moderate level. It is recommended that more studies with larger samples be conducted on the health perception and health behaviours of the society in the Covid-19 pandemic.

Keywords: Covid-19, pandemic, health perception

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Image of Male Nurse in Nursing Profession

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Aim: This study was carried out in order to draw attention to the perception of male nurses by the society in the nursing profession and to contribute to the professionalization of the profession and the increase of social status by the participation of male nurses in the nursing profession more.

Methods: This review was created by scanning databases such as Pudmed, Google Akademik, Science Direct, Ulakbim, Dergipark, and examining studies on gender and male nurse perception in the nursing profession. The MeSH (Medical Subject Headings) index was used for English keywords.

Results: The feelings of care, feeding, healing and compassion for the individual for many years have been identified with the roles of women and motherhood in the nursing profession. In the nursing profession, which has the concept of care at its core, the important thing is not the gender of the care giver, but the quality of the care given. The quality of care will emerge with the nurse's knowledge, success and skill in practice, as well as experience. In this direction, it is stated that nurses' giving qualified care and their success in practice are more important than gender, and the quality of care should be emphasized instead of gender discrimination. Studies have revealed that a part of the society still sees the nursing profession as a female profession and that male nurses are sometimes distressed by the society.

Conclusions: It is important for male nurses to take more roles in the field, to provide education to the society that the nursing profession can be practiced by both genders, and to raise awareness of high school students who will choose a university and a profession.

Keywords: Nursing, male nurse, gender, profession image

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**Healthy Lifestyle Behaviors of Vocational School of Health Services Students
During the Covid-19 Pandemic Period**

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Aim: The goal of this study is to evaluate healthy lifestyle behaviors of students of the Vocational School of Health Services during the Covid-19 pandemic period.

Methods: A descriptive survey was undertaken online among 425 university students who attended the Vocational School of Health Services during the 2019-2020 Academic Year. All were accepted to participate in the research and maintained sufficient internet access. Data were collected through a "Participant Information Form" consisting of questions regarding personal information and pandemic experiences, as well as a "Healthy Lifestyle Behaviors Scale-II".

Results: It was discovered that the students worried significantly about being infected with Covid-19 or infecting someone else, which led to changes in sleep, hygiene, movement, diet, school and social life. Of all the practices recommended for reducing the risk of infection during the pandemic, it was found that the students adapted firstly to increased hand washing, and second to wearing a mask. The adjustment to social distancing was lower. A difference was found in the healthy lifestyle behaviors of the students according to demographics, fear of infection, compliance with prevention recommendations and the changes in their lives ($p < 0.05$).

Conclusions: It is recommended to include current scientific information about Covid-19 in the educational process, increasing student awareness, especially in regard to social distancing practices, and to generally support healthy lifestyle behaviors.

Keywords: Covid-19, healthy lifestyle behaviors, student, health services.

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Determination of the Relationship Between Parent Health Belief and Coronavirus Anxiety Levels of Mothers During the Pandemic

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Aim: This research was carried out as a descriptive and cross-sectional study between 20 August 2020-20 February 2021 for the purpose of determination the relationship between parent health belief and coronavirus anxiety levels of mothers.

Methods: The sample of the study consisted of 597 individuals who accepted to participate in the study. Number-percentage calculations, mean, standard deviation, independent t test and ANOVA, Spearman Correlation and Linear regression tests were used in the evaluation of the data.

Results: In the study, %49,7 of the mothers were between the age of 30-38. %61,1 of the mothers graduated from university and %50,9 of them working. The total mean score of the mothers on the Parental Health Belief Scale (PHBS) was 69.62 ± 8.33 and the mean score of the Coronavirus Anxiety Scale was determined as 8.14 ± 4.16 . A statistical difference was found between the participants' family type, having a person with Covid-19 in the family, the situation of keeping their child in crowded environments, and their anxiety about their education and their PHBS score ($p < 0,05$). The relationship between the variables of mothers' family type, socio-economic status, having someone with Covid-19 in the family and worrying about the education of the child and the coronavirus anxiety levels were found to be statistically significant ($p < 0,05$). The relationship between mothers' age, education status, employment status, number of children, presence of chronic disease, chronic disease in child/children and coronavirus anxiety levels is statistically insignificant ($p > 0,05$). There is a statistically significant difference between the mothers' Coronavirus Anxiety Scale scores and the PHBS score ($p < 0,05$).

Conclusion: Mothers with high parental health belief levels were also found to have high coronavirus anxiety levels.

Keywords: Covid-19, parent, health belief, anxiety

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Work-Family Life of Nurses in the Pandemic Process: A Qualitative Study

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Aim: This study aims to examine nurses' experiences in family and work life during the pandemic process.

Methods: The research was carried out with the nurses working in a state hospital in a province in Turkey, using the phenomenological qualitative research method. Nurses who have been working as a nurse for at least 1 year and have been married for at least 1 year voluntarily agreed to participate in the study. Semi-structured qualitative interviews were conducted with 15 nurses. The evaluation of the data was determined by the content analysis technique.

Results: In line with the data obtained from the research, four themes as effects on work-life, effects on family life, individual effects, and coping strategies were reached. Sub-themes were determined under each theme. During the pandemic, nurses stated that they experienced difficulties due to lack of personnel in work life and increased working hours, as well as decreased motivation due to financial dissatisfaction and feelings of worthlessness, and feelings of anxiety towards their colleagues. They stated that they were afraid of the spread of the disease to their families, they were away from their families, there was a change in the roles of spouses and parents, and they spent less time with their children. During the pandemic process, individually, they emphasized their physical and emotional fatigue and the happiness of the individuals they care for when they recover. In addition, nurses stated that they used both effective methods such as directing to various coping activities and suggestion and ineffective methods such as procrastination and increase in irrational thoughts.

Conclusions: Since the increase in the workload of nurses and the worsening of working conditions affect family life in the pandemic, it is recommended to evaluate family and work life as a whole in coping with problems.

Keywords: Family, nurses, pandemic, work life

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How Should Nurse Workforce Plan in Health Policies After the Covid-19 Pandemic?

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Aim: Developing recommendations for nursing workforce planning after the Covid-19 pandemic.

Method: The relevant literature was searched.

Results: According to the latest data of the World Health Organization (WHO), it has been reported that approximately 250 million people have contracted this disease and 5 million people have died due to the Covid-19 epidemic, and more than 115,000 of them are healthcare workers, the majority of whom are nurses. According to the data of the Organization for Economic Cooperation and Development (OECD), our country is in the last place with the number of nurses per 1,000 people. Despite the insufficient number of nurses in our country, the International Council of Nurses (ICN) reported that there is a need for 10 million nurses worldwide by 2030. The increase in the workforce and burnout in nurses due to the Covid-19 pandemic, the aging of the nurse workforce and increasingly difficult working conditions are not included in this calculation, and it is thought that the number may be higher.

Conclusions: While planning nurse workforce of health policy developers in countries; Continuous education, awareness and support are of great importance to cooperate with international health organizations and professional organizations, to take into account the problems from nursing professional groups and the field, to include global health problems such as pandemics by nursing professional groups throughout their working lives. In addition, while developing health policies, nurse workforce planning should be done systematically, taking into account the characteristics such as nurses' intention to leave, burnout levels and age.

Keywords: Covid-19, health policy, nursing, workforce

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**Examination of the Burnout Levels of Healthcare Professionals and Related Factors
During the Covid-19 Pandemic Period in Turkey**

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Aim: The aim of the study is to examine the burnout levels of healthcare professionals and related factors during the Covid-19 pandemic in Turkey.

Methods: The research is in descriptive and cross-sectional design and was carried out between 10.05.2021 and 10.08.2021. Sampling were included all healthcare workers who were actively working in Turkey during the Covid-19 pandemic and agreed to participate in the study. The research data were collected through the internet (online) with the participation of 478 health workers due to pandemic measures. Healthcare professional information form and Maslach Burnout Scale (MBI) were used to collect data.

Results: 63.6% of the participants were working in a public institution and 56.1% were not satisfied with their working conditions. 80.5% of the sample gave an insufficient answer to the question of "salary received according to working conditions". Emotional exhaustion ($p<0.001$) and depersonalization ($p=0.007$) scores were found to be higher in those who lived separately from people they normally live with. Emotional exhaustion and depersonalization scores of nurses were found to be significantly higher than doctors and other healthcare professionals ($p<0.001$). Emotional exhaustion ($p=0.011$) and depersonalization ($p=0.001$) scores of those working in public institutions were higher than those working in private institutions, and personal achievement scores ($p<0.001$) were lower.

Conclusions: It is recommended to improve working conditions, closer monitoring of employees in high-risk units and psychological support in order to prevent or reduce the burnout of health workers during the pandemic period.

Keywords: Covid-19 pandemic, healthcare professional, burnout

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**Determining the Relationship Between Covid-19 Fear and Covid-19 Hygiene Behavior
in Adults**

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Aim: This research was carried out as a descriptive and cross-sectional study between January and April 2021 in order to determine the relationship between Covid-19 fear and Covid-19 hygiene behaviors in adults.

Methods: The sample of the research consisted of 1876 individuals who accepted to participate in the online survey with the snowball sampling method and completed the research completely. Research data were obtained with an introductory questionnaire, Covid-19 Fear Scale and Covid-19 Hygiene Behavior Scale. In the analysis of the data, number-percentage calculations, mean, standard deviation, independent t test and ANOVA, Spearman Correlation and Linear regression tests were used.

Results: 35.6% of the participants are between the ages of 18-25 and 75.1% are women. 15.8% of the participants had coronavirus, and one of the relatives of 85.4% had coronavirus. The mean score of the individuals on the Covid-19 Fear Scale was found to be 19.512 ± 6.891 and the total mean score of the Covid-19 Hygiene Behaviors Scale was found to be $105,348 \pm 18,610$. Covid-19 Fear Scale mean scores were found to be high for women, primary/secondary school graduates, those who do not work, those who live in villages/towns, those whose income is less than expenditure, those who live with an individual with a chronic disease, those who pay more attention to hygiene than before the pandemic, and those who think that hygiene protects from coronavirus. ($p < 0.05$). As the age and education level of the individuals increased, the mean scores of Covid-19 Hygiene Behaviors decreased; Covid-19 Hygiene Behavior score averages are higher for women, working/working from home, married, having a large family, having no children, living in the central regions of Turkey and the district center, having less income than spending, living in the same house with individuals with chronic diseases detected ($p < 0.05$). In addition, it was determined that those who were worried about the coronavirus, who paid less attention to hygiene before the pandemic, who thought that the hygiene rules were protective, had higher Covid-19 Hygiene Behavior mean scores ($p < 0.05$).

Conclusions: As the Covid-19 fear levels of individuals increase, the Covid-19 Hygiene Behaviors also increase

Keywords: Covid-19, pandemic, fear, hygiene

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Importance of Vaccine in Covid-19 Pandemic and Vaccine Hesitancy of Communities

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Aim: The study was carried out with the aim of evaluating the studies on the importance of the vaccine during the Covid-19 pandemic process and the vaccine hesitancy experienced by individuals, and raising awareness in order to make the necessary arrangements in the education process of the society in line with the information obtained.

Methods: As a result of the literature review, studies on the subject were evaluated. Interpretations were made by comparing the results of research conducted around the world on vaccines.

Results: Societies have taken a number of measures to prevent the Covid-19 epidemic. These measures implemented to prevent the transmission of the virus were insufficient and caused many economic and psycho-social problems. The Covid-19 vaccine is therefore critical in containing and potentially ending the pandemic. Citizens in many countries regarding the Covid-19 vaccine, which is one of the fastest vaccines developed to date, have expressed their doubts about the safety, effectiveness and side effects of the vaccine, and the country where the vaccine was produced. The most worrying issue for public health is vaccine hesitancy, which can be defined as indecision, reluctance, concerns about vaccines, or delay in receiving vaccines. The World Health Organization has recognized vaccine hesitancy as one of the top ten health threats globally. Studies show that individuals hesitate to get vaccinated and some of them refuse to be vaccinated. Socio-demographic characteristics, individual beliefs and experiences of individuals affect their intention to be vaccinated. There are also differences in the acceptance rate between countries. In addition, people who have been informed about the safety/efficacy of the vaccine are more likely to accept the vaccine.

Conclusions: It is necessary to understand societies' perceptions, fears, doubts or thoughts about the benefits of the vaccine. It is important to organize trainings on the subject for all segments of the society and to cooperate between sectors in order for the training campaigns to be effective.

Keywords: Vaccine, vaccine hesitancy, covid-19, community education.

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**Nursing Students' Opinions About the COVID-19 Vaccine:
A Descriptive, Cross-Sectional Study**

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Aim: This study aims to identify the nursing students' opinions about the COVID-19 vaccine.

Methods: This descriptive design study was realized with 1008 students enrolled in the nursing departments of four universities located in Istanbul. The study data was collected online with the "Information Form".

Results: In the study, 85.7% of the students did not get a COVID-19 vaccine, and 44.8% of the unvaccinated students did not think about getting a vaccine or were indecisive. The reasons for the students' not thinking about getting the COVID-19 vaccine or their indecisiveness about it were most frequently the vaccine having been produced in a very short time, not trusting the protection or content of the vaccine, not having enough information about the vaccine, thinking that the vaccine has so many side effects, having read/heard negative statements about the vaccine, vaccine fatalities, fast approval of the vaccine by institutions, and thinking that it is an individual right to be an anti-vaxxer. 56.7% of the students stated they did not have sufficient information about the COVID-19 vaccine, and 68.8% followed scientific studies about the COVID-19 vaccine. 77.7% of the students stated they might recommend their relatives to get a COVID-19 vaccine, and 54.1% stated that the COVID-19 vaccine should be compulsory. A significant difference was found between the students' grade in school ($p = 0.000$), type of university ($p = 0.000$), knowledge level about the COVID-19 illness ($p = 0.028$) and vaccine ($p = 0.000$) and their thinking about getting vaccinated.

Conclusions: It was found out that a tiny part of the students was vaccinated; almost half of the unvaccinated students did not think about getting vaccinated or were indecisive. Understanding the student's perspective on the COVID-19 vaccine can be helpful in planning multidisciplinary education strategies.

Keywords: COVID-19, immunization, nursing, students, vaccination, vaccines

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It Was Difficult, But Our Struggle to Touch Lives Gave Us Strength’: The Experience of Nurses Working on COVID-19 Wards

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Aim: The present study aimed to explore Turkish nurses’ experience of working at COVID-19 pandemic units.

Methods: The present study was conducted by using methodology of classic grounded theory. The study was conducted with 15 nurses were those who were working in COVID-19 pandemic units and a willingness to participate in this study. The present study was conducted at a public hospital in Turkey. The data were collected through in-depth, online interviews by telephone. Data were analysed using open, axial and selective coding, representing a hierarchical, systematic approach. The constant comparative method was also used. To achieve rigour, TACT framework was considered.

Results: The core category was generated: ‘It was difficult working in the unknown, but our struggle to touch lives gave us strength’. Core category presents that all nurses felt both heroic, with the satisfaction of touching patients’ lives, and uncertain. Four main categories also emerged: being in the pandemic; empowerment for coping with the struggle; challenges during the coping process; and effects of the pandemic on life). The nurses described different emotional responses, but they felt part of a heroic struggle. They had many resources to empower them to cope with the struggle but also faced challenges during the coping process. The nurses working in the pandemic feel it has affected their lives, in terms of the meaning of their lives, psychological symptoms and voluntary social isolation.

Conclusions: Some factors which are feeling that nursing is sacred and being valued by society, and comprehensive support were determined as a facilitator for coping with the process. Difficulties were described as fear of infecting others, adapting to many new elements, the learning process and a lack of understanding of their role as team members. The nurses have experienced some effects of COVID-19 on their lives.

Keywords: Coping process, COVID-19, experience, grounded theory, nurses, pandemic

O-69

Healthcare People's Coating with Uncertainty and Humor During COVID-19

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Aim: This research was conducted in a descriptive-relation-seeking type to examine the intolerance of uncertainty and coping with humor in healthcare workers during the COVID-19 process.

Methods: The sample of the study consisted of 415 healthcare professionals between 30 March and 30 April 2021. Research data were collected via digital channels with the 'Personal Data Collection Form', 'Intolerance of Uncertainty Scale (BTS-12)' and 'The Scale for Coping with Humor in the Workplace'.

Results: The mean age of the participants was 31.84±7.82 years, 76.6% were women, 51.6% were single, 58.8% were undergraduates, and 68.7% were nurses/midwives. 68.4% of the participants reported that they worked in public hospitals and 48% in specialized units. 64.1% of the participants were working in units with patients diagnosed with COVID-19, 68% had a patient who died due to COVID-19, 30.4% had COVID-19 infection, and 32.3% had COVID-19. They said he had a relative who died because of it.

Conclusion: In the current study, many factors were analyzed with intolerance to uncertainty, but no significant relationship was found. However, in situations where uncertainty prevails, it is seen that healthcare professionals use more humor to cope with; situations that may be more traumatic for them (when they are diagnosed with COVID-19 and have a relative who died from COVID-19); It was determined that they could not use humor as a coping method.

In the study, it was concluded that the total score of intolerance to uncertainty was 36.73 ± 10.11 and moderate, and the total score of the scale of coping with humor in the workplace was 57.85 ± 18.62 and lower than moderate. It is thought that by determining effective coping methods with the data obtained as a result of the research, it can be helped to protect and maintain the mental health of health workers.

Keywords: Healthcare professionals, intolerance of uncertainty, coping with humor

O-70

Factors Affecting COVID-19 Vaccine Literacy and Attitudes Towards COVID-19 Vaccine

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Aim: This research was conducted to determine the factors affecting COVID-19 vaccine literacy and attitudes towards COVID-19 vaccine.

Methods: This descriptive study was conducted with the participation of 472 people. The Descriptive Characteristics Questionnaire, the COVID-19 Vaccine Literacy Scale and the Attitudes towards the COVID-19 Vaccine Scale were used to collect the data of the study. For the research, research permission from the Ministry of Health Scientific Research Platform, ethics approval from the University Ethics Committee and the consent of the participants were obtained. Data were collected with electronic data collection forms created through Google Forms.

Results: It was determined that the mean scores of the participants on the COVID-19 Vaccine Literacy Scale and the functional vaccine literacy and interactive/critical vaccine literacy subscale scores were 2.90 ± 0.45 , 2.74 ± 0.71 and 2.98 ± 0.62 , respectively. It was determined that the mean score of the Attitudes Towards the COVID-19 Vaccine Scale was 3.47 ± 0.65 , the mean score of the positive attitude subscale was 3.58 ± 1.01 and the mean score of the negative attitude subscale was 3.39 ± 0.54 . A weakly significant correlation was found between the total score of the COVID-19 Vaccine Literacy Scale and the total score of the Attitudes Toward COVID-19 Vaccine Scale, the scores of the positive and negative attitudes towards the COVID-19 vaccine subscale ($p<0.01$).

Conclusions: According to the data obtained from the research; it was determined that the COVID-19 vaccine literacy and attitudes towards the COVID-19 vaccine of the participants were above the moderate level. It was determined that as the COVID-19 vaccine literacy level of the participants increased, both positive and negative attitudes towards the COVID-19 vaccine increased. It is recommended to carry out planned trainings in order to increase the COVID-19 vaccine literacy level of individuals, to ensure that they reach the right information and to raise awareness.

Keywords: Attitudes, COVID-19, literacy, vaccine, vaccine literacy

O-71

The Effect of Covid-19 Vaccine Literacy and Sociodemographic Characteristics on Vaccine Attitudes in Nursing Students

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Aim: The aim of this study is to examine the effects of covid-19 vaccine literacy and sociodemographic characteristics on attitudes towards vaccines in nursing students.

Methods: This research is descriptive, cross-sectional and relational. The data of the study, which was designed as a preliminary study, were collected between 11-22 October 2021 by sharing the Google Form link in student groups via the WhatsApp application. 408 nursing students who voluntarily agreed to participate in the study were included.

Results: 98.8% (n=403) of the nursing students participating in the study had any Covid-19 vaccine. When the difference between the mean scores of the vaccine attitude according to the sociodemographic characteristics of the students is examined, there is no difference according to the student's grade level, educational status of the parents, having covid and income status ($p>0.05$), and the gender of the student ($t: 2.08, p<0.05$). and family type ($t: 1.64, p<0.05$), there was a significant difference between the mean scores of vaccination attitude. There was a positive weakly significant correlation between Covid-19 vaccine literacy and attitude towards vaccine ($r=0.24, p<0.05$).

Conclusions: As a result of the study, it was determined that the Covid-19 vaccine attitude was more positive in women and students living in nuclear families. It has been observed that there is a positive relationship between literacy towards the Covid vaccine and vaccine attitude in nursing students. It has been determined that as the literacy level for the Covid-19 vaccine increases, the positive attitude towards the Covid-19 vaccine increases.

Keywords: Covid-19, vaccine, literacy, attitudes, nursing students

O-72

The perceptions of nursing students regarding coronavirus and the nursing occupation according to gender: a qualitative study

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Aim: Outbreaks are experienced by, differently based on the gender. The purpose of this study was determine the perceptions of nursing students as regards to the Coronavirus and their occupation, on the basis of gender differences.

Methods: This is a phenomenological qualitative study conducted with 20 nursing students. Data were collected through online internet interviews using a semi-structured questionnaire. The researchers analyzed them using the MAXQDA software.

Results: 10 of the nursing students were male. It was found that the 45.2% of the students had chosen this occupation voluntarily while 9.7% of them had chosen to study nursing education upon their families' request and that all of the students had liked the occupation of nursing. Five category were identified: Visual perceptions regarding the nursing occupation and Covid-19, the future nurses' occupational perception according to gender within epidemics such as the Coronavirus, the effect of the epidemic over occupational perception, the perceptions of the people around you regarding your profession within the epidemic process, the approach towards any pandemic in the future as a nurse. The students have explained their occupational perceptions as a nurse candidate against the Covid-19 pandemic and their definitions of "Coronavirus" via visualization. It was identified that the students often adopted the gender approach in terms of occupation and within the Covid-19 pandemic (f=11), that they expressed a "occupational commitment" (f=17), that people around them had often demonstrated a supportive approach towards the occupation of nursing (f=14) and finally, that they may often exhibit a positive attitude with regards to any pandemic process that may emerge in the future (f=14).

Conclusions: Pandemics can affect the occupational perceptions of nursing students. It goes without saying that a positive perception of the occupation can contribute to the development of a professional image and the empowerment of the nursing occupation.

Keywords: Coronavirus, nursing students, occupational perception, gender

O-73

The Covid-19 Pandemic and In-Service Training in Nursing

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Aim: The COVID-19 pandemic has caused many challenges for healthcare systems around the world. The need for rapid training of nurses, who have a major role in the care of COVID-19 patients, has arisen. The purpose of this review is to emphasize the importance of in-service training in nursing in the COVID-19 pandemic.

