Objectives: Develop a statistical model of the dynamics of the number of completed suicides, considering regions of Ukraine and months. For this, a time series of the number of suicides from 2005 to 2021 was created, a mathematical and statistical analysis of the dynamic characteristics of the time series was carried out, and a forecast of the dynamics of the number of completed suicides was built.
Methods: Time series analysis using autocorrelation analysis with the calculation of Leung-Box statistics and the method of seasonal exponential smoothing were applied.
Results: Autocorrelation of the absolute indicators of the number of completed suicides made it possible to construct correlograms for each separate region of Ukraine. In order to ensure the statistical reliability of the autocorrelation coefficients, the number of lags was equal to 50, based on the fact that $k \leq n/4$, where k is the maximum number of lags, and n is the number of observations. The correlograms of the regions that characterized the built statistical model of the dynamics of changes in the number of completed suicides were clustered in the form of four groups. The calculation of the coefficient of determination indicated that a high proportion of the total variation for Ukraine as a whole ($R2=0.656$) and for its individual regions ($R2=0.731\pm0.051$) can be explained using the model we built, and the model itself should be evaluated as consistent. Based on the developed model, it was established that the period from March to May, July and, to a lesser extent, January is characterized by the highest number of suicides.
Conclusions: The constructed statistical model of the dynamics of suicides in Ukraine is coherent and statistically reliable. It can be used for forecasting, provided corrections are made, taking into account the social changes of wartime. The study of chronobiological aspects that drew attention during the analysis is promising for further targeted scientific research and may be of practical interest for the creation of national suicide prevention programs in Ukraine.

Disclosure of Interest: None Declared

EPV1075

Deliberate self-poisoning in children and adolescents

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Introduction: Suicide is a significant global public health issue that has a severe impact on children and adolescents.
Objectives: This study examined the epidemiological features of self-poisoning events among these groups in Morocco.
Methods: In this retrospective study, data on intentional poisoning cases among children under 15 years of age and adolescents aged 15-19 years were analyzed. The Moroccan Poison Control Center has reported these cases over a period of 34 years.
Results: During the study period, 7,111 deliberate self-poisoning cases were documented among children and adolescents, representing 30% of all reported self-poisoning cases (out of a total of 23,711 cases with known ages). The vast majority of the cases (80.8%) involved females, indicating a significant female-to-male ratio of 4.2. The patients had a mean age of 16.05 ± 2.10 years. Notably, drugs were the predominant method of self-poisoning, comprising 51.7% of the cases, followed by pesticides at 31.3%. The symptoms of poisoning manifested with