Methods: This article was a review about the Covid-19 Pandemic and in-service training in nursing.

Results: Zhang et al. (2020) performed participation of 1357 healthcare professionals, 89% of healthcare professionals had sufficient knowledge about COVID-19, more than 85% were afraid of being infected, and 89.7% were concerned about COVID-19 determined to follow the right practices. It was stated that factors such as the level of knowledge affect the attitudes and practices of healthcare professionals regarding COVID-19. Marks, Edwards and Jerge (2021) reported nurses gave positive feedback to have a team-based system (buddy system) where inexperienced nurses support more experienced nurses and an intensive care educator regarding an intensive care training program implemented rapidly in the COVID-19 pandemic in the USA. In Liu et al. (2020) showed in China, the nursing department has formed a nursing leadership team for the epidemic. This team provided priority nursing practices and preparation of guidelines and provided training to nurses. Yalnız et al. (2020) in Turkey, the Covid-19 Educator Team was assigned, Pandemic and Infection Control trainings were continued. Educators observed staff after training during on working and they repeated the training when they saw inadequacy in practice.

Conclusions: All changes and developments in the Covid-19 pandemic process require health care workers to constantly renew their professional qualifications. Therefore, it is of great importance to continue in-service training of nurses who play a key role in health care in social health problems.

Keywords: Covid-19 pandemic, in-sevice training, nursing

O-74

Reflection of the COVID-19 Pandemic Process on Postgraduate Theses in Nursing

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Aim: The COVID-19 pandemic, which has affected the whole world, has adversely affected health, education, economy and social life. With the restrictions in education and social life, there is increasing interest in research about the impact of the COVID-19 pandemic on individuals. In this study, theses about the COVID-19 pandemic process in nursing postgraduate education were examined.

Methods: In this study, it was reached to theses by scanning official website T.C. Higher Education Council's "National Thesis Center". As a result of scanning with the keywords "COVID-19 and nursing", the characteristics of 24 postgraduate theses in nursing were evaluated in this study.

Results: In the search made with the keyword "COVID-19" in the National Thesis Center, it was determined that there were 226 theses in medicine, and 24 of them were in nursing. Of the nursing theses related to COVID-19, 23 were made in 2021, 1 was a doctoral thesis and half of them collected data on online platforms. Of the theses, 19 were descriptive, 2 were methodological (scale development), 2 were quasi-experimental, and 1 was randomized controlled trial (RCT). It was found that music therapy was used as an intervention in quasi-experimental studies, and wellness education in RCT. The sample groups of theses in nursing mostly consisted of nurses (10), nursing students (3), children and adolescents (4). It was determined that the COVID-19 Fear Scale (8) was mostly used. The fear/risk of COVID-19 and workload in nurses, and the effects of the pandemic process on sleep, physical activity, nutrition and digital game addiction in children were examined in the theses.

Conclusions: It was determined that the theses in nursing focused on the effects of COVID-19 on work, education and healthy life and were mostly carried out with nurses.

Keywords: COVID-19 Pandemic, Nursing, Postgraduate theses

O-75

Child with Epilepsy and Family: Seizure Fear and Stigma

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Aim: Epilepsy is a common chronic disease in childhood, which affects both children and their parents, and is characterized by recurrent seizures. Parents play a key role in compliance with treatment and acceptance of the diagnosis of epilepsy in children. Therefore, the perceptions and experiences of parents regarding this process are important.

Methods: In the treatment and care process of the disease, parents should be learned to cope with problems such as seizure management, special diets, medications, difficulties at school, repeated hospitalizations, and behavioral problems in children. Studies show that the fear of seizures is high in parents with children with epilepsy. Parents' fears about their children having seizures outside the home and not be interfere in the seizure often cause family members to reconsider their future plans and restrict the social activities and lives of their children with epilepsy.

Results: The disease management of the child with epilepsy could affect the life process and daily routines of the families. In addition, families may encounter problems such as exclusion, labeling and stigmatization of their children and their family members by the society. Stigma could be arised by an undesirable quality, namely facing real events of discrimination due to the seizure situation, or the fear of facing discrimination at any time. Parents may experience fear of their children having a seizure in front of others and being stigmatized by the society in their social environment. Therefore, parents may have a high perception of stigma. Consequently, parents play a key role in the process of understanding and coping with the unwanted differences of children with epilepsy.

Conclusions: It is important that the fear of seizures and stigma in parents of children with epilepsy should be addressed by health professionals and the awareness of occupational groups working with children with epilepsy.

Keywords: Child with Epilepsy, Family, Seizure Fear, Stigma

O-76

The Effect of Post-Stroke Discharge Training and Telephone Counseling Service on Patients' Functional Status and Caregiver Burden

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Aim: To determine the effect of post-stroke discharge training and telephone counseling service on patients' functional status and caregiver burden.

Methods: This study was a randomized control trial. The study was conducted with 69 stroke patients (34 in the intervention group and 35 in the control group) and their caregivers. In the study, data were collected before discharge and three months after discharge. Discharge training and telephone counseling (one week after discharge and once a month for three months) were given to the caregivers of the patients in the intervention group.

Results: It was determined that discharge training and telephone counseling service reduced the caregiver burden. Modified Rankin Scale score of the patients in the intervention group three months after discharge was significantly lower than that of the control group. Barthel Index score of the patients in the intervention group was statistically significantly higher than that of the period before discharge, but the difference between the groups was not statistically significant.

Conclusions: Discharge training and telephone counseling provided to the caregivers of stroke patients reduced the caregiver burden three months after discharge and had a positive effect on the improvement of the functional status of the patients.

Keywords: Stroke, caregiver burden, functional status, discharge education, telephone counseling

O-77

Studies on the Effect of Lavender on Sleep Disorders in Hemodialysis Patients: A Systematic Review

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Aim: The purpose of this systematic review; This is a systematic review of studies on the effect of lavender on sleep disorders in hemodialysis patients.

Method: This descriptive study was conducted in the databases of "Pubmed, Google Scholar, National Thesis Search Center, Ulakbim Turkish Medical Directory" between 2011-30 September 2021. The review was prepared in line with the Center for Reviews and Dissemination (CRD) 2009 guidelines developed by the National Institute of Health Research at York University. Keywords used during browsing; It is "Hemodialysis patients and lavender oil", "Hemodialysis patients sleep quality ", "Hemodialysis patients and lavender oil", "Hemodialysis patients and sleep quality".

Results: In line with the investigations, a total of 960 studies (Pubmed: 693, National Thesis Search Center: 2, Ulakbim Turkish Medical Index 231, Google Scholar: 34) investigating the application of lavender oil to hemodialysis patients between January 2011 and September 2021 were reached. Six studies that met the inclusion criteria were included.

Conclusion: As a result of the studies, it has been reported that the application of lavender oil by inhaler or massage in hemodialysis patients improves the sleep quality of individuals. However, studies on the use of lavender in sleep disorders in hemodialysis patients are limited. For this reason, it is recommended to increase the number of studies on this subject with more and different samples.

Keywords: Hemodialysis, lavender oil, sleep disorders

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**Case Report: Evaluation of Patient Diagnosed Osler Weber Rendu According to
Abdellah's 21 Nursing Problems Model**

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Aim: In this case report, it was aimed to evaluate the patient with the diagnosis of Osler Weber Rendu according to Abdellah's 21 Nursing Problem Model.

Methods: The patient, who was diagnosed with a known and ongoing disease Osler Weber Rendu, applied to a training and research hospital due to the recent increase in fatigue complaints. During the physical examination, the patient was admitted to the clinic because of pale skin and facial thalangiectasis. The case was examined on the basis of Faye Abdellah's "21 Nursing Problem Theory" and nursing care was given using the nursing diagnoses in the North American Nurses Association (NANDA) classification system.

Results: As a result of the study, it was observed that effective nursing care was given to the patient in line with the interventions applied for the appropriate nursing diagnoses.

Conclusions: It is recommended to use appropriate nurse theorists during the effective delivery of nursing care.

Keywords: Osler Weber Rendu, Faye Abdellah, Nursing Problem Theory, Nursing Care

O-79

Health Behaviors and Adaptation to Chronic Illness of Individuals with a Chronic Condition during the COVID-19 Pandemic

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Aim: This study was conducted to evaluate adaptation to illness and health behaviors in individuals with a chronic disease during the COVID-19 pandemic and identify factors associated with COVID-19.

Methods: This descriptive cross-sectional study was conducted in Istanbul in a state hospital between February and May 2021. The study sample consisted of 175 patients diagnosed with at least one chronic illness who applied to outpatient clinics of internal diseases. Data was collected using the Adaptation to Chronic Illness Scale and Healthy Lifestyle Behavior Scale-II.

Results: The sample's mean age was 54.45 (SD \pm 17.15). The sample was mostly women (65.7%) and primary school graduates (48.6%). More than half of the sample (56.6%) did not regularly go to their medical check-ups and visits for their health care provider. One-fifth of patients (19.4%) stated their number of daily meals increased, and they consumed more carbohydrates (21.7%) during the COVID-19 pandemic. The patients only (46.3%) went outside to meet their needs during unrestricted hours. The sample obtained the lowest mean score from the Adaptation to Chronic Illness Scale (22.27; SD \pm 5.18). The study group obtained the lowest mean score from the Exercise subdimension (15.50; SD \pm 6.21). Analyses revealed a statistically significant relationship between adaptation to chronic illnesses and healthy lifestyle behaviors ($r = 0.70$, $p < 0.05$). Patients who were older, less educated, unemployed, and with low income needed help performing their daily activities.

Conclusions: The patients with chronic conditions experienced changes in performing healthy lifestyle behaviors, and their adaptation to chronic diseases was affected during the COVID-19 pandemic. Patients need support for fulfilling recommended health behaviors to keep their illness well managed during the pandemic.

Keywords: COVID-19 pandemic, chronic illness, health behavior, patient adherence

O-80

**Investigation of Ethical Attitudes of Nurses in Nursing Care during the COVID-19
Pandemic Period**

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Aim: The aim of this study is to determine the ethical attitudes of nurses working in a university hospital in nursing care during the COVID-19 pandemic

Methods: This cross-sectional study was conducted between September and October 2021 with 156 volunteer nurses working in a university hospital in western Turkey. Data were collected using the "Nurse Introduction Form" and "Ethical Attitude Scale for Nursing Care". Ethics committee and institutional permissions were obtained for the research. Data analysis was performed using SPSS 20.0 program with descriptive analysis, Pearson Correlation Analysis, Mann Whitney U and Kruskal-Wallis tests

Results: It was determined that 64.7% of the nurses had undergraduate education and their mean age was 30.21 ± 7.22 . 73.1% of people living with nurses it was determined that he was diagnosed with COVID-19, and 75% of them gave care to patients with a diagnosis of COVID-19. 26.3% of the nurses stated that they were diagnosed with COVID-19, and 58.5% of those diagnosed stated that the source of transmission was the hospital environment. In the study, the mean score of the Ethical Attitudes for Nursing Care Scale was found to be 157.28 ± 13.31 (range of points that can be obtained from the scale: 34-170). It was determined that the ethical attitudes of the nurses who did not care for the patients diagnosed with COVID-19 were significantly higher than the caregivers ($p < 0.05$).

Conclusions: In this study conducted during the COVID-19 pandemic period, it was determined that the ethical attitudes of nurses in care were positive and that giving care to patients diagnosed with COVID-19 negatively affected their ethical attitudes.

Keywords: Ethics, ethical attitude, nursing, nursing care, COVID-19

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Symptom Severity and Symptom Management in Patients with Chronic Lymphocytic Leukemia

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Aim: In this study, it was aimed to determine the symptoms experienced by patients with chronic lymphocytic leukemia (CLL) and the pharmacological and non-pharmacological methods used in the management of these symptoms.

Methods: This descriptive study was conducted in the hematology outpatient clinic of a research hospital between June 2019 and November 2019. Data were obtained from 92 chronic lymphocytic leukemia patients. In this study, the "Karnofsky Performance Status Scale (KPS)", the "Memorial Symptom Assessment Scale (MSTS)" and created by the researchers "Symptom Management Form" were used.

Results: In the study, 65.2% of the patients were male and the mean age was 64.71±11.42 years. The patients' KPS scores range from 70 to 100 points, the mean score was 86.30±8.98. The patients examined within the scope of the study MSTS total score was 0.34±0.19, the general status index score was 1.05±0.83, the physical state index score was 0.71±0.65, the psychological state index score was 1.05±0.91. While feeling sad (55.4%) was the most common symptom in the sub-dimension of MSTS psychological symptoms, whereas weakness (72.8%) was determined as the most common symptom in MSTS physical symptoms sub-dimension. In the KLL process, the social support resources of the patients were mostly partner (75%) and their children (64.8%), and the MSTS scores did not change according to the social support resources (p>0.05). The MSTS score of the patients with adequate social support perception was lower than those with insufficient social support (p<0.05). In symptom management, patients mostly benefited from relaxation techniques and spiritual methods.

Conclusions: In symptom management in CLL, an individual approach should be established by considering the patient's coping strategies, and social support mechanisms should be supported.

Keywords: Symptom severity, symptom control, leukemia, social support

O-82

Geriatric Care Problems During the COVID-19 Pandemic

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Aim: The World Health Organization defines the elderly population as people over the age of 65. The elderly population constitutes 20.6% of the general population in European countries and 9.29% in Turkey. The personal characteristics of caregivers and organizational policies have an impact on the geriatric health. The COVID-19 pandemic had a negative impact on geriatric caregivers. Restrictions have also caused numerous problems. The purpose of this review is to examine the difficulties in geriatric care during the pandemic.

Method: This article is a review study. Studies on the topic were reviewed to provide an overview of the literature.

Results: Studies show that factors such as failure to infection control in institutions, lack of equipment, the inadequacy of human resources are effective in disrupting geriatric care. The health system was blocked, COVID-19 patients can only be served, and older people are frightened to access care for reasons such as illness or death fear. Restrictions were implemented globally to protect the geriatric health during the pandemic. Restrictions have had unfavorable results, such as social isolation, inactivity, loneliness, and fear. Understanding the geriatric care needs is critical in this process for protecting their health. It is equally critical to understand how this process affects geriatric caregivers as well as elderly people. Studies show that geriatric care professionals experienced burnout and depression during the pandemic. It has been determined that geriatric nurses in Spain, Italy and Mexico experience intense burnout and ethical dilemmas. Geriatric caregivers witnessed too many deaths, were concerned about contagion, and had to work under extreme stress. During the pandemic period, severe psychological and technical conditions caused the abandonment of the elderly by health workers in some institutions.

Conclusions: It is critical to take a holistic approach to geriatric health care that includes both the elderly and caregivers.

Keywords: Geriatri, geriatric care, pandemic

O-83

**The Effect of Covid-19 Pandemic Period Upon Nurses' Compassion Fatigue- Example of
Turkey**

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Aim: Compassion fatigue is also defined as a physical, emotional, and mental decrease in working capacity together with burnout. This study was done to determine the effect of the COVID-19 pandemic period upon nurses' compassion fatigue.

Methods: This descriptive and cross-sectional study was done with 73 nurses between the 30th of January and the 28th of February, 2021. The data were gathered using an information request form developed in line with the literature and Compassion Fatigue Scale- Short Form. To assess the data; descriptive statistics, Independent Sample t-Test, One-Way ANOVA, and Pearson Correlation tests were employed. A difference was considered statistically significant if $p < 0.05$.

Results: Nurses' average score in Compassion Fatigue Scale- Short Form (CFS/SF) was found to be 76.72 ± 19.58 . It was identified that those who were married showed significantly higher average scores in CFS/SF-secondary trauma subscale as compared to those who were single ($p < 0.05$) and those who used alcohol had higher scores in CFS/SF-trauma and burnout subscales and in total CFS/SF considerably as compared to those who did not use alcohol ($p < 0.05$). A significant, positive, and strong correlation was found between CFS/SF total and subscale average scores ($p < 0.001$).

Conclusions: Nurses' compassion fatigue scores were determined to be above the average level. It may be recommended that nurses' compassion levels should be improved and nurses should be strengthened against negative effects of compassion fatigue and provided with psychological support at intervals.

Keywords: COVID-19, nursing, compassion, compassion fatigue

O-84

Turkish Adaptation of The State-Trait Anxiety Inventory Short Version (STAIS-5, STAIT-5): Validity and Reliability Study

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Aim: This research was carried out methodologically in order to examine the Turkish validity and reliability of the State-Trait Anxiety Inventory Short Version (STAIS-5, STAIT-5) by adapting it to Turkish culture.

Method: The research was conducted with faculty, college, vocational school students and staff working in all academic/administrative units in the central campus of a university in the Central Anatolia Region. Ethics committee, institutional permission and participant consent were obtained for this study, and the sample of this study consisted of 306 people between the ages of 18-59 who agreed to participate in the study and met the inclusion criteria. Data were collected with Questionnaire Form, STAIS-5, STAIT-5, State-Trait Anxiety Inventory (STAI), and Brief Fear of Negative Evaluation Scale (BFNE).

Results: It was determined that STAIS-5 and STAIT-5 were suitable for Turkish language, CVI values were ≥ 0.9166 , KMO values were 0.841 for STAIS-5 and 0.839 for STAIT-5. Barlett's Sphericity Test results of STAIS-5 and STAIT-5 scales were found to be statistically significant. It was determined that all factor loads in the STAIS-5 were between 0.706-0.835 and that of STAIT-5 was between 0.694-0.810. In addition, ICC values of STAIS-5 and STAIT-5 were found to be 0.816 and 0.855, respectively ($p < 0.001$). The Cronbach alpha coefficients of STAIS-5 and STAIT-5 were calculated as 0.838 and 0.837, respectively. It was determined that there was a significant difference between the first test and post-test values of STAIS-5 ($p = 0.033$), and there was no difference in STAIT-5 ($p = 0.145$).

Conclusions: According to these results, it has been determined that STAIS-5 and STAIT-5 are valid and reliable measurement tools for Turkish culture in determining the anxiety levels of individuals between the ages of 18-59. It can be suggested that the scales be used as an assessment tool in following studies to determine the anxiety levels of individuals aged 18-59.

Keywords: Anxiety, reliability, scale adaptation, state-trait anxiety inventory, validity

O-85

**Validity and reliability of the Turkish version of The Pressure Injury Prevention
Knowledge Questionnaire (PIPK)**

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Aim: This study aimed to evaluate the validity and reliability of the Turkish version of the Pressure Injury Prevention Knowledge Questionnaire(PIPK).

Methods: A methodological study design was used. The instrument was translated into Turkish and back-translated into English. After evaluating the language equivalence and content validity of the scale, test-retest reliability, internal consistency and construct validity were examined. The research was conducted with a total of 324 nurses working in a state hospital and two private hospitals, who volunteered to participate in the research. Number, percentage distributions, intraclass correlation coefficient (ICC), Kappa coefficient test, Man Whitney U test and Rasch analysis were used to evaluate the data.

Results: Content validity was evaluated by 11 experts in wound care and the CVI(content validity index) was found 0.90. The correlation coefficient between the groups was found to be ICC 0.979 in the Kappa coefficient test performed for the reliability analysis. When the in- and out-of-fit difficulty index values of the scale were examined, it was found that the averages of these values varied between “0.72” and “1.38” values.

Conclusions: The Pressure Injury Prevention Knowledge Questionnaire(PIPK) was found to be a valid and reliable tool for intercultural studies revealing the nursing knowledge of prevention on pressure ulcers. It is recommended to conduct studies that test the validity and reliability of the scale in different samples.

Keywords: knowledge, prevention, validity, reliability, pressure ulcer

O-86

The Role of the Nurse in the Prevention of Diabetic Peripheral Neuropathy

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Aim: Diabetes Mellitus, is a chronic metabolic disease that is considered one of the most important health problems of today, requires constant medical care and causes high health costs. Diabetes mellitus has complications that occur in the short or long term and cause various system, tissue or organ damage. These complications, classified as microvascular and macrovascular, increase morbidity and mortality, and decrease the quality of life. Diabetic peripheral neuropathy is one of the most common microvascular complications of diabetes, which is caused by damage to the nervous system as a result of long-term uncontrolled diabetes. Although its prevalence increases in direct proportion to age and duration of diabetes, it varies depending on the control of diabetes and the type of diabetes.

Results: Diabetic peripheral neuropathy neuropathic pain, decreased sensation, falls, limitations in daily life activities and depressive symptoms lead to consequences that reduce the quality of life, and if not controlled, it causes important problems such as diabetic foot ulcers and lower extremity amputations. Nurses should screen patients with diabetes for peripheral neuropathy, help patients manage risk factors, and teach patients proper foot care and skin care. The presence of sensory loss due to neuropathy prevents patients from recognizing the injuries in their feet, and this leads to foot ulceration, delayed wound healing, and lower extremity amputation in the presence of peripheral artery disease. Depression, which is common especially in patients with painful diabetic peripheral neuropathy, adversely affects patient outcomes and adherence to treatment.

Conclusions: It is extremely important that nurses in the diabetes team provide training on self-care activities such as foot care and examination, encourage them to talk about treatments that do not meet their needs and expectations, and plan and implement training according to their individual needs for patients who have problems in disease management and have limited coping skills.

Keywords: Diabetes, peripheral neuropathy, nursing

O-87

Theses on Organ Transplantation in Turkey: A Systematic Review

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Aim: It was aimed to examine the characteristics of the theses on organ transplantation in Turkey.

Methods: Theses, Higher Education Council National Thesis Center archive <https://tez.yok.gov.tr/UlusalTezMerkezi/giris.jsp> by entering the search word(s) of the advanced search engine "Organ Transplantation" accessed online by typing the words. 358 theses belonging to the years 2005-2021 were included in the research. It was seen that 35 of the theses were done in the field of nursing. In 3 of the theses, it was determined that the field was not suitable. The data were analyzed by content and numerical analysis technique. In the content analysis, the purpose of each thesis was chosen as the unit of analysis. Data were collected using a questionnaire consisting of 15 questions.

Results: 28.1% of the theses included in the study were made in 2019, 15.6% were made in doctoral programs, 84.4% were made in master's programs, and 33.3% of theses were made in 18 different universities. It was determined that it was done in the Department of Nursing. 34.3% of doctoral theses were conducted in the Surgical Nursing Department. It was determined that all theses were accessible, 96.8% of them were made in one step, and 71.8% of them were descriptive research. It was determined that the Immunosuppressive Therapy Adherence Scale was the most frequently used scale in theses. When the purpose of the theses was examined, it was determined that 12.5% of them were to develop a data collection tool.

Conclusions: It was determined that most of the theses were made in the master's program and studied with a patient group. It is recommended to increase thesis studies in the field of organ transplantation, especially in doctoral programs.

Keywords: Nursing, organ transplantation, thesis.

O-88

**Experiences And Recommendations Of Intensive Care Nurse During The Covid-19
Pandemic Process**

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Aim: This study was conducted to determine the experiences of intensive care nurses during the Covid-19 epidemic

Methods: This study, which is a descriptive situation determination, was carried out using the qualitative research method. Before the study, permission from the Ministry of Health, ethics committee approval (2020/03) and informed consent from the participants were obtained. The research was carried out with 8 nurses working in intensive care units between June and August 2020. Research data were collected by using "nurse information form" and "semi-structured interview form". In the analysis of the data, coding and analysis were made and the research report was written.

Results: The statements of the nurses at the end of the interview are as follows:

- Problems faced by intensive care nurses; Nurse TM: Our biggest problem was the patients hospitalized without knowing whether they were covid or not and the lack of materials. Emotionally, we experienced anxiety and worry. There were too many patients whose condition deteriorated, our psychology was very bad, we were exhausted.
- What they do in solving problems; Nurse AG: We tried to motivate each other with our teammates. We identified clean and dirty areas. We started training right away.
- What they learned during COVID-19; Nurse EE: It was very difficult in crisis management, we learned not to panic. After that, we learned the methods of protection from infectious diseases thoroughly.
- What they learned after the epidemic; Nurse BG: If I had another epidemic, I think we would not have made these planning mistakes in our country. I would suggest increasing the number of qualified nurses and reorganizing especially intensive care units.

Conclusions: Similar to the literature, it is seen in this study that nurses have the most material shortage and anxiety in the Covid-19 epidemic, and these situations cause them to experience psychological exhaustion. It has been seen that these problems are solved with team relations and institutional support, and it can be recommended to determine the steps to cope with the institutional crisis and to employ qualified health professionals in the next processes

Keywords: Covid-19, Intensive Care, Nurse

O-89

Turkish Validity and Reliability Study of the Surgical Anxiety Questionnaire

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Aim: This research aims to adapt the Surgical Anxiety Questionnaire to Turkish culture and to conduct validity and reliability studies.

Methods: The sample of the methodological study consisted of 311 volunteer patients who were admitted to the clinic to undergo surgical intervention in a university hospital. Research data were collected between April 2019 and May 2021. The data of the research was analyzed in SPSS and JASP programs. Invalidation calculations; content validity index, explanatory and confirmatory factor analysis, reliability calculations; Cronbach's alpha coefficient, split-half, item-total score correlation analyzes were used.

Results: It was found that the mean item content validity index of the scale was 0.932 and the scale content validity index was 0.931. As a result of the explanatory factor analysis, the Kaiser Meyer Olkin value was found to be 0.890, and it was determined that the items were distributed in four sub-dimensions and the four sub-dimensions explained 58.745% of the variance. As a result of confirmatory factor analysis, fit indices were obtained as $\chi^2/sd=1.807$, GNFI=0.979, NNFI=0.988, RMSEA=0.053, SRMR=0.053, GFI=0.987. The Cronbach's alpha coefficient of the scale was 0.890; 0.810 of the first sub-dimension consisting of six items; 0.748 of the second sub-dimension consisting of four items; It was determined that the third sub-dimension consisting of four items was 0.756 and the fourth sub-dimension consisting of three items was 0.591. As a result of the split-half analysis, the correlation coefficient between the two halves was found to be 0.851. It was found that the correlations of the scale items with the scale total score ranged between 0.326 and 0.752.

Conclusions: According to the results of the research, the Turkish version of the Surgical Anxiety Questionnaire is a valid and reliable measurement tool and can be used to determine the anxiety levels of patients in the preoperative period.

Keywords: Anxiety, reliability, Surgical Anxiety Questionnaire, surgery, validity

O-90

The Effect of Surgical Nurses' Knowledge and Attitudes towards Pain Control on Patients' Satisfaction with Post-Operative Pain Control

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Aim: The knowledge and attitudes of nurses towards pain control play an important role in the satisfaction of postoperative pain management of patients who undergo surgery. The purpose of this study is to determine the relationship between the knowledge and attitudes of surgical nurses regarding pain management and the satisfaction of patients with postoperative pain management.

Methods: The study was conducted with 43 volunteer nurses working in the same clinics with 151 patients who had undergone surgery in Trakya University Hospital between September 2018 and June 2019. "Pain Management Quality Monitoring Questionnaire" and "Knowledge and Attitude Questionnaire about Nurses" were used to collect the data. Descriptive statistical methods, t test, variance and correlation analysis were used in the analysis of the data.

Results: In the research, as the nurses' knowledge and attitude levels related to pain management increased, although the patients experienced the most severe pain they experienced in the last 24 hours after surgery and their current pain levels decreased during their interview, their satisfaction with pain management also decreased. It was determined that the knowledge and attitude levels of the nurses about pain were affected by the working time in the surgical unit and that the nurses used the nonpharmacological approaches.

Conclusions: Good knowledge and attitudes of nurses on pain management have a positive effect on reducing the pain experienced by patients, while negatively affecting patients' level of satisfaction with post-operative pain management. In addition to improving the knowledge and attitudes of the nurses on postoperative pain management, the nurses are informed by the nurses regarding the principles and practices of pain management in the postoperative period, the development of institutional approaches aiming to improve the satisfaction of the patients treated in the surgical clinics and the views of nurses and patients regarding postoperative pain management.

Keywords: Attitude, knowledge, nursing care, pain management, postoperative period, satisfaction.

O-91

The Effect of Postoperative Mobilization with a Pedometer on Pulmonary Functions and Length of Postoperative Hospital Stay in Patients Undergoing Lung Resection

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Aim: Mobilization takes an important place in providing postoperative pulmonary rehabilitation and is accepted as an effective factor in accelerating the recovery process, preventing complications related to immobilization and improving quality of life. The goal of this study to evaluate the effect of postoperative mobilization with a pedometer on pulmonary functions and length of postoperative hospital stay in patients undergoing lung resection.

Methods: This descriptive and cross-sectional study was conducted with the 52 patients in a thoracic surgery clinic of a university hospital between April 2019 and March 2020. In the G power program (3.1.9.4), the sample was found to be 46 patients, suggesting a power of 95% and an effect size of 0.5 at a 95% confidence level. However, a total of 52 patients were reached. Adult patients who had lung resection, were followed up in the thoracic surgery clinic postoperatively, had normal lung capacity, were mobilized on the first postoperative day, did not have any perioperative mobility obstacles and did not use any assistive device, did not have any neurological/psychiatric disorders, and could communicate in Turkish. The “Patient identification form” and the “Patient results evaluation form” were used to collect the data. The Spearman Correlation analysis was used in analyzing the data in IBM SPSS 22.0 programme.

Results: It was found that the total step count and walking distance did not affect the post surgery FEV1, FVC, and FEV1/FVC values. A weak negative correlation was determined between total step count and the length of postoperative hospital stay.

Conclusions: The study showed that the increase in the step count was not effective on pulmonary functions in the early period and, shortened the length of postoperative hospital stay. Since of its contributions to pulmonary physiotherapy, we propose using a pedometer following lung resections because it standardizes mobilization measurement, stimulates mobilization, and shortens hospital stay.

Keywords: Mobilization; pedometer; postoperative hospitalization; pulmonary function; surgical nursing

O-92

The Use of Powdered Sugar in a Short-Time Pressure Injury in a Young Traumatic Patient

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Aim: Although it can be prevented with evidence-based nursing practices; Pressure sores are still an ongoing health problem in the world and in our country. Pressure ulcers, which are accepted as an important criterion in the evaluation of patient safety and quality of care, are especially common in patients hospitalized in the long-term intensive care unit (ICU).

Methods: In this case, a pressure ulcer that progressed in a short time in an immobile patient who was treated for a non-vehicle traffic accident was examined. The patient had fractures in the right pubis, symphysis pubis, left lateral sacrum, vertebrae, “floating chest” due to fractures of bilateral ribs and sternum, tibia, bilateral hemopneumothorax. The day the patient is transferred to thoracic surgery (on the 60th day of the patient's admission) coccyx (stage 4, PUSH score: 10), right and left heel (stage 3, PUSH score: 10), vertebra (stage 3, PUSH score: 10), scapula (stage 3, PUSH score: 10) and neck (stage 1, PUSH score: 4) pressure sores were present. Although the pressure wound care protocol was applied to the patient, when the expected progress could not be achieved, powdered sugar was used in wound care. The pressure sore in the sacrum region was cleaned with physiological saline and powdered sugar was applied in a thin layer by the thoracic surgery team. VAC was applied to the patient afterwards. VAC application was continued by wound care and thoracic surgery nurses in service conditions. The VAC dressing was changed every three days. After the patient's other pressure injuries were cleaned with saline three times a day, care was continued using only powdered sugar.

Results: Significant improvement was observed in the patient's pressure injuries (sacrum; stage 2, PUSH score: 7, right and left heel; stage 2, PUSH score: 6, vertebra; stage 2, PUSH score: 4, scapula; stage 2, PUSH score: 4). The patient was discharged on the 37th day of his admission to the thoracic surgery service by contacting the home care services.

Conclusions: With the use of powdered sugar, which is one of the traditional applications, the patient's pressure injuries were healed.

Keywords: Nursing; pressure injuries; powdered sugar

O-93

The Postoperative Nursing Care of a Patient with Tracheal Stenosis, Surgery Delayed due to COVID 19: A Case Report

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Aim: Described as a serious epidemic facing humanity in the era of globalization, COVID-19 has once again revealed the key position of nurses on a national and international scale. A multidisciplinary team, which includes many health professionals, should undertake the treatment and care of patients diagnosed with COVID-19. The aim of this study is to present the nursing care of a patient with tracheal stenosis whose surgery was delayed due to COVID-19 within the framework of Marjory Gordon's Functional Health Patterns diagnosis after tracheal dilatation. **Methods:** The study was conducted in a university hospital between December 2020 and January 2021.

Results: The patient was diagnosed with 8 nursing diagnoses as ineffective health care, nausea, impaired gastrointestinal motility function, risk of activity intolerance, impaired sleep pattern, impaired verbal communication, ineffective coping, and fear. Appropriate nursing interventions were applied and the results of the care were evaluated.

Conclusions: Using the Functional Health Patterns model in postoperative nursing care provided an opportunity to provide effective nursing care in reducing the patient's anxiety in the postoperative process, in managing the postoperative process and in infection control. The patient, who did not develop early postoperative complications, was discharged on the fourth postoperative day.

Keywords: Coronavirus; Nursing care; Postoperative period; Tracheal stenosis

O-94

Spiritual Care In Surgery Patients In The Covid-19 Pandemic

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Aim: As one of the decisions taken to prevent the spread of the COVID-19 virus, visitor restrictions were applied in many countries. The lack of social support resources for individuals with indications for surgery for potentially life-threatening causes during the pandemic may be an additional source of stress and anxiety during the surgical process. This presentation was written in order to identify and support the spiritual needs of the individual, whose social support resources are limited during the pandemic process, in order to cope with the surgical process.

Methods: Studies in the literature including visitor restrictions and their effects on surgical patients during the COVID-19 Pandemic were reviewed. In addition to these studies, spiritual care suggestions were emphasized.

Results: It was observed that patients who did not have visitors during the pandemic process were less satisfied with their general hospital experience, they found the post-operative care and discharge planning inadequate, and the stress caused by anxiety, loneliness, and isolation negatively affected their psychosocial well-being. This situation draws attention to the importance of digital methods that provide remote healthcare services and practices that alleviate strict visitor policies.

Conclusions: Understanding the concerns of patients and their families during the surgical process while the COVID-19 pandemic continues; It is extremely important to identify and support their spiritual needs so that they can cope with this challenging situation.

Keywords: COVID-19, spirituality, surgery, perioperative, visitor restrictions

O-95

Evaluation of the Impact of the COVID-19 Pandemic Process on Violence Against Children

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Aim: The COVID-19 pandemic has brought profound changes to income and well-being, both at the global economy and at the family level. Similarly, its potential effects on mental health have been widely accepted. In this study, it is aimed to evaluate the COVID-19 pandemic process in terms of its effect on violence against children.

Methods: In this review study; national and international databases were used.

Results: The changes in lifestyles, habits and care responsibilities caused by staying at home and restraint measures due to the effect of the pandemic have also affected individuals' psychological states and subjective well-being, leading to an increase in stress and anxiety levels. In this process, school and peer interaction, outdoor activities decreased, feelings of isolation and loneliness, fear of contagion, time spent at home, loss of parent's job, and economic difficulties increased, and daily routines such as sleep and eating were disrupted. As a result, many factors such as domestic conflict and violence have led to mental problems such as depression and anxiety disorders, post-traumatic stress disorder and eating disorders in the child/adolescent age group. In addition, this process has increased the severity of the problems that already existed before the pandemic. School and workplace closures and movement restrictions have radically changed how and where adults and children spend their time, and it has been reported that this can affect children's exposure to domestic violence. However, some literature also reports, at first glance, a reduction in certain forms of violence against children. In the same literature, researchers explain this situation as educators and health professionals are generally the ones who make and report abuse referrals, meaning that the number of people who only witness the effects of violence decreases. For this reason, it was emphasized that the measures to stay at home will not mean a decrease in violence, and that the pandemic created a mask effect by keeping the violence secret. These authors urge teachers, social workers, doctors and nurses to be vigilant against domestic violence, even if only through online learning or telehealth format.

Conclusions: It is recommended that all professionals who work closely with children and families should be careful in terms of awareness, and to conduct research on the impact of the COVID-19 pandemic on violence against children.

Keywords: COVID-19, pandemic, violence, child

O-96

The Effect of Climate Change on Maternal and Newborn Health

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Aim: Climate change, which has been emphasized in recent years; is defined as the change in weather events such as temperature, precipitation, wind over decades. With climate change, determinants of health such as access to clean water, air quality, safe housing and food security are negatively affected and human health is affected. Individuals in the risk group affected by this situation, especially pregnant women and newborns, constitute vulnerable and sensitive subgroups. It is noteworthy that studies on climate change and its effects on health have been carried out especially in recent years. This review, it is aimed to draw attention to the effects of climate change on maternal and newborn health. Among the studies examined, it was determined that there is a relationship between exposure to high temperatures and air pollution and gestational diabetes (GD), hypertension, preterm birth (PTB), premature rupture of membranes, low birth weight, stillbirth and newborn sex and congenital anomalies.

Methods: A literature review was used in this study.

Results: In the studies were obtained the following results, 1°C increase in average temperature corresponds to approximately 1% more male births per year; increasing preterm and stillbirths by 1.05 times. The prevalence of GD in women exposed to extremely cold ($\leq -10^{\circ}\text{C}$) ambient temperature 4.6% in the 30 days before the screening, while in those exposed to a hot ($\geq 24^{\circ}\text{C}$) environment, it increased to 7.7%, and a direct relationship between ambient temperature and the risk of GD was revealed. Approximately 1.35% of PTB in Spain can be attributed to air pollution.

Conclusions: All health disciplines should work together on climate change, which is a public health problem and requires an interdisciplinary approach. In particular, public health nurses, who are in close contact with the individual and the society, should be at the forefront of raising public awareness and conducting research on the subject.

Keywords: Climate change, maternal health, newborn health

O-97

The Relationship between Nutrition-Physical Activity Behaviors of Children with Autism and their Families and Obesity status of Children during the Covid-19 Pandemic

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Aim: This study examines the relationship between the nutritional and physical activity behaviors of children with autism and their families during the Covid-19 pandemic, and the obesity status of children.

Methods: It has been studied with 80 parents of children with autism. The data have been collected with the socio-demographic data form, Child/Parent Nutrition-Physical activity behaviors and Body Mass Index (BMI) Form, The Family Nutrition Physical Activity Scale (FNPAS), Brief Autism Eating Behavior Inventory (BAMBI) added to the Google Forms via social networks. Descriptive, correlation and univariate linear regression analyzes have been used in the analysis of the data.

Results: It was found that there was highly strong positive correlation between the mean BMI of children with autism before covid and the mean BMI of the covid period ($p=0.000$). The parents' mean FNPAS score was 55.18 ± 7.86 , and the mean BAMBI score was 31.76 ± 8.79 . When the conditions affecting the FNPAS score averages were examined, it was determined that the autism diagnosis groups and height/ weight measurement state had been affected ($p=0.015$; $p=0.027$). In addition, 57.5% of parents did not follow their child's height and weight during the covid process, 35.0% perceived their child as overweight/obese, 46.3% of children with autism gained weight, 32.5% had an increase in eating. It was found that the %50.0 of them did not do physical activity compared to pre-covid, and 16.3% did not do it at all.

Conclusions: The results of the study confirm that parents' FNPAS levels are slightly above the average, increased eating habits during the covid period compared to pre-covid period, decreased physical activity status and increased BMI averages are the risk of obesity in children with autism. In line with these results, it is thought that increasing distance special education interventions and other support services may be effective in preventing obesity.

Keywords: Covid-19, obesity, autism, parent, child

O-98

Children's Perioperative Multidimensional Anxiety Scale (CPMAS): Turkish Validity And Reliability Study

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Aim: To test the Validity and Reliability of the Turkish version of the Children's Multidimensional Perioperative Anxiety Scale (CPMAS).

Methods: This study is a methodological research model. 100 children (81% male) aged 7-13 years undergoing elective surgery at a tertiary university hospital were included. Self-administered Children's Perioperative Multidimensional Anxiety Scale CPMAS and State-Trait Anxiety Inventory-Children (STAI-C) were used to collect data at preoperative, operation day, and a month after the operation. Internal consistency, test-retest reliability, parallel form reliability, and content and construct validity of the tools were determined across all three visits.

Results: The CPMAS demonstrated good test-retest reliability (ICC= 0.51-0.78) and good internal consistency (Cronbach's alpha = 0.78-0.81). Inter Item correlation values were ranged from 0.20- 0.62 at preoperative, 0.32- 0.64 on the day of operation and 0.36-0.75 at a month after the operation. CPMAS single-factor construct and the explanatory percentages were 0.54 and above. After Pearson Correlation analysis, CPMAS was moderately correlated with STAI-C at T1 (r= 0.54, p<0.01) and T2 (r= 0.56, p<0.01).

Conclusions: The Turkish version of CPMAS has good reliability and validity score. Therefore, it is a suitable instrument to assess perioperative anxiety in 7-13 years old children in a clinical setting.

Keywords: Anxiety; children; elective surgery; perioperative period

O-99

The Effect of Coloring the Pediatric Surgery Clinic on Preoperative Anxiety Level in Children

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Aim: This study was conducted to evaluate the effect of coloring the walls of the Pediatric Surgery Service with universal cartoon characters for children, on the preoperative anxiety level in children.

Methods: This study was conducted in the Pediatric Surgery clinic with "Comparative-Descriptive Design" between June 2018 and August 2020. Eighty children aged between 4-10 years and were going to be operated in the pediatric surgery were included into the study. There were 42 and 38 patients patients in the control and the study group, respectively. Power analysis was calculated using the G*Power (v3.1.9.2) program to determine the sample number. Children's anxiety levels were determined by the "The Children's Anxiety Meter-State" and "The Children's Anxiety Meter-Trait" developed by Ersig et al and a validity and reliability study conducted by Gerceker et al.

Results: The patients and their families in the study and control groups were similar in terms of socio-demographic and clinical characteristics ($p > .05$). The mean preoperative trait anxiety states of the children in the control group were 0.26 ± 1.25 , and the mean preoperative trait anxiety states of the children in the study group were 0.39 ± 1.40 . There was no statistically significant difference between the preoperative trait anxiety scores of the pediatric patients in both groups ($p = .656$). The mean scores of the preoperative state anxiety states of the children in the control group were 5.40 ± 3.46 and the mean scores of the preoperative state anxiety states of the children in the study group were 3.52 ± 3.50 . A statistically significant difference was detected between the preoperative state anxiety scores of the pediatric patients in both groups ($p = .018$).

Conclusions: It was determined that coloring the walls of the pediatric surgery service with universal cartoon characters and natural images such as sea and forest for children was effective in reducing preoperative anxiety in children

Keywords: anxiety, child, surgery

O-100

The Effect of COVID-19 on Breastfeeding

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Aim: The aim of this research is to examine the effect of the COVID-19 pandemic on breastfeeding.

Methods: The study is a compilation consisting of a literature review. It was carried out by examining national and international health databases.

Results: Evidence-based research has shown that breastfeeding have numerous benefits for both the baby and the mother. Breastfeeding plays an important role in the postpartum period in uterine involution, bleeding control, avoiding postpartum depression, reducing stress and anxiety. Organizations and research emphasize the importance of breastfeeding during the COVID-19 pandemic. Since there is no data on the transmission of the virus through breast milk and it is transmitted through droplets, it is recommended to continue breastfeeding under protective measures. It is recommended to encourage breastfeeding and start it as soon as possible since the virus is not found in the breast milk of infected mothers and breast milk is a source of antibodies for the newborn baby. In the first consensus published in, there were recommendations about using donor milk or formula for breastfeeding mothers who are COVID-19 positive, but there was no evidence to support this view. Today, international organizations support breastfeeding in the guidelines they publish. It is stated that the mother should practice hand hygiene and use gloves, masks, glasses/visors during breastfeeding. It is recommended that babies suspected to have contracted the coronavirus or tested positive stay with their mothers, day and night with skin-to-skin contact and kangaroo care. In the guidelines published in Turkey, it is stated that breastfeeding should be provided and encouraged during the postpartum period.

Conclusions: Nurses and midwives have an important role in initiating breastfeeding, maintaining it effectively, preventing problems that may be encountered during breastfeeding, and breastfeeding success of the mother. They must also fulfill these roles effectively during the COVID-19 pandemic.

Keywords: COVID-19, breastfeeding, breast milk

O-101

Determination of Health-Related Quality of Life of School Age Group Children during the COVID-19 Pandemic Period

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Aim: As the COVID-19 crisis spread around the world, it touched almost every aspect of children's world and caused great changes in their daily lives. Coping with the pandemic process and complying with restrictions have a significant impact on children's quality of life and mental health. In the study, it was aimed to define the quality of life of school age children during the COVID-19 pandemic period and some related sociodemographic and behavioral determinants.

Methods: The cross-sectional design type research was conducted with 1221 volunteer family members and their children, who have children between the ages of 8-14, in six schools determined by purposive sampling method in three different cities. Descriptive questionnaire and Child Screening Index Short Family Form (KIDSCREEN-27) online questionnaire were delivered to families between January 1st and February 2021. Descriptive (number, percentage, mean, standard deviation) and significance statistics (Student-t test and One-Way ANOVA) were used in the analysis of the data.

Results: The total mean score of the families' responses to the KIDSCREEN-27 scale is 50.67±10.23 for girls and 49.31±9.71 for boys. Being male, being in the 12-13 age group, having four or more siblings, having a low economic level in families, and having a quiet-calm, emotional-sensitive, introverted personality trait were determined as socio-demographic determinants for low quality of life. In addition, the life expectancy of children whose sleep habits, social relations, personal hygiene habits and healthy food consumption behaviors were adversely affected during the pandemic process, whose screen exposure time outside of lessons increased, the time they spent on reading decreased, the time they spent on hobbies decreased, and the time they spent on sports and exercise decreased. quality scores were also low.

Conclusions: Identifying groups of children at risk of low quality of life is also important in terms of guiding intervention programs and policy decisions to be planned to improve the health of the young population.

Keywords: COVID-19, children, health-related quality of life, school age group

O-102

**Preparation Process Before Elective Surgery in Our Country in the COVID-19
Pandemic**

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Aim: The aim of this study is to explain the preparation process before elective surgery in our country in the COVID-19 pandemic.

Methods: This review was prepared by examining the current literature related to the subject.

Results: Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. COVID-19 has been defined as a “pandemic” by the World Health Organization. The success of the treatment in patients who are planned for surgical intervention is closely related to the preparation of the patient before the operation as well as the surgical technique applied. The preoperative preparation process basically consists of physiological and psychological preparation. Physiological preparation stage includes assessment of examinations. Today, depending on the pandemic conditions, real time polymerase chain reaction (PCR) has become one of the examinations requested before elective surgery. Along with routine preparations, COVID-19 screening by PCR should be performed in patients who are scheduled for elective surgery, paying attention to the criteria determined. If PCR screening is required, the sample should be taken at least 48 hours before the surgical procedure by the unit to which the patient applied. Surgery should be performed no later than 7 days after the negative test result. The procedure of the patient should be performed as soon as possible after hospitalization, or even on the same day if possible. The periods before and after the procedure should be kept short.

Conclusions: It is clear that the COVID-19 pandemic makes changes compulsory in the surgical preparation process. In this direction, it is recommended that surgical nurses follow the current guidelines and recommendations regarding the surgical preparation process during the COVID-19 pandemic, adapt them to their working areas and shape their practices accordingly.

Keywords: COVID-19, elective surgery, preoperative preparation

O-103

Effect of Informing the Relatives of the Patients by Short Message (SMS) on Anxiety and Satisfaction Level during Orthopedic Surgical Intervention

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Aim: This study aims to determine the effect of informing the relatives of the patients by short message on the level of anxiety and satisfaction during orthopedic surgical intervention.

Methods: This experimental type research was conducted in a public hospital between November 2017 and December 2017. The study was carried out with the 112 relatives of the patients who met the inclusion criteria of the patients who were hospitalized in the orthopedics and traumatology clinic and underwent surgical intervention in the operating room. Relatives of the patients were randomly assigned to the experimental and control groups. Introductory Information Form, State-Trait Anxiety Inventory and Satisfaction Survey were used as data collection tool in the research. The data were obtained by interviewing the patient relatives face-to-face, filling the forms by the researcher and filling the forms by the patient relatives themselves.

Results: The State Anxiety Scale (STAI-S) pretest scores of the experimental group were found to be statistically significantly higher than the control group ($p<0.01$). It was determined that the STAI-S posttest scores of the experimental group were statistically significantly lower than the control group ($p<0.001$). It was determined that the experimental group reported a high level of satisfaction with related to the intervention (9.50 ± 1.43).

Conclusions: It was determined that informing the relatives of the patients by short message during orthopedic surgical intervention significantly reduced the level of anxiety and individuals were satisfied with this service. In this direction, it was recommended informing by short messages during the operation and applications to be developed in order to decrease anxiety of relatives of patients and increase their satisfaction.

Keywords: Anxiety, information, relatives, satisfaction, short message service

O-104

Determination of Patients Who Underwent Surgery to Apply to The Emergency Department After Discharge By Retrospective Analysis

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Aim: Surgical patients apply to the emergency department with different problems after discharge.; The aim of this study is to determine the characteristics of surgical patients admitted to the emergency department after discharge.

Methods: In this retrospective study, medical records and reports of 30 surgical patients who applied to the emergency department of a university hospital between June and September 2021 with various indications after discharge were reviewed. Age, gender, chronic diseases, duration of hospitalization in the postoperative surgical service, post-discharge emergency department. Data on the duration of admission to the service, the reasons for admission, the methods of application, the surgery performed, the area of treatment, and discharge status after emergency service treatment and care were questioned and recorded in the form. Institutional permission was obtained before the research. Data were analyzed using descriptive statistics in IBM SPSS V.22.0 program.

Results: : It was determined that the mean age of the patients was 42.1±14.2 (19-68) years, 60.0% were male and 53.3% had no chronic disease. It was found that 40% of the patients applied to the emergency department after discharge from the general surgery service. It was determined that 76.7% of the patients applied to the emergency department by walking, and 96.7% were treated in the yellow area. The most common (46.7%) reason for admissions was pain. The mean postoperative hospital stay of the patients was 7.2±6.5 (2-30) days, and the mean time to admission to the emergency department after discharge was 32.0±29.7 days. It was determined that 73.3% of the patients were discharged from the emergency department after symptomatic treatment.

Conclusions: It was determined that surgical patients applied to the emergency department most frequently because of pain after discharge, and the majority of the applications were general surgery patients. The fact that the vast majority of patients were discharged after symptomatic treatment suggests that the patient population admitted to the emergency department is non-emergency and can be treated in primary health care services. As surgical nurses, we recommend that patients be informed about the situations that require admission to the emergency department and to raise awareness about this issue in order to reduce the unnecessary admissions of patients to the emergency department after discharge.

Keywords: Emergency department, admission, surgical

O-105

Individualized Care Perceptions of Nursing Students and Affecting Factors

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Aim: This study was carried out in order to reveal the importance of individualized care and to draw attention to the measures that can be taken against the factors that negatively affect individualized care perceptions of nursing students and the factors affecting these perceptions in the light of the literature.

Methods: This review was created by examining the studies published in the last ten years on individualized care perceptions of nursing students, using Web of Science, Science Direct, Ulakbim, YÖK-Tez databases and Google Scholar engine, using Turkish and English related keywords.

Results: It is seen that the tendency to benefit from standardized protocols has started to become widespread by ignoring the individuality of the individual in the practice of nursing care now a days. However, individualized care aims to provide care with a holistic and humanistic perspective by using nursing philosophy, values and ethical codes, respecting the dignity, individuality, beliefs, preferences and differences of the individual. In this direction, individualized care perceptions of nursing students differ in clinical practice. In the studies, although it was reported that the individualized care perceptions of nursing students were at a good level, it was revealed that the students were affected by factors such as theoretical knowledge, practical skills, profession perceptions, innovativeness levels, problem solving skills, stress levels and moral sensitivity levels.

Conclusions: It is important for nursing students to determine appropriate strategies for the prevention of factors that will negatively affect their perceptions of individualized care and to participate in practices that will directly lead to patient care.

Keywords: Nursing student, care, individualized care

O-106

Hygiene Attitudes and Behaviors of Students Studying in the Health Vocational High School

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Aim: The aim of to research was to determine the attitudes and behaviors of the students in Nurettin Yılmaz Vocational and Technical Anatolian High School about hygiene.

Methods: The research has a descriptive design and was conducted with students studying in Nurettin Yılmaz Vocational and Technical Anatolian High School assistant nurse, midwife assistant, health care technician departments in the 1st term of the 2017-2018 academic year. In the study, it was tried to reach the entire universe without choosing a sample. 212 students who met the inclusion criteria were included in the sample. Research data were collected by the researcher through face-to-face interviews. Descriptive Characteristics Information Form and Hygiene Attitude Scale were used to collect data.

Results: The mean age of the students participating in the study was 16.21±1.09 and 72.6% were girls. According to the Personal hygiene sub-dimension scores of the Students' Hygiene Behavior Scale, 16.5% showed positive hygiene, 83.5% showed negative hygiene behavior, 35.4% according to the hand washing sub-dimension scores showed positive hygiene, 64.6% According to the food hygiene sub-dimension scores, 41.0% showed positive hygiene and 59.0% showed negative hygiene behavior. According to the Hygiene Behavior Scale total scores, 19.3% of the students showed positive hygiene behavior and 80.7% showed negative hygiene behavior. It was observed that the rate of negative hygiene behavior was more common than the students' hygiene attitude scale.

Conclusions: In order to realize positive behavioral changes related to personal hygiene in students, it is recommended to increase the training and awareness activities on this subject and to ensure active participation of students in these activities.

Keywords: Hygiene attitude, personal hygiene, high school, student, health.

O-107

Self-Efficacy Perception and Evaluation of Quality of Life in Chronic Diseases

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Aim: The study aimed to evaluate the perception of self-efficacy and quality of life in individuals with chronic diseases and determine their needs. This study is descriptive research.

Methods: The research was conducted between 1 July 2019 and 1 July 2020 in the internal medicine, neurology, chest diseases, and cardiology clinics of two state hospitals. The research sample consisted of 130 patients. Data tools were the Patient Information Survey, the Strategies Used by Patients to Promote Health (SUPPH) scale, and the SF-36 Quality of Life Scale.

Results: The patients were male (53.8%), and 45.4% were older than 70. The research group was mostly (54.6%) primary school graduates. Of the sample, 45.4% were treated for DM, 33.8% for HT, 29.2% for COPD, 21.5% for stroke, 19.2% for CHF. The stress Reduction subscale of self-efficacy scale score was 29.95 ± 11.99 , and the Making Decision subscale score was 8.90 ± 3.62 , Positive Attitude subscale score was 49.73 ± 18.92 . The SUPPH scale score was 88.58 ± 33.80 . Scale scores indicate that the perception of self-efficacy was moderate in individuals with chronic disease. Physical Role, General Health, and Bodily Pain sub-dimensions were the most negatively affected. Physical Functioning, Social Functioning, and Energy dimensions were moderately affected. Analysis revealed a positive correlation between SUPPH scale total scores and SF 36 Quality of Life Scale scores ($r = 0.45-0.99$, $p = 0.000$).

Conclusions: Individuals with chronic diseases need support in managing physical problems, activities of daily living, and coping with symptoms. In addition, to improving the quality of life, it is recommended to determine stressors and provide counseling on stress management. In addition, the self-efficacy perception and quality of life of individuals over 60 years of age, single, with low-income, unemployed, obese, and frequently hospitalized with chronic disease need close and regular monitoring.

Keywords: Chronic diseases, self-efficacy perception, quality of life

O-108

Diabetes Management and Motivational Interviewing

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Aim: Motivational Interviewing (MI) is a form of collaborative interviewing to strengthen one's own motivation and commitment to change. Today, most of the diseases that cause individuals to consult healthcare professionals (eg doctors, nurses, dentists) are largely preventable or curable diseases through health behavior change. These behavioral changes include many issues such as smoking, excessive alcohol use, diet, physical activity, and prevention of infectious diseases. MI is frequently used to change behavior in individuals with chronic diseases. The purpose of this review is to examine studies using MI techniques in diabetes management.

Methods: The literature review of this review was made using Web of Science, Science Direct, EBSCO, CINAHL, TR Dizin and Google Scholar databases.

Results: Studies conducted in recent years have determined that MG has a positive effect on diabetes self-management. MI techniques can be used to reveal behavioral change to help patients recognize and analyze their ambivalent emotions (conflicting emotions). Being motivated ensures that patients with diabetes feel ready for behavioral change and that interventions to improve diabetes management are effective. For example, patients who do not comply with treatment generally increase their compliance level after MI techniques (participating in follow-ups, regular blood glucose monitoring and improvement in glycemic control, increasing exercise and fruit and vegetable intake, reducing stress, keeping food diaries, increasing medication compliance, alcohol and reducing illicit drug use, smoking cessation, and fewer hospitalizations).

Conclusions: MI techniques have proven to be effective in managing diabetes. To increase the effectiveness of MI techniques, consultants need to be trained in this area. For future research, it is recommended that MG techniques should be applied by nurses in primary health care institutions, especially on individuals with diabetes registered in the Family Health Center.

Keywords: Diabetes mellitus, motivation, nursing

O-109

The Relationship of Adaptation to the Disease and Quality of Life of Individuals with Chronic Disease

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Aim: The study was carried out to determine the relationship between the adaptation to the disease and the quality of life of individuals with chronic diseases.

Methods: The descriptive and cross-sectional study was conducted with 155 patients with chronic disease hospitalized in a state hospital in Tekirdağ. Data were collected using the Personal Information Form, "Chronic Disease Adaptation Scale (CDAS)", and "EQ-5D Health Related Quality of Life (HRQoL)". To conduct the study, written permission was obtained from the ethics committee, institutions and patients. Data were analyzed using descriptive and comparative statistical research methods.

Results: The mean age of the patients participating in the study was 54.42 ± 18 years, and the duration of chronic disease was 9.40 ± 7.18 years. 40.6% of the patients were primary school graduates. It was determined that 72.9% of the patients had more than one chronic disease, 61.9% went to regular check-ups, and 59.8% of those who had a diet for chronic diseases followed their diet. The patients' EQ-5D HRQoL Scale mean score was found to be 0.73 ± 0.21 for index score, 73.50 ± 1.63 for VAS score, and 106.23 ± 19.26 for CDAS total score.

It was found that there was a statistically significant difference between the patients' education level, the number of chronic diseases, regular check-ups, and adherence to their diet, and between adaptation to the disease and quality of life ($p < 0.05$). It was determined that there was a negative relationship between the patients' age and disease duration, adherence to the disease and quality of life, and a positive relationship between adaptation to the disease and quality of life ($p < 0.05$).

Conclusion: It has been determined that the patients' adaptation to the disease and their quality of life are high, and some socio-demographic and disease-related characteristics affect their adaptation to the disease and their quality of life.

Keywords: Adaptation, Chronic Disease, Quality of Life

O-110

The Effect of Covid-19 on Fatigue, Stress and Workload in Intensive Care Unit Nurses

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Aim: This study was designed to determine the influence of COVID-19 outbreak on fatigue, stress and workload in intensive care unit nurses.

Methods: The study was conducted with 125 nurses, who worked at Prof. Dr. Cemil Taşcıoğlu City Hospital intensive care unit between the dates of November 2020 and April 2021. The study data was obtained through an online questionnaire which included Personal Information Form, Workload Scale, Perceived Stress Scale and Piper Fatigue Scale. The data obtained was analyzed by Number Cruncher Statistical System.

Results: The data illustrates that 83.2 % of the nurses are concerned about contamination while tending COVID(+) or suspected patients. Participants 91.2 % are concerned about spreading the infection to their families in case that they become contaminated and the necessity to wear protective gear during the shifts have been detrimental for fatigue and workload for 91.2 % of the participants. 31.2 % of the nurses had been COVID(+) throughout the outbreak. In nurses who are concerned about being contaminated while tending COVID(+) patients, workload scale scores have been observed to be relatively higher. It has been determined that the nurses who have relatively higher perceived stress scores also have higher workload and the participants with high perceived stress and workload scores were more fatigued.

Conclusions: As a result of the study, it has been concluded that COVID-19 pandemic has had detrimental effects on fatigue, stress and workload in nurses.

Keywords: COVID-19 Intensive Care, Workload, Fatigue, Stress

O-111

Use of the Information-Motivation and Behavioral Skills (IMB) Model in Type 2 Diabetes Management

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Aim: T2DM is a global public health problem due to its high mortality and morbidity rates. To provide self-management of this common disease, positive health behaviors should be developed in individuals. Nurses receive support from theories and models to provide positive behavioral change in individuals with diabetes. One of these models is the Information, Motivation and Behavioral Skills (IMB) Model.

Methods: The literature review of this review was made using Web of Science, Science Direct, EBSCO, CINAHL, TR Dizin and Google Scholar databases.

Results: This new model of diabetes management offers a comprehensive framework by linking the attributes of high-quality diabetes care, self-care processes and health outcomes. The IMB model consists of information, motivation, and behavioral skills components. The model argues that information and motivation must be formed to initiate and maintain behavioral change in the individual. It includes information related to the IMB model-based diabetes self-management, health education about diabetes, and educator-patient communication. Individual motivation refers to an individual's diabetes health beliefs about the consequences of a behavior related to diabetes and perceived attitudes towards self-management behaviors. Social motivation includes the individual's perceived social support for self-management behavior. Increasing motivation in individuals with diabetes improves diet control, adherence to medications, regular exercise, regular blood sugar monitoring, diabetic foot care and hyper/hypoglycemia management positively. Behavioral skills include diabetes self-efficacy and positive coping strategy.

Conclusions: When studies conducted on individuals with type 2 diabetes were examined, positive improvements were found in both metabolic control levels (HbA1c) and self-care behaviors (nutrition and exercise). In future studies, it is recommended that nurses provide individual or group diabetes self-management education for the *information* component of IMB model-based interventions in individuals with Type 2 diabetes, and Motivational Interviewing techniques, which have proven effective in diabetes, for the *motivation* and *behavioral skills* component.

Keywords: Type 2 Diabetes Mellitus; model; information; motivation; behavioral skills

O-112

The Effect of Breathing Exercise Applied After a Laparoscopic Cholecystectomy Intervention on Pain and Anxiety

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Aim: Pain and anxiety are among the most common complications in the early postoperative period. In addition to pharmacological methods, nonpharmacological methods are also used to relieve pain and anxiety. Breathing exercise, which is the first step of relaxation, is one of the common nonpharmacological methods. This study was designed as a quasi-experimental study to determine the effect of breathing exercise applied on patients who underwent a laparoscopic cholecystectomy on pain and anxiety.

Methods: The population of the study consisted of individuals who underwent laparoscopic cholecystectomy during the last year between January and November 2019 at the General Surgery Clinic of Lüleburgaz and Kırklareli State Hospital, whereas the sample of the study consisted of 74 volunteer individuals determined using a power analysis. A questionnaire, Visual Analogue Scale (VAS) and State-Trait Anxiety Inventory (STAI I / II), containing the descriptive features of the patient, which are created for data collection, were used. 37 patients who underwent laparoscopic cholecystectomy and were subjected to a breathing exercise constituted the experimental group, and 37 patients who were not subjected to a breathing exercise, but only visited constituted the control group.

Results: Descriptive statistical methods and parametric tests were used in the analysis of the data in the NCSS 2007 program. In the experimental group, the decrease in postexercise pain scores ($p=0,001$; $p < 0,01$) and the state ($p=0,001$; $p < 0,01$) and trait anxiety ($p=0,043$; $p < 0,05$) scores was found to be statistically significant as compared to that of pre-exercise.

Conclusions: As a result, in this study, it was found that the breathing exercise applied postoperatively has a positive effect on pain and anxiety. This result suggested that nurses should use breathing exercise, which is one of the independent tasks, more frequently and effectively.

Keywords: Laparoscopic cholecystectomy, breathing exercise, pain, anxiety



**UNION OF THRACE UNIVERSITIES
IV. INTERNATIONAL HEALTH SCIENCES CONGRESS**

BOOK OF ABSTRACTS

MIDWIFERY, OBSTETRICS AND GYNECOLOGY

O-113

The Perceived Stress And Psychological Well-Being Levels By Pregnant Women During The Pandemic Process And Affecting Factors

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Aim: This study was carried out to determine the perceived stress and psychological well-being levels of pregnant women during the pandemic process and to reveal the effects of both situations on each other.

Methods: This descriptive and relationship-seeking research was conducted between June 5 and September 15, 2020, with an online survey on social media. The research was completed with 155 pregnant women aged 18 and over, who were pregnant, who could speak and understand Turkish, and who had social media membership during the data collection process. The research data were obtained with the introductory questionnaire, the Perceived Stress Scale, and the Psychological Well-Being Scale. In the analysis of the data, number and percentage calculations, mean, standard deviation values, Kruskal-Wallis test, Mann-Whitney U test, t-test and ANOVA test were used.

Results: The mean age of the pregnant women included in the study was 30.67±4.22 (min:20, max:44). 43.2% of the pregnant women stated that they had sleep problems due to anxiety disorder, and 20% needed psychological support. It was determined that 71.6% of the pregnant women were in 1-3 months of pregnancy, whereas 88.4% were planned pregnancy and 5.8% had a miscarriage risk. 27.7% of the pregnant women stated that they always stayed at home, whereas 63.2% always had anxiety when they went out and 94.2% always used protective equipment when going out. 96.8% of the pregnant women stated that they restricted their visits during the pandemic; 91.6% were afraid of catching the virus; and 93.5% were worried that the virus would harm their baby. It was determined that 28.4% of the pregnant women had individuals who had Covid-19 in their close environment and that 61.9% were worried about spending the birth in a health institution. The mean PSS score of the pregnant women was found to be 32.53±4.7, while the Psychological Well-Being Scale mean score was 41.17±10.86. There was no statistically significant relationship between the stress levels perceived by the pregnant women and their psychological well-being (p>0.05).

Conclusions: As a result of the research, it is recommended to conduct studies with larger sample groups and different variables.

Keywords: Covid-19 pandemic, Perceived stress, Psychological well-being, Nurse

O-114
How Has the COVID-19 Pandemic Affected Maternal Attachment and Birth Experience?

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Aim: The unexpected pandemic caused panic, uncertainty, and unpredictability. This situation had an impact on the childbirth experience and maternal attachment. The aim of this review is examining how the pandemic affected childbirth experiences and maternal attachment.

Methods: This article is a review study. Studies on the topic were reviewed to provide an overview of the literature.

Results: Childbirth is a significant experience that is influenced by personal expectations, plans, and environmental factors. Maternal attachment describes the behavioral and emotional attachment to baby. Maternal attachment is essential for the baby's physical, emotional, and mental well-being. According to studies, negative childbirth experience has a detrimental impact on maternal attachment. Breastfeeding, self-efficacy, bonding to the baby, and having another child decision, are influenced by the childbirth experience. Studies show that maternal mental health problems were common during the pandemic. Prior to the pandemic, women described childbirth as exciting and joyful. Women's expectations about childbirth, have changed significantly during the pandemic. Women describe childbirth with more fear, uncertainty feelings, and sadness during the pandemic. According to a study conducted in pandemic at the United States, women suffered increased postpartum stress, post-traumatic stress disorder, and breastfeeding problems, and acquired less maternal attachment. A study conducted in Italy determined that anxiety experienced during the pandemic has a negative impact on maternal attachment. Another study discovered that the risk of postpartum depression increased during the pandemic compare pre-pandemic.

Conclusions: Women remember and are affected by their childbirth experiences for a long period, not only following the birth. For this reason, being aware of the problems that pregnant women experience during the pandemic will benefit both women's and newborns' health. Health professionals should be aware of the importance of women's childbirth experiences and should make every effort to provide a positive experience.

Keywords: Childbirth, maternal attachment, childbirth experience, pandemic

O-115

The Effect of the Covid-19 Pandemic on the Health-seeking Behavior of Pregnant Women

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Aim: This study was conducted to reveal the effect of the Covid-19 pandemic on the health-seeking behavior of pregnant women.

Methods: Health-seeking behaviors are an extremely important factor in having a healthy pregnancy period and the formation of healthy generations and societies. Health-seeking behavior is the whole of actions aimed at detecting and preventing disease before it is too late, as well as protecting and maintaining well-being. Therefore, current literature information on this subject has been examined.

Results: Although pregnancy is a natural process, it is a critical period in which many physiological and psychological changes occur. Therefore, there are some responsibilities for pregnant women to maintain their health in a state of complete physical, mental and social well-being. These responsibilities, which are also described as health-seeking behavior, can be affected and disrupted by various situations. Health-seeking behaviors of pregnant women are affected by many factors such as customs and traditions of the society they live in, health literacy level, inequalities in health, social media, health belief, income level, health policies, education level, and lifestyle. Today, one of the factors that seriously affect health-seeking behavior is the Covid-19 epidemic that we experience around the world. Fear of contacting Covid-19 infection causes pregnant women do not apply to health institutions except in compulsory situations and delays receiving health care so they cannot receive a good antenatal care service. Pregnant women who apply to a health institution only for delivery not only risk their own life and the life of the fetus/newborn but also prevent a healthy delivery.

Conclusions: To improve maternal and fetal health during pregnancy, the factors affecting the health-seeking behaviors of pregnant women should be determined and the obstacles should be emphasized and the problems should be minimized.

Keywords: Behaviour, Covid-19, health, pregnant

O-116

Approach to Lower Urinary System Infections in Pregnancy During Covid-19

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Aim: This study was carried out to reveal the approach to lower urinary tract infections in pregnancy during Covid-19.

Methods: Urinary system infections (UTI) are infectious diseases caused by microorganisms such as bacteria, fungi, protozoa, and viruses in the tissues forming the urinary system. A Lower urinary tract infection is an infection seen in any part of the urinary system (kidneys, bladder, ureters, urethra, etc.). Urinary tract infections can cause different clinical conditions ranging from asymptomatic bacteriuria to sepsis, septic shock, and pyelonephritis. Therefore, current literature information on this subject has been examined.

Results: Urinary system infections, which are one of the most common infections among the reasons for hospitalization, are also among the most common infections in pregnancy. Urinary system infections are quite common in pregnant women due to the enlargement of the ureters and renal pelvis leading to urinary stasis and reflux during pregnancy, and this situation begins in the first weeks of pregnancy and may continue until delivery. Pregnancy causes an increase in urine pH and creates a favorable environment for the proliferation of aminoaciduria and glycosuria agent pathogens. The incidence of bacteriuria in pregnant women with good socioeconomic status is lower than those with poor socioeconomic status. Personal hygiene habits have an important place in the control of many infectious diseases. Preventing some diseases with individual habits is an indispensable element in improving the level of health.

Conclusions: One of the main goals, to ensure that the general health indicators in our country are at the desired level is to increase the level of women's health. Pregnancy-specific functional and structural urinary tract changes are the basis of the predisposition of pregnant women to urinary infection, and individual hygiene habits and behaviors play a major role.

Keywords: Covid-19, infection, pregnancy, urinary system

O-117

Access to Women's Reproductive Health Services in the Covid-19 Pandemic

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Aim: The aim of this research is to examine women's access to reproductive health services during the COVID-19 pandemic.

Methods: The study is a compilation of national and international literature review.

Results: The Covid-19 pandemic has caused an increase in morbidity and mortality risks for individuals all over the world. Women who are exposed to limited access to health services and social, economic and gender inequality are likely to be affected by the pandemic. During the process, it was determined that women postponed their routine examinations, canceled their non-urgent appointments, and avoided the behavior of going to the hospital and getting service. It has been determined that access to deferred health services affects receiving prenatal care, family planning services, pregnancy follow-ups, and postpartum care process. The interruption of basic health services and contraceptive services, as well as antepartum and intrapartum services during the pandemic, has created risks for women's reproductive health. Reproductive health services are important for maternal, newborn and community health. Decreased access to reproductive health services may cause adverse effects on women's reproductive health, such as unwanted pregnancies, unsafe abortions, pregnancy complications, sexually transmitted infections, maternal and infant deaths, high-risk pregnancies, and pregnancy complications. On the other hand, the quarantine and isolation processes brought by the pandemic, the increase in the length of stay at home, childcare responsibilities, increased the domestic women's workload and caused economic, physical, social and psychological and health problems that could negatively affect women's health.

Conclusions: Nurses and midwives have their roles in ensuring and maintaining the continuity of access to reproductive health services.

Keywords: Covid-19, reproductive health services, women's reproductive health

O-118

Pregnant Follow-up in the Covid-19 Pandemic

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Aim: In our study we aimed to evaluate the alteration in total number of primary care admissions, number of pregnant admissions and the frequency of pregnant follow-up in Kırklareli province during the Covid-19 pandemic.

Methods: Using SPSS version 19.0 with licence number: 10240642 we retrospectively analyzed the 2019-2020 Ministry of Health Decision Support System National Health System (KDS USS) data of primary, secondary and tertiary care admissions, pregnant admissions in primary care and the frequency of pregnant follow-up.

Results: According to KDS USS data in 2019 total number of primary care admissions was 1463055, the collective number of secondary and tertiary care admissions was 3855174 and in 2020 the number of primary care admissions was 1274088 whereas secondary and tertiary care admissions were 2911944. When analyzed per month there was more evident decline in the number of secondary care admissions than primary care. The number of primary care pregnant admissions was 12162 in 2019 and 21649 in 2020. The frequency of pregnant follow-up was 3,7 in 2019 and 6,3 in 2020.

Conclusions: During the Covid-19 pandemic Family Health Centers continued to be the first choice for individuals which helped reduce the burden of secondary and tertiary healthcare. By the authority of the ministry, local administrators restructured Family Health Center admissions to reduce crowd and therefore the risk of transmission. Furthermore the main objective of Family Health Centers was to ensure the continuity of protective healthcare services during the pandemic. Implementation of appointment system in primary care, assignment of appointments during more calm and clean hours of health centers before patient admissions, informing hesistant pregnant women with phone calls and assuring admission helped increase the number of pregnant admissions and the frequency of follow-up.

Keywords: Primary care, protective healthcare services, pregnant follow-up



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BOOK OF ABSTRACTS

CHILD DEVELOPMENT

O-119

**The Impact of Health News on Children's Development: The Case of Garlic Agenda in
Traditional and Social Media During the Covid-19 Pandemic**

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Aim: This research aims to analyze the media impact during a pandemic regarding the triangle of child, media literacy, and health issues, aiming to emphasize the importance of the media in childhood development.

Methods: The article makes use of both qualitative and quantitative methodology analyzing the bunch of garlic news presented in the print media between January 1, 2020 and June 3, 2020.

Results: During the Covid-19 Pandemic Period, adults and children were exposed to more traditional and social media content. They heard a lot about the Covid-19 and almost everything important and irrelevant was associated with it. Health related news were in the top topics of conversation both in the traditional and social media content.

Conclusions: A pseudo impact is created through the fake news that Covid-19 has found its way into the agendas of children and all this caused a variety of unpleasant outcomes ranging from nervousness to anxiousness, addiction to terror, etc. Fake news or ambiguous information associated to health could endanger the population's health, particularly the youth's knowledge, expectations, attitudes, and applications.

Keywords: Fake News, Garlic, Agenda Setting, Child Development

O-120

The Impact of Media Literacy on Digital Addiction and Digital Detox During the Covid-19 Pandemic

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Aim: For a variety of reasons, most families nowadays consider reducing the use of their children's media or advise making use of the "Media Diet." The goal of this study is to see if digital detox is effective and if it can assist parents protect their children from becoming addicted to the virtual world of the internet. The concept is discussed and analyzed through 850 interviews with parents, specialists, and children aged 8 to 14 to learn more about the problem and possible solutions.

Methods: The article makes use of a qualitative methodology analyzing the interviews of 850 participants as well as the focus group for deeper interviews. The study is conducted throughout 6 pilot schools based in İstanbul covering secondary school students, parents, and educators on media literacy, digital addictions, and digital detox. Edward de Bono's "Six Thinking Hats" method entails approaching a topic from a variety of angles since each hat reflects a different perspective.

Results: The findings revealed that the majority of families believe that digital detox is the only way to treat their children's digital addiction. The responses of the interviewees also illustrate how the six different groups approach media use in different ways.

Conclusions: The study raised concerns about not only the frequency and amount of media exposure during the Covid-19 pandemic but also the addiction to digital media. As a result, media literacy and holistic awareness would be more effective in covering the remedy not only for the children but also for their families and instructors.

Keywords: Media Literacy, Digital Addiction, Digital Detox

O-121

**Profile of Children Applying to Child Development Polyclinic during the Covid19
Pandemic Process**

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Aim: The COVID 19 pandemic, which has been experienced in our country and in the world for the last two years, can be expressed as one of the important environmental effects in this context. Children are among the groups most affected by this process. Studies on the pandemic process reveal the fact that this isolation process deeply affects social life, especially as a result of children being away from education and training processes, restriction of play and activity opportunities, restriction of peer interaction and social interaction, and that it causes children to be affected psychosocially.

Methods: In this retrospective study conducted in a quantitative model, data on the consultation of 570 children aged 0-18, taken from the archive records of Kırklareli Training and Research Hospital, were examined.

Results: When the findings are examined, it is seen that 62.1% of the children referred to the child development unit are boys and 37.9% are girls. When the age groups of the children who applied to the unit are examined, it is seen that 97 (17%) are three-year-olds, 81 (14.2%) are four-year-olds, and 60 (10.5%) are five-year-olds. It is seen that 327 (57.4%) children applied to the unit in the pre-school period and 161 (28.2) children in the school period, and 82 (14.4%) children in the adolescence period. The reasons for the application of children to the unit, respectively; 197 (34.6%) developmental assessments, 145(25.4%) intelligence assessments, 81 (14.2%) language speaking problems, 39 (6.8%) family attitudes assessments, 24 (4.2%) toilets education, 21 (3.7%) school readiness, 13 (2.3%) sibling jealousy, 10 (1.8%) fear and anxiety problems, 8 (1.4%) age counseling and nail biting problems, 7 Food and anger control problems (1.2%), 4 (0.7%) sleep problems, 3 (0.5%) neuromotor developmental delay, 1 (0.2%) introversion, selective mutism, childhood masturbation

Conclusions: Possible effects may continue to be seen during and after the epidemic. It is very important to support children and families in this process. It should not be forgotten that child development professionals working in hospitals, healthy life centers and family health centers are the primary occupational group that can be supported in this regard.

Keywords: Covid 19 Pandemic, Child Development Polyclinic, Child Development

O-122

Mother's Opinions Regarding the Routines of School-Age Children

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Aim: In this study, it was aimed to determine the views of mothers about the routines of school-age children.

Methods: The study group consisted of 20 mothers with children between the ages of 7 and 12. Six questions were prepared by the researchers to determine the daily routines of the children. The interview with the mothers lasted between 6-10 minutes. Written transcripts of the interviews were made and analyzed by content analysis.

Results: It was observed that the mothers perceived the routine as a daily thing and did not emphasize it on a weekly or monthly basis. It was stated that in routines related to housework, children only do their own chores and are not included in common household chores. It was found that the number of mothers who indicated the social activities that could be done on a weekly and monthly basis was very low, and they mostly applied the methods of being a model and making explanations while improving the routines. It was determined that they did not use housework as punishment.

Conclusions: It has been observed that mostly family members have at least one routine individually and as a family. Some participants were found to have routines, although they did not have awareness of routines. It has been concluded that families apply collaborative and authoritative methods in gaining routines. It has been determined that the participation of their children in domestic responsibilities is not seen as a part of a routine by the mothers, but rather that the children routinely evaluate the work they need to do about themselves. It has been observed that they adopt the routines daily, and that they do not have certain routines on a weekly and monthly basis. Among the daily routines of children, those related to self-care and homework came into prominence.

Keywords: Routine, Child Routine, School-age Children



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BOOK OF ABSTRACTS

HEALTH MANAGEMENT

O-123

The Relationship Between Career Development and Turnover Intention of Healthcare Professionals

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Aim: This study was conducted to examine the relationship between career development and turnover intentions of healthcare professionals working in hospitals, and also to determine whether these variables differ according to demographic characteristics.

Methods: The data of this research are through questionnaires. In the questionnaire form, the demographic information form and career development scale and turnover intention scale were deployed. The study was carried out on health workers working in three private hospitals operating in the province of Istanbul. The analysis of data is made with a %95 confidence rate in SPSS 26.0 designed for Windows package program.

Results: As a result of the overall analysis, it is concluded that the career development level of the employees demonstrates a meaningfully differentiate according to education, position and profession; On the other hand, the turnover intention rate differentiate significantly in terms of gender, marital status, age, education and occupation variables.

Conclusions: As a result, I argue that career development and turnover intention of employees differentiate depending on some demographic characteristics. Also, a significant relationship is found out between career development and turnover intention.

Keywords: Career Development, Turnover Intention, Healthcare Professionals

O-124

Assessment Of Physicians' Attitudes towards COVID-19 Vaccine

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Aim: To evaluate the fear of physicians about getting infected with COVID-19 and their attitudes towards the COVID-19 vaccine.

Methods: Our research is a cross-sectional study, which was conducted between January 4th and February 26th, 2021. A Google Forms questionnaire was prepared according to the literature. The first part of the two-part questionnaire included the sociodemographic characteristics of the physicians and some variables thought to be related to COVID-19. In the second part, questions from the "Attitudes Towards COVID-19 Vaccine Scale (ATCVS)" were included. Multiple linear regression analysis with variables that were significant in univariate analysis was used for further analysis.

Results: Three hundred fifteen (71.9%) of a total of 438 participants stated that they were assigned to units related to COVID-19 during the pandemic. Positive attitudes towards the COVID-19 vaccine were higher in the 24 - 30 years' age group and the specialist physicians compared with other physician groups. With more than 10 years of work in the profession, physicians had a more positive attitude towards vaccination than those with 1 - 5 years' experience. Most of the physicians reported that there were insufficient studies on these newly developed vaccines. Possible adverse effects, uncertainty about the efficacy and safety of the vaccine, and beliefs that people are not at risk for severe disease were prominent.

Conclusions: Despite all the uncertainties about the efficacy, safety, and long-term adverse effects of newly developed COVID vaccines, it was determined that 79% of the physicians approached the vaccine positively. The most important reason for vaccine hesitation was the insufficient studies about COVID-19 vaccines.

Keywords: COVID-19 Vaccines, Pandemic, Vaccine Hesitancy

O-125

The Role Of 112 Emergency Call Centers in The Covid-19 Pandemic Process

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Aim: 112 Emergency Call Center (ECC) was established to provide emergency assistance to people in urgent need after a request for assistance by phone. Coronavirus originated in Wuhan, China, in December 2019. It affected the whole world in a short period of time and defined it as a pandemic on March 11, 2020. The Covid-19 pandemic has brought life to a standstill, causing economic and social losses. In this review, it is aimed to examine the role of 112 ECC in the Covid-19 pandemic process.

Methods: All emergency agencies in Turkey prior to the emergency call center system 110 (Fire Alarm), 112 (Ambulance), 155 (Police), 156 (Gendarmerie), 122 (AFAD) and there were separate numbers of Call Centers. However, as in Europe, studies have been carried out for the single number emergency call center "112" in Turkey. In accordance with the letter of the Ministry of Internal Affairs dated 19.01.2017 and numbered E.1373, all emergency numbers in Turkey were collected from the address '112'. In accordance with the different requirements encountered during the pandemic process, new units were included in 112 ECC and the needs of the citizens were met in the fastest way. This research has been examined by the compilation method.

Results: The first unit established during the pandemic process is Vefa Social Support Groups. Its purpose is to receive and meet the demands of citizens with the start of the lockdown. Later, another unit (ISDEM) was established. With ISDEM, epidemic precautions were controlled, and the management of the epidemic process was supported.

Conclusions: During the Covid-19 pandemic, 112 ECC entered a new phase. The workload of institutions within 112 ECC has increased and the fight against the epidemic has begun. In 112 ECC, the epidemic process was managed in a controlled manner.

Keywords: Covid-19, Pandemic, 112 ECC.

O-126

Investigation of COVID-19 Fear and COVID-19 Awareness Status in Health Management Students

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Aim: The aim of this study is to examine the effect of fear of COVID-19 on the awareness of COVID-19 in health management students. Another aim of the study is to investigate whether the fear of COVID-19 and awareness of COVID-19 differ according to various socio-demographic variables.

Methods: The population of the study consists of 252 students enrolled in an undergraduate health management programme at a public university. No sample selection was made in order to reach the whole universe, and data were obtained from 189 students. The data were collected face to face by the researchers. Descriptive statistical methods, correlation analysis, regression analysis, reliability analysis, t-test and one-way analysis of variance were used in data analysis.

Results: The general average of the students' scores on the COVID-19 fear scale and the COVID-19 awareness scale was determined as 2.52 ± 0.83 and 4.34 ± 0.47 , respectively. According to the results of the correlation analysis, a positive and weak relationship was found between fear of COVID-19 and awareness of COVID-19. According to the regression analysis, the increase in the perceptions of the participants about the fear of COVID-19 statistically increases their awareness of COVID-19 ($t=2.369$; $p<0.05$). Finally, when the COVID-19 fear and awareness scores of the participants were evaluated according to socio-demographic variables, it was determined that there were statistically significant differences only in the gender variable.

Conclusions: In line with the results of the study, it is seen that the COVID-19 fear levels of the students are moderate and their awareness levels are high. During the pandemic period, it is recommended to take measures to reduce the fear of individuals (such as increasing vaccination rates, providing psychological support, etc.) and to carry out studies to increase their awareness of the disease.

Keywords: The Fear of COVID-19, COVID-19 Awareness, Health Management Students

O-127

**Attitudes of Individuals towards Vaccines: A Cross-Sectional Study in Yalova Province,
Turkey**

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Aim: This study aims to determine the attitudes of individuals residing in Yalova province towards vaccines and to examine whether these attitudes show statistically significant difference according to the demographic characteristics of the participants.

Methods: This descriptive cross-sectional study was conducted in Yalova province in Turkey between 10 December 2020 and 27 December 2020. The study was conducted among individuals who are aged 18 and over and currently reside in Yalova. Data were collected using questionnaire.

Results: The findings of the study revealed that the participants had a positive attitude against vaccines (3.90±0.70). There was no statistically significant difference between attitudes towards vaccines and gender, age and working status of the participants. A statistically significant difference was found between attitudes towards vaccines and education level, marital status and having children.

Conclusions: The study revealed that individuals had positive attitudes towards vaccines. Some suggestions were made within the frame of research outcomes in order to continue and raise the positive attitude towards vaccines.

Keywords: Vaccine, Vaccination, Immunization

O-128

The Effect of Psychological Violence (Mobbing) Perception on Job Satisfaction in Healthcare Professionals

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Aim: In these times when the value of healthcare professionals is better understood, psychological violence experienced by healthcare workers gains a special importance.

Methods: Within the scope of this study, which deals with the effect of psychological violence (mobbing) perception on health workers' job satisfaction, a research was conducted on 199 healthcare workers in Kocaeli Province. Heinz Leymann's Psychological Terror Inventory (Mobing Scale) and Job Satisfaction Scale (Minnesota Job Satisfaction Scale (MSQ) were used within the scope of the research. SPSS 22 package program was used for data analysis in the study. Frequency, Independent T-test, One-Way ANOVA, Pearson correlation and Linear regression analyzes were used for analysis.

Results: The total mean of the mobing scale items is 1.39 ± 0.63 . The average of all the items of the job satisfaction scale is 2.71 ± 0.93 . There is a positive relationship between the Mobing scale and only the sub-dimension of external job satisfaction and social relations. In the regression analysis performed with external job satisfaction, a significant relationship was found with mobbing sub-dimensions and it explains 6.1% of the total variance on external job satisfaction of mobing.

According to the analysis results; Statistically significant differences were found between the variables of gender, age, education, occupation, working style and working year, and mobbing and job satisfaction scales.

Conclusions: As a result of the study, mobbing was found to be low and job satisfaction was found to be moderate in health studies. In addition, it was concluded that mobbing negatively affects job satisfaction at a low level. There were also many significant differences with the socio-demographic characteristics of the participants. As a result of the study, it was concluded that the exposure of health workers to mobbing negatively affects their job satisfaction.

Keywords: Mobbing, Psychological Violence, Job Satisfaction Level.

O-129

**Assessment of the Level of Risk Perceptions and Some Related Parameters for the
COVID-19 Pandemic**

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Aim: Assessment of risk perception in communities in the context of the COVID-19 pandemic is essential for organizing effective interventions. The aim of the study is to determine the level of COVID-19 risk perception and the factors associated with risk perception.

Methods: It is a cross-sectional study in which 452 participants, who were employees of Eskişehir Osmangazi University, were included between December-2020 and January-2021. The COVID-19 risk perception level was assessed with 9 questions by modifying the COVID-19 Instant Monitoring Turkey protocol study questions. The prepared questionnaire included variables of sociodemographic characteristics, the status of transmission risk, preparedness, and self-efficacy, compliance with protective behaviors, actionism(ineffective protection behavior) and confidence in information sources/tools. The 25th percentile and lower scores were evaluated as having low risk perception. Univariate and multivariate analysis were used.

Results: The participants had a mean age of 38.51±9.66 years (46.9% females, 53.1% males) were included in the study. The median COVID-19 risk perception score was calculated as 42(Interquartile range:35-50). In this study, the frequency of low COVID-19 risk perception was 26.3%. Being 40 years old and older[OR(95%):1,76(1,12-2,76)], the low-level of compliance with protective behaviors[OR(95%):1.75(1.09-2.76)], and low-level of confidence in information sources/tools[OR(95%):2.37(1.49-3.78)] were predictive for having a low-level of risk perception of COVID-19. Those with a low level of COVID-19 risk perception were more likely to agree that the restrictions being applied were exaggerated(p=0.001). The most trusted sources of information about COVID-19 were the statements of health professionals and official institutions(p<0.001).

Conclusions: In one out of every four people in the study group, a low-level of risk perception was detected. COVID-19 risk perception of individuals should be monitored since it is related to many parameters in epidemic management.

Keywords: Risk Perception, COVID-19, Risk Factors

O-130

Globalizing Reflections of the Covid 19 Pandemic to the 4th Industrial Revolution

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Aim: The aim of the study is to discuss the global scale effects of the Covid-19 pandemic that spread the fourth industrial revolution that is based on digitalization.

Methods: Literature review

Results: Industry 4.0 has a history of about 10 years. However, its global spread progressed very slowly until the Covid 19 pandemic. The fact that the pandemic severely affected every part of the world. Our country also made a rapid entry into Industry 4.0. In Turkey, where labor-intensive production was common until yesterday, there were temporary closures due to the Covid 19 pandemic. In almost every sector, it was necessary to step up in the use of technology. The healthcare sector has also internalized Industry 4.0. In fact, the health sector has become one of the sectors that internalized the industry 4.0 the most. Today, it is not possible to go to the doctor to prescribe medication after the medication reports are given. When it is time to receive the medicines, patients are called from the pharmacy and their medicines are given to them. In many branches, examinations are carried out online. These developments can be considered as the revolutionary effects of the Covid 19 Pandemic.

Conclusions: Health crises have devastating effects. But sometimes it can also have revolutionary effects. We don't know whether it is a coincidence, but the current health crisis came out at a point in the fourth industrial revolution and took the whole world by storm. This feature is the globalizing effect of the Covid 19 pandemic on the fourth industrial revolution.

Keywords: Health Crises, Health Policy, Social Policy, Covid 19 Pandemic, Industry 4.0.

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The COVID-19 Infodemic: A Qualitative Study to Identify Perceptions of Information Sources and Misinformation

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Aim: The Covid-19 infodemic is overflowed with both true and false information, making it difficult for people to access reliable information which they seek in order to overcome the Covid-19 disease. This study was conducted to identify perceptions of Covid-19 information sources and misinformation

Methods: The study was designed using the qualitative method as semi-structured face-to-face interviews were conducted with 17 participants, their opinions were transcribed, and the data were analyzed with the MAXQDA software package.

Results: In the study, 70 codes were determined which were grouped under 5 main themes: information sources, issues which increase the search for information, the characteristics of the information that creates confusion, the factors that determine the perception of correct information, and the factors that affect the individual health behavior.

Conclusions: The main difficulties in accessing information in the group in which the study was carried out are determined as the lack of an accepted scientific reference source to access the correct information, the lack of consensus among health authorities, the difference between the provided information and the individual life experience, the constant change of information, the presence of large amounts of information in virtual networks and the presence of too many technical terms in various information sources which cause confusion.

Keywords: COVID-19, Information, Infodemic, Qualitative Research

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**Changes in the Regional Distribution of Health Workers in the Covid 19 Pandemic:
Application Findings with Gini Coefficient**

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Aim: The aim of the study is to compare the inequalities in the distribution of health personnel during the Covid-19 pandemic according to NUTS 1.

Methods: Gini inequality index

Results: A comparison of regional inequality according to health personnel between 2019 and 2020 was performed. It is observed that there is an inequality regarding the specialists and dentists for both years. The most balanced distribution is available for nurses and midwives. The Gini coefficient values are as follows: While the Gini coefficient for Specialists was 0.152 in 2019, it became 0.147 in 2020. This result shows that regional inequality has decreased during the pandemic period. For medical practitioners, the Gini coefficient fell from 0.082 to 0.081. This result indicates that regional inequality has decreased, too. However, for the total number of physicians, the coefficient increased from 0.102 to 0.111, indicating that inequality has increased. The other health personnel fragment that experienced an increase in inequality was the nurses and midwives, and the Gini value jumped from 0.058 to 0.066. Regarding the pharmacist and dentists, it is seen that regional inequality has decreased during the pandemic period.

Conclusions: The most important actors in the fight against the Covid 19 pandemic are the healthcare workers. For this reason, it is necessary to offer health workers in every region in a balanced way with its population. The findings show that, physicians are distributed more evenly between regions compared to the previous year. But the rise in inequality among nurses and midwives is cause for concern.

Keywords: Public Health Services, Inequality in Health Services, Social Policy, Health Management

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Differences in the Number of Nurses According to Country Rankings in Deaths Caused by Covid-19

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Aim: In this study, it was aimed to examine differences in the number of nurses in deaths caused by Covid-19, according to the death rates of countries.

Methods: In the study, the changes in the number of nurses and midwives over time in Peru, which has the highest death rate due to Covid-19 in the world (per one million people), Turkey, and China which has the lowest mortality rate, were analyzed. The numbers of midwives and nurses per thousand people over time were used for three countries from the World Bank Country Reports database. Kolmogorov Smirnov test was used for normality distribution of the data, Kruskal Wallis test was used for difference analysis and Mann Whitney U test was used for Post Hoc analysis.

Results: Peru ranked first, Turkey ranked 87th and China ranked 207th in death rates due to Covid-19 among each million people. The average number of nurses per thousand people over time in Turkey was 2.06 ± 0.59 , while it was 1.96 ± 0.76 in Peru and 1.36 ± 0.56 in China. The country with the highest number of nurses and midwives per thousand was Turkey, followed by Peru and China. The differences between the ratios between the numbers of nurses and midwives per thousand people in the three countries were statistically significant ($p < 0.05$). Post Hoc Mann Whitney U test results showed that the difference between Turkey and China and the difference between Peru and China were statistically significant ($p < 0.05$). The differences between the numbers of nurses and midwives per thousand people in Turkey and Peru were not statistically significant ($p > 0.05$).

Conclusions: Results argue that effective use of the health personnel and taking the necessary managerial measures will be more effective on deaths caused by Covid-19, rather than the number of nurses during the pandemic process.

Keywords: Nurse, Covid-19, Pandemic, Mortality

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The Graying of Turkey: Is the Demographic Window of Opportunity Closed?

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Aim: It is to determine whether the demographic window of opportunity for Turkey is closed or not.

Methods: Today, an average of 13% of the total world population consists of people aged 65 and over, this average varying between continents and countries. In Turkey, the rate is close to 10%. Turkey is therefore no longer a young country, a phenomenon of the 20th century, but just one of the older societies of the 21st century. Turkey, where demographic aging accelerated from the beginning of the 2000s, can be described as an old country, even though it has a significant young population, due to the proportion of elderly people in the total population.

Results: In 1950, only 5.2% of the world population was over 65, while the rate in Turkey at that time was 3.2%. Turkey was then a very young country in terms of demographics. However, the proportion of elderly people has exhibited a serious upward trend since that time, and as of 2019, 9.1% of Turkey's population consists of people over the age of 65. Societies where the proportion of the elderly population exceeds 7% are considered elderly, and as very old when it exceeds 10%. The elderly population of Turkey is expected to exceed 10% by 2023, while according to projections, 16% of the world, 30% of Europe, and 18% of Turkey will be elderly by 2050. In other words, Turkey will be a demographically very old society in just a few years.

Conclusions: Has the demographic window of opportunity for Turkey already closed, or is there still an opportunity? This study seeks the answer to that question, and we also think that it will contribute to creating a vision for possible future studies, to creating awareness, and to acquiring a new perspective.

Keywords: Demographic Aging, Demographic Window of Opportunity, Older Adult

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Optimization with Simulation in Healthcare

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Aim: It can be said that linear optimizations in the decision-making processes of health services lead to incomplete evaluation of the system and thus ineffectiveness. Today, with the developments in computer technology, complex relationships can be analyzed and evaluated. One of these complex system tools is the agent-based modeling approach. With agent-based modeling, the health system can be modeled, and nonlinear optimizations can be made with simulations. In the emergency departments of hospitals, which are one of the most complex structures in the health system, uncertainty is high about when and how the demand for health care will arise. Contrarily, since health is accepted as a fundamental right, the supply of health services should always meet the demand for health services to a very large extent. However, because resources are limited, not all hospital resources can be transferred to the emergency department. Therefore, cost optimization is expected for the efficient use of limited resources. In this study, it is aimed to optimize a medium-sized hospital emergency department in terms of cost under budget constraints.

Methods: The emergency department were modeled on the basis of agents, and the frequency of patient visits was calculated computationally, according to the relevant literature. It was simulated under various scenarios for one day of the emergency department. Instead of classical mathematical optimization, optimization was made with simulation.

Results: As a result of the scenarios realized, patient waiting times could be minimized with the increase in the number of experienced personnel under budget constraints.

Conclusions: In this study, it has been shown computationally how the agent-based modeling approach, which can be used by health managers in modeling the complex structure of health services, can better reflect the real world and thus offer more effective optimization, in modeling hospital units such as the emergency department.

Keywords: Health Economics, Simulation, Optimization, Agent Based Modeling



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BOOK OF ABSTRACTS

NUTRITION AND DIETETICS

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Table Salt from Past to Present

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Aim: Salt is an important component of daily life to balance the physiological functions of humans and other living systems. There are different kinds of salt in the global market. For example, Himalayan rock salts are gaining popularity due to a variety of nutrients. In this study, the mineral contents of 6 different salt types, namely lake salt, pink himalayan salt, white himalayan salt, sea salt, iodized salt and local rock salt, were compared.

Methods: Salt samples (0.2g) were diluted with 20 ml of 2% nitric acid (HNO₃). Afterwards, it was kept in a hot water bath at 100rpm at 50 °C for 1.5 hours. Mineral determinations were made using Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and Atomic Absorption Spectroscopy (ASS) instruments.

Results: The salt type with the highest aluminum value was the iodized salt sold in the markets. Al was not detected in rock salt and white himalayan salt. The vanadium content was determined similarly in all salts. The type of salt with the highest iron value was determined as pink himalayan salt. No iron was detected in iodized salt and local rock salt. The type of salt with the highest potassium and magnesium value was pink Himalayan salt, similar to the iron mineral. The salt type with the highest copper and zinc mineral values was determined as pink himalayan salt and no copper mineral could be detected in the lake salt. The salt type with the highest cobalt mineral value was determined as pink himalayan salt.

Conclusions: It has been determined that pink Himalayan salt has higher mineral values compared to other salt types. Although the mineral values of iron, potassium and magnesium were found to be higher in pink himalayan salt compared to other salts, other mineral values were found to be similar to each other.

Keywords: Himalayan salt, sea salt, rock salt, lake salt, table salt

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A New Perspective in Nutritional Therapy: Apitherapy

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Aim: Honey bees have been living on earth for more than 80 million years. With the increasing interest in bee products, the number of honey bee colonies and apitherapy production in the world has been increasing regularly in the last 50 years. Derived from the Latin word "apis", which is the equivalent of the word "bee", apitherapy has survived from ancient times to the present day. While China is the world leader in beekeeping as the country with the highest apitherapy production, Turkey is the second country that produces the most honey. This review article will give information about some apiteria products such as honey, bee pollen, propolis, perga, royal jelly.

Methods: A compilation article was written by scanning different types of articles.

Results: Antioxidant apitherapy products such as flavonoids, phenolic acids and terpenoids are widely used in alternative medicine for the protection of health and the treatment of diseases due to their antibacterial, anti-inflammatory, vasodilative and antitumor effects. Honey, which is the most commonly used apitherapy product, has potential effects such as microbial inhibition and wound healing. Propolis is good for gastrointestinal system and oral diseases, and in addition, it has positive effects against gynecological problems. Thanks to the high antioxidant and lipids such as 10-HDA in royal jelly, it has positive effects especially against reproductive health and neurodegenerative disorders. Bee pollen has a therapeutic effect against allergic and immunological diseases due to its various phytochemical content.

Conclusions: With the understanding of the positive effects of apitherapy products on health, the interest and use of these products has increased. Increasing interest brings with it wrong consumption and applications. It is a debate that misapplications reduce the effect of apitherapy application.

Keywords: Honey, Bee pollen, Propolis, Perga, Royal jelly

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Evaluation of Functional Constipation and Nutritional Status in Adult Women

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Aim: The aim of this study is to evaluate the nutritional status of individuals with and without functional constipation.

Methods: The study was conducted on 200 female individuals between the ages of 19-65 and they were randomly selected from Cankaya, Ankara. Individuals without pregnancy or colorectal cancer and those who didn't use laxatives/softeners were included. The form including sociodemographic features, regular medication use, dietary habits, 24-hour dietary recall, Rome IV criteria and Bristol stool scale was applied by face-to-face interview technique. It was determined that individuals have functional constipation according to both the Rome IV criteria and the Bristol stool scale (BSS).

Results: According to Rome IV criteria and BSS, 16% of the participants were with functional constipation. 62.5% of people with functional constipation's defecation frequency was every two or three days and 70.2% of individuals without functional constipation's defecation frequency of was once or twice a day ($p<0.001$). 59.4% of individuals with functional constipation and 61.9% of individuals without functional constipation consume ≥ 3 meals in a day. Individuals consuming insufficient fiber constitute 90% of the sample and 87.5% of those with functional constipation consume insufficient fiber. Only 7% of all individuals drink more than 2 L and 50% of those with functional constipation drink <1 L/d of water. 34.4% of individuals with functional constipation and 17.3% of individuals without functional constipation consume 1-2 L/d of tea, coffee, etc. drinks. Energy, carbohydrate, protein, cholesterol, fiber, potassium, calcium, magnesium, and iron intake levels of individuals with functional constipation were found lower, and fat and sodium intake were found higher than those without functional constipation ($p>0,05$).

Conclusions: Individuals with functional constipation have low daily intake of fiber, water, potassium, magnesium and iron, while their fat and sodium intake is high. Adequate and balanced nutrition should be provided to prevent functional constipation.

Keywords: Functional constipation, Bristol Stool Scale, The Rome IV criteria, Nutrition

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Nutritional Habits and Prevalence of Obesity Among Bitlis Eren University School of Health Students

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Aim: This study is aimed to assess the prevalence of obesity due to the eating habits of students at Bitlis Eren University and to determine the nutritional habits that increase or decrease the prevalence of obesity.

Methods: It is a descriptive cross-sectional study. The population of the research consists of 837 students who studied at Bitlis Eren University School of Health in the 2020-2021 academic year. The sample size of the study was determined to be 212. The research was implemented with 217 people who gave consent to participate in the research. Making use of previous scientific studies, a questionnaire consisting of 45 questions.

Results: 71.4% (n=155) of the students are female and 28.6% (n=62) are male. 9.7% of the students do not have breakfast. Regarding the nutritional habits of the students that they are not satisfied with; 50.2% of the students stated that they consumed sugary and floury foods, 34.1% ate fatty foods, 30.4% consumed junk food and fast food excessively, while 27.6% of the students stated that they ate their meals rapidly, 25.3% of them had a snack late at night, 20.3% of them stated that they were constantly snacking, and 12.9% of them continued to eat even though they were full. 75.6% of the students had normal weight, while 12.0% were slightly overweight, 10.6% were underweight, and 1.8% were obese. The rate of slightly overweight-obese students with an obese family member (25.0%) was found to be significantly higher than that of students without an obese family member (11.3%) ($p<0.05$).

Conclusions: It was found out that the students were aware of their poor eating habits. It was concluded that nutrition education that can be given with continuous and effective symposiums, conferences, and panels should be carried out to ensure that the behavior change is permanent in the acquisition of correct nutritional habits.

Keywords: Nutrition, obesity, university, student, health

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Evaluation of University Students' Eating Disorder Risk and Life Satisfaction in Pandemic Period

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Aim: Covid-19, which is accepted as a pandemic by World Health Organization, poses an important public health threat in Turkey. In addition to the negative effects of this disease on health, the effects of this disease still continue on eating behavior and life satisfaction. In present study, it was aimed to evaluate the relationship between eating disorder risk and life satisfaction in university students.

Methods: The study was conducted online and 316 university students (M:59 and F:257) participated in the study. Eating Attitudes Test (EAT-26) was used for evaluation of eating disorder risk and The Satisfaction with Life Scale was used for evaluation of life satisfaction. The body mass index (BMI) value of the participants was calculated and evaluated. The study was taken from the Ethics Committee of Social and Human Sciences Researches of Tokat Gaziosmanpaşa University with the decision dated 01.10.2021 and numbered 80536.

Results: While the mean BMI of male was 24.2 ± 3.20 kg/m², the mean BMI of female was 21.7 ± 3.98 kg/m². While the mean score of EAT-26 was 13.6 ± 13.63 , the mean score of life satisfaction was 14.1 ± 4.32 . 19.6% of individuals had an EAT-26 score of 20 and above. While eating disorder risk was related with BMI positively, life satisfaction was related negatively ($r:0.114$, $p=0.042$ and $r:-0.227$ $p<0.01$ respectively). There was no statistically significant correlation between BMI and life satisfaction ($r:-0.054$ $p=0.338$).

Conclusions: In this study, life satisfaction and body weight were found to be associated with the risk of eating disorders. Some measures, such as social isolation, have effects on both psychological state and eating behavior. Further studies to be conducted on the regulation of eating behavior will have a positive effect on both body weight and life satisfaction.

Keywords: eating behavior, life satisfaction, pandemic period

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Digestive Properties of *Acetobacter Ghanensis* on Gluten Peptides

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Aim: Celiac disease (CD) is a severe autoimmune disorder that caused by consumption of food containing gluten in genetically predisposed people. CD is characterized by damages in the villus of enterocytes where most of nutrient absorption occurs primarily at proximal small intestine as an inflammatory response against gluten peptides. Digestive symptoms such as chronic diarrhea and constipation and nutrient-deficiencies related symptoms including growth retardation, weight loss, and anemia are the most common signs of CD. Recent study outcomes have shown that certain probiotics, such as Lactobacillus strains could be able to diminish the toxic effects of gluten peptides by digestion. In this study, we aimed to test whether *Acetobacter ghanensis* isolated from home-made fermented kefir has digestive effects against gluten.

Methods: To determine the gluten degrading effects of *Acetobacter ghanensis*, a growth medium with and without gluten as a principal nitrogen source which is vital for survival were prepared as follows: 20 g/L glucose, 30 g/L gluten, 0.05 g/L CaCl₂, 0.07 g/L ZnSO₄, 0.05 g/L L-cysteine, 0.1% Tween 80, 60 mM phosphate buffer (pH 6.5), 16 g/L agar. *Acetobacter ghanensis* were then cultured at 37°C for several days in those growth media.

Results: As expected, there was no bacteria growth were observed on the gluten-free culture media. *Acetobacter ghanensis*, however, were able to survive in the presence of gluten by using its nitrogen subsequent digestion of gluten peptides.

Conclusions: This novel observation suggest that gluten-digestive effect of *Acetobacter ghanensis* may diminish the pathogenic effects of gluten. Further studies are warranted to understand the basis of actions of this novel probiotic strain on pathogenicity for CD as *in vitro* and *in vivo*.

Keywords: *Acetobacter ghanensis*, Celiac disease, gluten, probiotics

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Evaluation of Phenylalanine and Protein Intake of Mothers of Children with Phenylketonuria

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Aim: The purpose of this study is to compare and evaluate the consumption of phenylalanine and protein sources of mothers of children with PKU and healthy children.

Methods: Research was conducted in April 2018 with volunteer mothers who have children with PKU (n=35) and healthy children (n=35) living in İstanbul. Mothers in both groups; age range, sociodemographic and anthropometric characteristics are similar. Inclusion criteria were that children were older than two years of age and before puberty, the mother and child had no chronic disease other than PKU. The data were collected face-to-face with questionnaire consisting of four parts. In the questionnaire, "Sociodemographic Data Form" with 30 questions, "Food Consumption Record" for 24 hours retrospectively and "Food Consumption Frequency (semi-quantitative)" with 47 items were used for food consumption in the last month. Food consumption records were evaluated with "BeBis 7.2 program". The data were evaluated statistically with SPSS 15.0.

Results: It was determined that mothers who had children with PKU consumed statistically significant less phenylalanine than mothers in the control group (p <0.01). It was found that mothers who had children with PKU consumed cheese varieties, red meat, oilseeds (p <0.01) and fish varieties, eggs and legumes (p <0.05) less frequently than other mothers.

Conclusions: It has been determined that mothers of children with PKU consume less phenylalanine and protein sources. This may be related to their children's diet restricted in terms of phenylalanine and natural protein sources. However, protein and essential amino acid phenylalanine are required these mothers as much as healthy women need. Dietitians who follow children with PKU should take role in the mothers nutrition of these children and provide nutritional support, being aware that they need counseling. The issue needs to be examined in parents of children with other metabolic diseases.

Keywords: phenylketonuria, mother, nutritional status, phenylalanine, protein

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The Effects of Hydroxycitric Acid on Weight Loss and Metabolism

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Aim: To evaluate the metabolism of hydroxycitric acid (HCA) and effects of HCA on weight loss through animal experiments, clinical randomized controlled, systematic reviews, and meta-analysis studies.

Methods: 15 studies investigating the relationship between HCA and weight loss between 2000-2021 years were reviewed in PUBMED database.

Results: HCA is the primary acid in the peel of tropical fruit of *Garcinia cambogia* plant native to India, it has distinctive and sour taste. Studies have shown that *Garcinia cambogia* plays an important role in regulating endogenous lipid synthesis. This effect is explained by HCA, a competitive inhibitor of lipogenesis, contained in the plant. HCA is a potent competitive inhibitor of ATP-citrate lyase, an extra mitochondrial enzyme that catalyzes the breakdown of citrate to oxaloacetate to acetyl CoA. Acetyl-CoA formation is an essential step in lipogenesis. With the competitive inhibitory effect of HCA, acetyl CoA accumulation, which is important for the initial step of fatty acid and cholesterol synthesis, is reduced. Thus, HCA is known to reduce fatty acid and cholesterol synthesis. In addition, HCA, which support weight loss by increasing fat oxidation and decreasing fat synthesis, has an effect on the initiation of satiety and decreased appetite with hepatic fatty acid oxidation.

Conclusions: There is little evidence to support the potential efficacy and long-term benefits of *G. cambogia* and its active ingredient, HCA. It has been observed that majority of research on this plant is animal studies. While some studies didn't specify the amount for the dose, in some studies, the daily dose for weight loss was stated to be in the range of 1.667-4.668 mg. It's recommended to divide the total dose into three and consume 30-60 minutes before meals. Further clinical studies are needed to determine the appropriate dose and form of HCA to prevent obesity.

Keywords: Hydroxycitric Acid, *Garcinia cambogia*, Weight Loss, Obesity, Nutrition

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Evaluation of Hedonic Hunger and Eating Attitude Behaviors in Adult Individuals: A Preliminary Study

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Aim: In the study, it was aimed to evaluate the hedonic hunger and eating attitude behaviors of adult individuals.

Methods: In this study, 247 adult individuals aged 19-65 living in Turkey were included. Prior to the study, approval was obtained from the Clinical Research Ethics Committee of Akdeniz University Faculty of Medicine. Individuals' hedonic hunger status was determined using the Power of Food Scale (PFS), and their eating attitude behaviors were determined using the Three-Factor Eating Scale (TFEQ-R21).

Results: The mean age of the individuals participating in the study was 22.6±5.7 years, and the mean body mass index (BMI) was 22.1±4.1 kg/m². 17.8% of the individuals were underweight, 61.9% were at normal body weight, 15.8% were overweight and 4.5% were obese. The PFS score was determined as 3.1±0.7. A positive significant correlation was found between PFS score and BMI and body weight (r=0.138, p=0.030; r=0.150, p=0.019). The sub-factors of the TFEQ-R21 was cognitive restriction, emotional eating, and uncontrolled eating. Individuals' cognitive restriction score was 14.5±3.5, emotional eating score was 12.8±4.5, and uncontrolled eating score was 19.7±5.1. A significant positive correlation was found between the sub-factors of TFEQ-R21 and BMI and body weight (p<0.05). Also, a positive significant correlation was found between PFS score and emotional eating and uncontrolled eating scores (p<0.001).

Conclusions: Hedonic hunger and eating attitude behaviors have an effect on the nutritional status of individuals. This affects the food intake of individuals and, accordingly, their body weight. It is very important to determine the eating attitude behaviors of individuals and to make nutritional interventions specific to the individual in terms of preventing obesity and related diseases. In the light of the study data, it was determined that as the PFS score and TFEQ-R21 sub-scores increased, the body weight and BMI values of the individuals also increased.

Keywords: Hedonic hunger, emotional eating, uncontrolled eating, cognitive restriction, body weight

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Importance of Breast Milk in the Covid-19 Pandemic

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Aim: The aim of this study is to emphasize the importance of breastfeeding and the need to continue it during the covid 19 pandemic.

Methods: Articles containing the expressions; covid 19 and breastfeeding and immun system, were searched through the Pubmed database and 37 articles published since 2019 were reviewed.

Results: Breast milk is the most important source of nutrition for infants. Breast milk is not only provides an ideal balance of nutrients, but also contains numerous bioactive components such as immunoglobulins, oligosaccharides, anti-inflammatory agents, prebiotics and other ingredients. COVID-19 is a disease with high morbidity and mortality. There are very few infectious disease concerns led to the recommendation not to breastfeed their infants. Examples of these are maternal infection with human immunodeficiency virus, human T-cell lymphotropic virus type I or II, or Ebola virus. Women with airborne infections requiring precautions (eg, tuberculosis, chickenpox, measles) should avoid contact with the baby, but may feed their infants with expressed breast milk. Since it is a new virus, although there were questions about breastfeeding at the beginning of the pandemic, it is now recommended that infected mothers should definitely feed their babies with breast milk by paying attention to hygiene conditions. Antibodies passed from mother to milk are protective for the baby, breast milk; In addition to its prebiotic effects, it is known that oligosaccharides in breast milk inhibit the adhesion of pathogens to the epithelial surface and exert immunomodulatory effects by interacting directly with immune cells. Additionally; it has been documented that it has an antiviral effect and is protective against respiratory tract infections.

Conclusions: It is very important for mothers and babies to continue to breastfeeding during COVID-19 period in order to benefit from the benefits of breast milk for mother and baby.

Keywords: COVID-19, Breast milk, Breast feeding

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Evaluation of General Public Knowledge, Attitudes and Practices Regarding the Covid-19 Outbreak One Week After the First Reported Cases in Turkey

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Aim: This study aims to determine the relationship between the public's knowledge, attitudes, and practices towards the COVID-19 outbreak one week after the first cases were reported in Turkey.

Methods: A cross-sectional, web-based study was conducted on the knowledge, attitudes, and practices of COVID-19 among individuals in the first week after the first case was seen in Turkey on March 12, 2020. Data were collected with a 23-item questionnaire. The questionnaire was randomly distributed to individuals of all ages living in Turkey via e-mail. A total of 1306 Turkish adults aged 19-65 completed and returned the survey.

Results: Overall, 72.8% of the participants were women, 56.3% married, and 41.3% health professionals. The mean age of the participants was 33.3±11.2 years and the majority were under 45 years old (83.5%). It was determined that the general understanding of the COVID-19 disease was good, with 91.7% of the knowledge about the main symptoms such as fever, cough, and respiratory distress. The overall correct rate of the knowledge questionnaire was 80.5%. Nearly half of the individuals (45.0%) think that wearing a mask when going out is an important measure to prevent disease. Approximately half of the individuals agree that gargling with salt water (43.5%) and vinegar water (44.1%) is not effective in preventing the disease. The level of knowledge about COVID-19 among healthcare workers is higher. It was found that the younger ones had significantly higher attitude and behavior scores. The women had a higher level of adaptation to the COVID-19 disease.

Conclusions: Most people in Turkey have good knowledge and positive attitude and practice about the COVID-19 outbreak. However, negative attitudes were still found in this study and as a result, by publicizing the increase in daily cases, the prevention measures cannot reach their maximum effectiveness.

Keywords: Attitude, Coronavirus outbreak, COVID-19 disease, knowledge, practices

O-147

Soft Tissue Sarcomas and Immunonutrition

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Aim: Soft tissue sarcomas(STS) refer to rare malignant tumors of muscle, fat, connective or nerve tissue. The most common sites of sarcomas, which constitute about 1% of all cancers, cover the lower and upper extremities. In the perspective of recent developments, it is known that immunonutrition has very positive effects on the prognosis of cancer patients. In this review, the effects of immunonutrition support on the prognosis of STS with a poor prognosis were examined.

Methods: This review containing the latest data was created by compiling the data obtained as a result of scanning the current literature with the relevant keywords.

Results: It is estimated that STS, whose etiology is not fully determined. Genetic defects are seen as the most important risk factor. STS, which usually occurs with an asymptomatic tissue mass, may cause severe pain by creating pressure on the related tissue in the following periods. However, conditions such as loss of appetite, hypoglycemia and hypocalcemia may be encountered. Arginine, glutamine, and omega-3 which are the most frequently researched immunonutrients, are among the products that are frequently used in the improvement of prognosis and prevention of cancer-related malnutrition and cachexia in various cancer diseases, including STS. Arginine, which provides stimulation of lymphocyte functions; It reduces the release of inflammatory mediators by regulating wound healing. Glutamine, which is used as an oxidative fuel in cells such as lymphocytes, is important in nitrogen transport and is the precursor of glutathione. In response to stress, the body's need for glutamine increases. Omega-3, which is included in the structure of eicosapentaenoic acid; It positively affects immunological resistance by reducing inflammatory reactions.

Conclusions: In medical nutrition therapy, it has been reported that immunonutrition in the perioperative period reduces the length of hospital stay and infectious complications, and has positive effects on prognosis at STS.

Keywords: Soft Tissue Sarcomas, Immunonutrition, Glutamine, Arginine, Omega-3

O-148

Vitamin A and Immune System: Current Approach in Covid-19

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Aim: The purpose of this review is to examine vitamin A and its effects on the immune system in the light of current approaches in Covid 19.

Methods: Articles containing the expressions "Covid 19 and vitamin A" were searched through the Pubmed database. A total of 44 articles published in 2021 were reviewed. The traditional review method was used in the study.

Results: Covid 19 is one of the most important public health problems of recent times. Strong immunity is essential in the fight against Covid 19. At this point, it is thought that vitamin A may also have potential benefits. Vitamin A is an unsaturated monohydric alcohol group containing an alicyclic ring. Vitamin A is found in the form of retinol, retinal, and retinoic acid. Retinoic acid is the biologically active form and exists in two important derivatives. As an accelerator for morphology and enhancer of cell differentiation, vitamin A is an integral part of the mucus layer of both the respiratory tract and the gut. As Vitamin A promotes mucin secretion, it improves the non-antigen-specific immune function of tissues. Research shows that vitamin improves the mechanical defense of the oral mucosa, increases intestinal mucus integrity, and preserve the morphology and quantity of urothelium (urinary tract epithelial) cells. Studies have shown that important immune organs require dietary vitamin A intake to maintain their concentrations.

Conclusions: Vitamin A has supportive and regulatory roles in both innate and acquired immunity. In this context, it is thought that Vitamin A may have positive effects on the Covid-19 process.

Keywords: Covid 19, vitamin A, immunity

O-149

Evaluation of the Breakfast Meal in the Regulation of Inpatient Treatment Institutions

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Aim: Regulation of Inpatient Treatment Institutions was published in the Official Gazette in 1983 and includes various issues, especially the implementation fundamentals of different services provided in public hospitals. In this regulation, implementation fundamentals have been determined for patients regarding nutrition, which is very important for health. This study aimed to evaluate the implementation fundamentals of the Regulation of Inpatient Treatment Institutions for breakfast meals, a crucial component of healthy nutrition.

Methods: The current Regulation of Inpatient Treatment Institutions published on www.mevzuat.gov.tr in April 2021 was evaluated. In the evaluation made, implementation fundamentals of the regulation regarding breakfast meals were examined. In the regulation, for some foods that can be given at breakfast included in the daily allowance schedule, the maximum daily amount and maximum weekly number of servings, usage styles and changing sections for adults of normal meals were evaluated.

Results: In the regulation, the time for breakfast was fixed. Regarding the number of varieties, " at breakfasts, it is allowed to served only three types of foods, except bread, tea or milk. Cheese and eggs should not given together" statements are included. The amount of olives for breakfast is stated as 25 grams 4 times a week. The maximum amount for kashar cheese or melted cheese is allowed as 20 grams.

Conclusions: In the regulation, there is a statement that "dietitian prepares the daily list of food of consumption materials according to the charts attached to the regulation". Dietitians who receive nutrition and dietetic training have limited breakfast options because of the regulation in inpatient treatment institutions. Moreover, that situation may cause consumer dissatisfaction and malnutrition; there is a need for a reorganization regarding breakfast in the regulation. Current regulations should update by the needs of patients.

Keywords: Inpatient Treatment Institutions, Regulation, Breakfast

O-150

Assessment the Effectiveness of the Reservation System in State University Food Service

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Aim: It is crucial to carry out Institutional Food Service Systems effectively in universities affiliated to the Higher Education Institution in our country. It is essential to make a future consumption estimation for efficient and effective use of resources and adequate and balanced nutrition of the consumers. This study is aimed to evaluate the systems used by state universities in our country for consumer estimations.

Methods: The use of the reservation system in the foodservice offered at state universities and how it is used were evaluated. In February 2021, a search was done on the Google search engine.

Results: As a result of the search, it was determined that the reservation systems were used in 31 (23.7%) of the state universities. In 10 (32.2%) of the universities using the reservation system, no information about the reservation system could be found outside the system. It is possible to make reservations at 5 (16.1%) universities 1 day before, 4 (12.9%) universities 2 days before, 3 (9.6%) universities 1 week before and at 4 (12.9%) universities weekly reservation information is given. The same periods were used in the cancellation process. Universities with different cafeterias have the opportunity to choose cafeterias. In universities that have the system designed, the reservation price was more advantageous.

Conclusions: Preparing and serving more food than consumed causes waste, and missing food cause serious problems regarding service quality. Integrating the card entrance turnstile systems, which have been used in universities for a long time, with the reservation system is beneficial in calculating the consumption amount. In order to make high-accuracy decisions, additional features should be added to the reservation system, and it should be supported with data such as the status of consumers and statistics for the past period.

Keywords: Food Service Systems, Reservation, State University

O-151

The Effect of Pre-Competition Caffeine Consumption on Athlete Performance

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Aim: The aim of this review is to clarify the effect of caffeine on pre-competition athlete performance in accordance with the available evidence and reveal the type of exercise associated with the appropriate dose and form.

Methods: Fifteen studies investigating the effect of pre-competition caffeine consumption on athlete performance between 2017-2021 years were reviewed under this study.

Results: Caffeine is one of the most well-known performance-enhancing agents in sports. The absorption of caffeine in the body occurs rapidly, and then it is metabolized in the liver to theophylline, theobromine and paraxanthin. It dissolves in fat, providing quick access to the brain and other tissues. It also enters to the blood within 15 minutes after ingestion and reaches its highest levels within an hour. Additionally, it strongly affects both the central and peripheral nervous system.

Conclusions: As a result, caffeine is ergogenic, when consumes at a dose of 3-6 mg/kg/day. The caffeine supplementation is most commonly used 60 minutes before exercise. Doses above the daily intake of 9 mg/kg of caffeine do not further improve performance in sports and can cause side-effects. There is limited references on performance improving of caffeine-included alternative sources such as caffeinated chewing gum and mouthwashes. It is emphasized that the ergogenic effect of caffeine-containing energy drinks is not only attributed to the amount of caffeine, but can also improve as a result of the taurine content. Since the effectiveness of caffeinated aerosol mouth and nose sprays as a dosage can be very small, there is little support for any ergogenic effect. In order to determine the appropriate dose and form of caffeine to improve pre-competition performance, more detailed studies are needed.

Keywords: Sports Nutrition, Caffeine, Athlete Performance

P-4

Gender differences in adolescents' eating habits at school and its relationship with obesity

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Aim: This study aimed to evaluate gender differences in adolescents' eating habits at school and to determine the relationship between eating habits and obesity.

Methods: The study was conducted in 1020 fifth-eighth grade students in secondary schools located in city center of Kırklareli, Turkey between November 2019 and December 2019. Data was collected by face to face questionnaire method. Descriptive information and eating habits at/outside the school were questioned. Anthropometric measurements were obtained in accordance with the methods. Obesity was determined according to BMI-for-age (5-19 years) percentiles by the World Health Organization.

Results: Mean age was 12.3±1.3 years (10-16 years). Girls constituted most of the participants (50.8%) in this study. Among students, 22.6% (n=230) was obese. Approximately one out of three students consumed at least one main meal at school (35.5% of boys and 32.0% of girls; p>0.05). Snack consumption at school was higher in girls than boys (p<0.05). Percentages of girls carrying a lunchbox to school and shopping from the school canteen was higher than boys (29.9% vs. 17.9% and 91.7% vs. 87.8% respectively; p<0.05). When shopping at the canteen, percentage of preferences for biscuits/cakes (34.2% vs. 27.9%; p<0.05) and confectionery (37.5% vs. 28.1%; p<0.05) was higher in girls than boys. On the other hand, sandwich was preferred more by boys than girls (24.5% vs. 17.8%; p<0.05). Compared to non-obese, three main meal consumption was lower in boys with obesity (72.0% vs. 86.1%; p<0.05). But, there was no significant difference in eating habits of girls and boys at school according to obesity status.

Conclusions: This study suggests, adolescents tend to consume unhealthy foods at school. It is thought providing a food environment that will encourage healthy eating habits at school and planning interventions for not skipping meals at/outside the school may be beneficial to prevent obesity in adolescents.

Keywords: adolescents, eating habits, gender, obesity, school

P-5

The Relationship Between Mindful Eating and Body Mass Index in College Students

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Aim: Mindful eating has been shown to be helpful in assisting individuals with eating behaviours and weight regulation. The aim of this study was to determine the relationship between mindful eating and Body Mass Index in college students.

Methods: This cross-sectional study was conducted in college students in city center of Ankara, Turkey between January 2020 and March 2020. The sample of the study consisted of 277 students who volunteered to participate in this face to face survey. Anthropometric measurements (weight, height) were obtained by researchers. A sociodemographic information form were administered. Mindful eating were determined by using the Mindful Eating Questionnaire (MEQ).

Results: Mean age was 21.3 ± 1.5 years. In this study, 69.7% (n=193) of participants were women. Percentage of smoking was 19.1% and percentage of alcoholic beverage consumption was 24.5%. Most of the participants (89.5%) reported not to have any chronic diseases. According to BMI classification, 19.9% of the participants were overweight/obese, 9.4% were underweight and 70.7% had normal weight. The total mean mindful eating questionnaire (MEQ) score was 99.0 ± 12.2 . Total mean MEQ score of women was higher than men (100.0 ± 12.2 vs. 96.4 ± 11.7 ; $p < 0.05$). While disinhibition score was higher in men; emotional eating, eating control, conscious nutrition and interferences scores were higher in women ($p < 0.05$). The total mean MEQ score of overweight/obese participants (93.0 ± 12.8) were found to be lower than underweight (102.2 ± 10.7) and normal weight (100.0 ± 11.7) participants ($p < 0.05$). The disinhibition and emotional eating scores of overweight/obese participants were higher than underweight and normal weight. The score of eating control of overweight/obese was lower than underweight participants ($p < 0.05$).

Conclusions: It was concluded that mindful eating was lower in overweight/obese college students compared to underweight and normal weight. Intervention strategies to increase mindful eating in college students might be effective to prevent risk of obesity and related diseases.

Keywords: Body mass index, college students, mindful eating, obesity

P-6

Awareness of Adult Women Towards Halal Food: A Cross-sectional Study

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Aim: Foods that are carried out in accordance with Islamic rules in all processes applied in every step from production to consumption are defined as halal food. The aim of this cross-sectional study is to investigate the awareness of adult women about halal foods.

Methods: In the period of November 2017- April 2018 in Konya province, the study data were collected by face-to-face survey application with convenience sampling method. A questionnaire consisting of 30 questions, including 9 sociodemographic characteristics, 21 halal food information questions developed by the researchers, was applied to the participants.

Results: The mean age of the participants was 35.93 ± 11.62 years. 82.3% of the participants are single, 47.9% are primary school graduates and 66.2% are housewives. The mean body mass index is 25.8 ± 5.33 kg/m². The rate of those who declared that they heard/know about the halal certificate is 93.8%. Among the characteristics that halal food should have, 89.2% of the participants stated that it should be produced according to the requirements of the religion of Islam, 84.3% should not contain pork or its derivatives, 83.9% should not contain alcohol. More than half of the participants (58.4%) stated that halal food should be produced by Muslim people. 1.6% of the participants think that halal food is not a quality and healthy product, and 1.3% think that it is not a clean product. Participants stated that religious reasons (63.0%) were the most effective in halal food consumption, followed by health (15.1%) and sensitivity to halal food (5.9%), respectively.

Conclusions: Due to the increasing consumption in societies, it is important to investigate the factors affecting consumption. It is thought that the results of this study, which investigates the halal food factor, which is one of the factors affecting consumption, will provide useful information to consumers and producers in their decision-making processes.

Keywords: Halal food, halal consumption, awareness



UNION OF THRACE UNIVERSITIES
IV. INTERNATIONAL HEALTH SCIENCES CONGRESS

BOOK OF ABSTRACTS

PHYSIOTHERAPY AND REHABILITATION

O-152

Telerehabilitation Based Task Oriented Training in Improving Upper Extremity Motor Function in Parkinson's Patients: A Pilot Study

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Aim: It is known that intensive task-oriented training (TOT) applied from the early stage in Parkinson's Disease (PD) improves the functional skills of the upper extremity. However, there are few studies investigating the effect of TOT through telerehabilitation. Therefore, our study aimed to investigate the effects of telerehabilitation based TOT, which has become a necessity especially during the pandemic period, on upper extremity motor function.

Methods: Eight Parkinson's patients (four male, four female) with a mean age of 54.8±10.7 years, with a range of 1-3 according to the modified Hoehn and Yahr were included in the study. Dexterity with the Nine-hole peg test and the Jebsen-Taylor hand function test, the rough grip strength with the hand dynamometer J-Tech™ (Midvale, USA), motor symptoms with the Unified Parkinson's Disease Rating Scale-Motor Rating section (UPDRS-III), and daily activities of living were evaluated with the UPDRS-Activities of Daily Living section (UPDRS-II). After the initial evaluation, all patients were enrolled in a face-to-face telerehabilitation based TOT program, three days a week for six weeks, via video conferencing. Exercise sessions were composed of patient specific upper extremity tasks. The tasks were made more difficult by increasing the number of repetitions and adding motor and cognitive secondary tasks.

Results: After telerehabilitation based TOT, Nine-hole peg test and Jebsen-Taylor hand function test times were decreased, non-dominant side rough grip strength increased, and UPDRS-III and II scores improved in all individuals (p<0.05).

Conclusions: These results show that telerehabilitation based TOT improves fine dexterity, manual muscle strength, motor symptoms, and activities of daily living in Parkinson's patients. Our clinical experiences, together with the results we have obtained, show that TOT is a viable method through telerehabilitation in cases where the possibility of face-to-face physiotherapy is limited. We think that we can achieve more meaningful results when our study, which we started and continued as a pilot study, is completed.

Keywords: Parkinson disease, upper ekstremiti, telerehabilitation, task oriented training

O-153

Should Esports Players Also do Physical Training To Achieve Success?

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Aim: Electronicsports, or esport, is a fast-growing industry. Esport has become increasingly popular worldwide across a wide range of ages. This study aim to investigating health problems caused by low physical activity levels of esports players.

Methods: This study is a qualitative research aimed at examining and analyzing the literature on the subject.

Results: Motor abilities and skills, especially fine motor skills of hands and fingers, eye-hand coordination and local endurance are decisive for being successful in an eSports game. To compete at elite levels, esports players spend 12-15 hours a day using the mouse and keyboard to implement dynamic and repetitive movements within the game. It has been reported that spending time in front of a computer for a long time causes many musculoskeletal system complications such as postural disorders, myofascial pain syndrome, ulnar neuropathy, and symptoms associated with carpal tunnel syndrome based on the recollection of computer game playing experiences. Long-term maintenance of sedentary behavior is a risk factor for many chronic diseases. Due to the nature of esports, the risks of illness associated with physical inactivity are increased. However, it has been shown that being physically active has positive effects on players such as increasing skills such as anger and stress control, increasing attention and perception, increasing creativity, and increasing the ability to cope with external factors such as pressure and excitement.

Conclusions: Esports players should work with a professional just like traditional athletes. Activity levels should be increased by applying physical activity or training programs to esports players. It is thought that musculoskeletal system problems and chronic disease risks due to physical inactivity will be prevented and the success of the players will increase.

Keywords: Esport, Physical Activity, Sedantary Behaviour, Musculoskeletal Disorders

O-154

Evaluation of Physical Activity and Health Perceptions of University Students in the Covid-19 Pandemic

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Aim: The aim is to retrospectively examine the changes in the physical activities of university students due to staying at home during the COVID-19 process and to evaluate the health perception they experience during the pandemic process.

Methods: 161 university students studying in Istanbul participated in the research on a voluntary basis. The physical activities of the participants were evaluated with the accelerometers on their smart phones and their health perceptions were evaluated with the "Health Perception Scale". The three-month step counts and health perceptions of the students were collected using Google forms, due to the restriction rules.

Results: A 57% decrease was observed in the physical activity of the participants within three months. Among the participants, the health perceptions of those who were hospitalized in the last month, who had a chronic disease in their family, and whose families were hospitalized in the last month were found to be significantly lower.

Conclusions: During the pandemic period, attention should be paid to the physical inactivity caused by the restrictions, and physical activity of the society should be ensured with domestic exercises.

Keywords: Pandemic, Physical inactivity, accelerometer

O-155

**Investigation of the Physiotherapy Rehabilitation Program of a Child Case with
Pallster-Killian Syndrome and Scoliosis**

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Aim: To examine the effectiveness of Neurodevelopmental Therapy (NDT) and Schroth 3D scoliosis therapy applications in the correction of Pallster-Killian Syndrome (PKS) and scoliosis deformity due to hypotonia.

Methods: This is the 5-year follow-up of a 1-year-old male patient with a diagnosis of PKS who started a physiotherapy rehabilitation program. NDT approach was applied to support the case neurodevelopmentally. Schroth approach was applied for scoliosis that developed after the age of 2 years. Family education was given and the case was followed up with home program and telerehabilitation methods. Motor development was evaluated using Gross Motor Function Measure (GMFM-88), and scoliosis was evaluated by radiographic examination (cobb angle measurement).

Results: GMFM scores were 2y=26, 4y=82, 6y=144. While the muscle tone was severely hypotonic at the beginning of therapy, it showed moderate hypotonia at the age of 6 years. At the same time, he was able to walk unassisted. A 25° scoliosis was detected by the orthopedist in the left lumbar region (Lle) of the patient when he was 2 years old. Followed cobb angle values are 4y= 26°; It was measured as 6y= 16°.

Conclusions: In developmental disorders with low muscle tone, an increase in the motor development of the child and a decrease in the degree of scoliosis can be seen with the right intervention approaches in the early period. Parallel to the child's chronological age and motor development, the increase in muscle tone, strengthening of the muscles and symmetrical movement development could be achieved with the intervention program. The development of scoliosis, which has an increased risk due to hypotonia, could be controlled.

Keywords: Hypotonia, neurodevelopmental therapy, pallster-killian syndrome, schroth, scoliosis

O-156

Online Presentation of Physiotherapy and Rehabilitation Services: Telerehabilitation

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Aim: After the invention of the telephone in 1876, the concept of telerehabilitation has been added to the telemedicine applications, dating back to the 1880s, when some doctors tried telecommunication technologies. In this study, our aim is to address problems, its contributions to treatment, ethical problems and future expectations of telerehabilitation practices, including in physiotherapy and rehabilitation practices.

Methods: Our study was based on the literature using secondary sources. Secondary sources are data available before starting scientific research.

Results: The first scientific publication on telerehabilitation was dated 1998. However, especially during the covid 19 pandemic period, the number of articles on the subject has increased due to the development of new communication and computer technologies in recent years. Randomize controlled studies about rehabilitation have shown that prompt management of an injury or illness is critical to achieving satisfactory results in increasing patient self-efficacy. Therefore, a rehabilitation program should start as soon as possible, be as intense as possible, be long-term and continue during the recovery period. For this reason, the physiotherapy and rehabilitation practices started in the hospital became permanent with telerehabilitation. However, since physiotherapy and rehabilitation applications include different applications in different disease groups, it may not be possible for every patient to participate in treatment with telerehabilitation. In some applications, especially manual therapy techniques, telerehabilitation is not possible. and therefore the use of this application is limited to some disease groups.

Conclusions: Realistic and comprehensive studies on telerehabilitation practices all over the world are needed to measure how long and what kind of telerehabilitation is given to whom and by whom. We think that telerehabilitation practices will continue with the arrangements to be made in the future.

Keywords: Telerehabilitation, Physiotherapy, Patient, Ethic, Exercises

O-157

Rehabilitation and Nutrition After Covid-19 Infection

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Aim: This study aims to compile the rehabilitation and nutrition recommendations in the literature for patients who have had and survived from Covid-19 infection.

Methods: Unfiltered search of "rehabilitation and nutrition after covid 19", "rehabilitation after covid-19", "nutrition after covid 19" in PUBMED database, and literature search of "rehabilitation after covid-19" and "nutrition after covid-19" were reviewed in Google Scholar.

Results: Post-illness care strategies for patients who have experienced and survived from the coronavirus disease 2019 (COVID-19) are gaining increasing popularity. It is estimated that COVID-19 may have a major impact on physical, cognitive, mental and social health status in the coming years. Previous outbreaks of coronavirus have been associated with persistent lung dysfunction, muscle weakness, pain, fatigue, depression, anxiety, occupational problems, and reduced quality of life to varying degrees. Patients with COVID-19 and those who have recovered from COVID-19 will likely need rehabilitation and nutrition programs during and immediately after hospitalization. In individuals surviving Covid-19, many problems such as decreased appetite, changes in taste and smell perception, feeling of fatigue, continuation of cough and respiratory dysfunction will be possible to improve or control with nutritional and physiotherapy interventions.

Conclusions: Planning of rehabilitation follows evaluation and formulation. Planning is combined with information about the patient's wishes and values, prognosis and available interventions, and sets long-term goals along with medium and short-term goals. Effective rehabilitation interventions fall into five categories these are the same in all circumstances; General exercise that enhances cardio-respiratory work, repeated practice of functional activities, psycho-social therapies, education emphasizing self-management, tailored to the patient's priorities, needs, and goals, covering all areas of the biopsychosocial disease model and regularly evaluated in terms of benefits and harms, and their continuation. Proper nutritional interventions will control the body weight of patients, improve immune system and recovery.

Keywords: covid-19, health, nutrition, rehabilitation

O-158

Determinants Influencing Behaviors of Individuals with Duchenne Muscular Dystrophy Receiving Outpatient Physiotherapy and Rehabilitation Services in the COVID-19 Pandemic

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Aim: The aim of our study is to investigate whether the behavior of individuals with Duchenne Muscular Dystrophy(DMD) in receiving outpatient physiotherapy and rehabilitation services has changed during the Coronavirus Pandemic(COVID-19), and if so, the reasons.

Methods: Eighty-three participants with DMD were reached. 27 cases under the age of 12 and 8 cases who didn't receive physiotherapy service before the pandemic were excluded because the right to vaccination is not recognized in Turkey under 12 years of age. In addition to the evaluation form prepared by the researchers, the COVID-19 Fear Scale(C-FS) and the COVID-19 Prevention Guidelines Compliance Scale(C-PGC) were used in the study. The data were delivered to the families via Google Form. Statistical analyzes IBM SPSS Statistics 26.0 program was used. Spearman tests were used.

Results: C-FS score of the participants was 16.02 ± 6.65 , and C-PGC score was 37.21 ± 6.61 . Significant correlation was found between the ages of the participants and the scores of the C-FS($p=0.04$; $r=-0.298$) and C-PGC Scale($p=0.015$; $r=-0.348$). In this study, 64.6% of the participants had the COVID-19 vaccine. It was observed that 58.8% of those who didn't have vaccinated($n=17$) gave the answer "I think the vaccine may be dangerous due to my health condition". It was found that during the pandemic process, 47.9% of the participants received physiotherapy services in a rehabilitation center, 27.1% in the home environment, and 25% didn't receive both physiotherapy services. It was observed that 52% of those who didn't receive service in an rehabilitation center($n=25$) gave the answer "We are afraid of contracting COVID-19".

Conclusions: It was found that although regular physiotherapy and rehabilitation services are important for individuals with DMD, they cannot access this service with the pandemic. Particularly, information about vaccine and ways to protect against COVID-19 is important in terms of increasing the rate of receiving physiotherapy services.

Keywords: Duchenne muscular dystrophy, COVID-19, pandemic, vaccine.

O-159

Investigation of the Relationship Between Balance and Gait with the Clinical Stage of the Disease and the Severity of Motor Symptoms in Patients with Parkinson's Disease: Pilot Study

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Aim: Parkinson's Disease (PD) is a neurodegenerative disease which balance, gait disorders are common. This study investigated the correlation between the clinical stage of the disease and the severity of motor symptoms with balance, gait in PD.

Methods: The study included 16 patients with PD whose age of 63.50 years (57.25-66.75) and disease duration of 8 years (4.5-9.75). According to the Hoehn and Yahr Scale (H&Y), the average clinical stage was 3 (IQR=2-3). The severity of motor symptoms was evaluated with the motor assessment sub-dimension (UPDRS-III) of the Unified Parkinson's Disease Rating Scale. Balance was assessed by postural stability and stability limit tests using the Huber 360° Evolution System (LPG Systems, France). In the postural stability test, gravity center's sway area was recorded on both feet with eyes open-closed, on single foot with eyes open. In the stability limit test, the area formed by the stability limit boundaries in 8 different directions was recorded. Spatiotemporal gait analysis was performed with the C-Mill VR+ (Motek Medical, The Netherlands). Step-stride length, step width, swing, stance and double support period times were recorded.

Results: Correlation was found between the H&Y and stability limit, step width, and right swing phase duration ($p<0.05$, $r= -0.64, 0.56, -0.70$). UPDRS-III and all postural stability tests ($p<0.05$, $r= 0.52, 0.50, 0.81$) and left step length, swing phase duration ($p<0.05$, $r= -0.52, -0.56, -0.56$) were correlated.

Conclusions: This study's results show different parameters of balance and gait are affected as the clinical stage of the disease progresses and the severity of motor symptoms increases in PD individuals. Particularly, it should be kept in mind that these results pointing to the shuffling gait and the increased postural sways in reach activities may increase the falling risk. It should be aimed to evaluate and develop balance and walking with different dimensions.

Keywords: Balance, gait, motor symptoms, Parkinson's Disease



**UNION OF THRACE UNIVERSITIES
IV. INTERNATIONAL HEALTH SCIENCES CONGRESS**

BOOK OF ABSTRACTS

PHARMACY

O-160

**Investigation of The Irritation Potential of Intimate Wash Formulation Containing
Manuka Oil and Salix Bark Extract**

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Aim: Women often use a variety of feminine hygiene products as part of their daily cleaning routine; however, there is little published medical literature on the external vulva and how personal hygiene practices may affect it. Supported by international guidelines, daily gentle cleansing of the vulva is an important aspect of feminine hygiene and general intimate health. For this purpose, we designed formulations made with natural raw materials such as Manuka Oil and Salix Alba Bark Extract and investigated their irritation potential.

Methods: Dermatological safety assessment of the product – evaluation of the potential irritant and sensitizing properties. The report from dermatological research No 09/08/19/D/9 from Skin Lab International, Cracow. Fourteen women and 1 man, aged 19 – 56 years, with sensitive, problematic, dry skin were selected for the dermatological tests of the product. Dermatological tests were performed in accordance with the COLIPA Guideless for the Assessment of Human Skin Compatibility 1997”. Test has been conducted on group of 15 individuals using Human Repeated Insult Patch Test model. One % solution was applied to patients forearm using patch test through 3 following days and then removed. Baseline readings were recorded half an hour after removal to let erythema from patches and tape (if any) to settle down.

Results: None of 15 people, who were exposed to Patch Testing have shown positive reactions during the test reading.

Conclusions: Women should be encouraged to choose a carefully formulated and clinically tested external wash that provides targeted antimicrobial and other health benefits without adversely affecting the natural vulvovaginal microbiota.

Keywords: Intimate Wash, Manuka Oil, Salix Bark Extract, Human Repeated Insult Patch Test

O-161

Combination Effect Of Antibiotics To Ciprofloxacin Resistant *Escherichia Coli* Isolates

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Aim: The development of resistance of microorganisms to antimicrobial agents has become a major problem all over the world in recent years. For this reason, many antibiotics used in treatment become ineffective. Increasing antibiotic resistance and the difficulty of researching new antimicrobial compounds have made it necessary for existing compounds to be reused. Synergy studies are carried out by combining antimicrobials in order to prevent the development of resistance, to reduce the antibiotic toxicity that can be seen due to high doses, and to ensure that the antibiotics that lost their effect can be used again in treatment. In this study, it is aimed to investigate the effect of ciprofloxacin, nitrofurantoin and fosfomycin combinations against ciprofloxacin-resistant *E. coli* isolates.

Methods: Antimicrobial susceptibility tests were performed by microdilution method in accordance with EUCAST recommendations. Synergy tests were also performed using the checkerboard method. Checkerboard results were defined as synergistic or additive by calculating the FIC indices of the antibiotic combinations used.

Results: In all isolates, ciprofloxacin-fosfomycin and fosfomycin-nitrofurantoin treatments are additive. MIC values of both antibiotics vary between 0.56-1.5 µg/mL. For ciprofloxacin-nitrofurantoin, additive effect was determined for 1 isolate. Also synergistic effect was observed against 2 isolates. MIC values of those with synergic effect are between 0.31-0.5 µg/mL.

Conclusions: It has been determined that the combinations of ciprofloxacin, nitrofurantoin and fosfomycin have additive or synergistic effects. A decrease in MIC values of antibiotics was observed in combinations with additive effects. Considering the additive and synergistic activity obtained in the results of the study, the use of combinations of ciprofloxacin with nitrofurantoin or fosfomycin can be recommended in urinary tract infections caused by ciprofloxacin-resistant *E. coli* isolates.

Keywords: Checkerboard method, Ciprofloxacin, *E.coli*, Fosfomycin, Nitrofurantoin

O-162

Effectiveness Of Antibiotics Used In Acne Treatment With Chamomile Juice Tonic

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Aim: In recent years, the most realistic approach for the treatment of resistant bacterial infections has been considered to be research on inhibiting resistance rather than synthesizing new antimicrobial compounds. In the study, it was aimed to determine the effect of two different tonics prepared with two different chamomile juices on the minimum inhibitory concentration (MIC) of azithromycin and clindamycin in clinical isolates of *S. aureus* and *S. epidermidis*, and to calculate the ideal inhibitory concentration that eliminates the resistance of azithromycin and clindamycin.

Methods: Antimicrobial susceptibility tests were performed by microdilution method in accordance with EUCAST recommendations. The isolates with a decrease in the MIC value of azithromycin and clindamycin in the presence of tonic prepared with chamomile juice were included in the checkerboard test. According to the checkerboard results, inhibitor concentrations and FIC indices that eliminate azithromycin and clindamycin resistance were calculated and the effect of the combination was defined as additive.

Results: All of the isolates were found to be resistant to clindamycin. It was determined that *S. aureus* isolate was sensitive to azithromycin, while *S. epidermis* isolate was resistant to azithromycin. A decrease in clindamycin MIC values of *S. epidermidis* isolate included in this study was detected in the presence of tonic 2. Despite the decrease in clindamycin MIC values, the MIC value is still above the resistance limit value.

Conclusions: Combinations of plant extracts and antibiotics can be an important basis for the development of a new approach to resistance modifying agents.

Considering the results obtained with the *Staphylococcus* isolates used, it may be recommended to use chamomile juice tonic, which reduces the azithromycin and clindamycin MIC values below the resistance limit.

Keywords: Azithromycin, checkerboard assay, clindamycin, *S. aureus*, *S. epidermidis*

O-163

A new series of 1,3,4-oxadiazole derivatives: Synthesis and evaluation of antimicrobial activity

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Aim: Infectious diseases have become more and more life-threatening illnesses. Despite a large number of antimicrobial agents, deaths due to infectious diseases are increasing day by day. Antimicrobial drugs have remained insufficiently against some infectious diseases caused outbreaks such as Zika, Ebola, SARS and MERS coronaviruses during the last decades. Therefore, new antimicrobial agents are urgently needed. 1,3,4-Oxadiazole ring is an important pharmacophoric group which is exhibited a broad spectrum of pharmacological activity profile including their antibacterial, antifungal, antiviral, antimalarial, antitubercular properties (1). In this study, we aimed the synthesis of new 1,3,4-oxadiazole rings and evaluation of their antimicrobial activity.

Methods: New 2,5-disubstituted-1,3,4-oxadiazoles were synthesized at three steps. All compounds were characterized with spectral methods such as IR, ¹H-NMR, ¹³C-NMR and elemental analysis. The antimicrobial activity of 1,3,4-oxadiazoles was screened on four bacteria and three fungi according to our previous method (2). *Enterococcus faecalis*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* were used for antibacterial activity; *Candida albicans*, *Candida parapsilosis* and *Candida glabrata* were used for anticandidal activity.

Results: Minimum inhibitory concentration (MIC) was determined for test compounds and for the reference standards chloramphenicol, ketoconazole. The compound carrying methoxy substituent on the para position of the aromatic ring exhibited the same antibacterial activity as chloramphenicol against *E. faecalis* with a MIC₅₀ value of 62.50 µM/mL.

Conclusions: According to the results, we demonstrated that some compounds exhibit antimicrobial activities against tested microorganisms. Therefore, the oxadiazole nucleus is promising for new drug candidates.

Keywords: Antibacterial, antifungal, 1,3,4-oxadiazole.

O-164

Design of Novel Heterocyclic Compounds as BACE-1 Inhibitors by Molecular Docking

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Aim: Alzheimer disease (AD) is characterized severe loss of memory and decreasing cognitive behavior of person. Intracellular neurofibrillar tangles and formation of senile plaques are the most crucial histopathologic exhibition of disease. Amiloid- β ($A\beta$), which accumulates neurotoxically in senile plaque, causes the formation of free radicals. Melatonin is indolamine structure secreted mainly by pineal gland protects succesfully neuronal cells from the toxicity caused by $A\beta$. Melatonin secretion reduces in AD and this reduction causes sleep disorder and impaired cognitive function. Recent studies have shown that melatonin plays an impressive role neuroprotective on AD. β -secretase (BACE1) and acetylcholinesterase (AChE) are important enzymes in AD. AChE has been shown to be responsible for amyloid- β ($A\beta$) aggregation. BACE1 plays an active role in the formation of $A\beta$. Today galantamine, rivastigmine and donepezile are approved as AChEI to treat AD and also memantine, MNDA receptor inhibitor, is approved to decrease AD symptoms by FDA. Due to the high side effects of these drugs, most patients refuse treatment. Our study aims to exhibit the inhibitory and neuroprotective potential of melatonin-linked heterocyclic compounds on BACE1 by using docking analysis.

Methods: The crystal structure of human BACE1 was obtained from the Protein Data Bank (PDB: 2IRZ) and CDocker method was implemented using Discovery Studio 3.5. The docking studies were performed with melatonin-linked heterocyclic compounds.

Results: When the active site of the enzyme is examined, it was found that ASP32, SER325, ASP228, GLY230, ASN233 amino acids played an important role for inhibition. According to the docking results of the compounds, the interaction with these amino acids was achieved with low binding energies.

Conclusions: The study is important for the discovery of promising novel compounds to the treatment of AD.

Keywords: Alzheimer disease, BACE1, heterocyclic compound, melatonin

O-165

Determination of Vitreous Ang-1, Ang-2 and Tie-2 Levels in the Pathogenesis of Proliferative Diabetic Retinopathy

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Aim: The aim of this study was to determine the levels of angiotensin-1 (Ang-1), angiotensin-2 (Ang-2), tyrosine kinase receptor (Tie-2), which are involved in the pathogenesis of proliferative diabetic retinopathy (PDR) in vitreous fluid and to investigate the role of the angiotensin/Tie-2 system in PDR.

Methods: Twenty-five PDR patients and 25 age-matched non diabetes patients without PDR were enrolled in this study. Ang-1, Ang-2 and Tie-2 levels in vitreous fluid taken from control and patient were determined by commercial ELISA kit. SPSS package program was used for statistical analysis. Statistical significance level was accepted as $p < 0.05$.

Results: Ang-1 and Ang-2 vitreous levels of the PDR patient were found to be significantly decreased compared to the control group ($p < 0.05$). It was found that PDR vitreous Tie-2 levels slightly increased compared to the control group, and this increase was not statistically significant between the groups ($p = 0.248$).

Conclusions: In this study, it was determined that vitreous Ang-1 and Ang-2 levels were associated with the onset and progression of PDR. Binding of Ang-1 and Ang-2 proteins to Tie-2 affects a number of physiological events in the pathogenesis of PDR, including blood vessel permeability and neovascularization, and the Ang/Tie-2 system plays an important role in the development of PDR. This can be used as a therapeutic target for the development of new therapies in the pathogenesis of PDR.

Keywords: Proliferative diabetic retinopathy, Angiotensin-1, Angiotensin-2, Tie-2

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HILIC-HPLC-DAD analysis of indomethacin in capsule formulations

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Aim: Indomethacin is a nonsteroidal anti-inflammatory drug which is used for the treatment of various types of pain associated with arthritis, gout, and collagen diseases. A hydrophilic interaction high performance liquid chromatographic (HILIC-HPLC) method development for the quantification of indomethacin in capsule formulations.

Methods: Indomethacin in capsule formulations was quantitatively determined by HPLC using a HILIC (95Å, 2.1 x 150 mm, 1.8 µm) column and a mobile phase of water-acetonitrile (30:70) by isocratic elution at 20 °C. Flow rate of the mobile phase was 1,00 mL/min, injection volume was 10 µL. Indomethacin was detected at 230 nm wavelength. Determination of indomethacin in capsule formulation was performed by comparing the UV spectrum and retention times of capsule samples with standard compounds'.

Results: Quantification of the indomethacin in capsule formulations performed by using external standard. Retention time was 2,96 minute, theoretical plate number (USP) was 6897, capacity factor was 1,96 and symmetry factor was 1,28.

Conclusions: Chromatographic method is simple, fast, accurate and sensitive and it was applied for assay of indomethacin in capsule formulations. HILIC chromatography show better results at the analysis of polar and small molecules according to the normal phase chromatography. Developed method could be applied for routine analysis of indomethacin formulations.

Keywords: Indomethacin, HILIC, HPLC, Capsule, Quantification

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Determination of Lead (Pb), Aluminum (Al), Arsenic (As), Chromium (Cr) Elements in Bottled Drinking Water Samples by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

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Aim: It is aimed to determine the contents of heavy metals -Kurşun (Pb), Alüminyum (Al), Arsenik (As), Krom (Cr) - in bottled water sold as drinking water with the ICP-MS device.

Methods: Bottled water belonging to 20 different trademarks was placed in sample containers with 5 ml of each sample. The samples were read by taking deionized water as a standard in the ICP-MS device with the standard addition method without applying any pre-treatment.

Results: In this study, Pb, Al, As, Cr elements were examined with the help of ICP-MS device of 20 bottled water belonging to different trademarks and frequently used by the public. Calibration curves against the standard were used. The amount and standard deviation of Pb, Al, As, Cr elements were determined. The mean sample value for Pb is 0.0488 ± 0.003 ppb. The mean sample value for Al is 0.51165 ± 0.06 ppb. The mean sample value for As is 0.0683 ± 0.006 ppb. The mean sample value for Cr is 0.1709 ± 0.007 ppb. Results were evaluated according to the drinking water regulations of World Health Organization and Turkish Standard Institution.

Conclusions: As a result of the study, it was concluded that the metal levels in bottled drinking water did not exceed the maximum allowable limit values for any brand. Although the amount of some elements was found to be significantly higher in certain samples compared to other samples, it was determined that it was well below the maximum tolerable limit value. It has been determined that it will not pose a threat to human health.

Keywords: ICP-MS, Bottled Water, Heavy Metal, Metal Determination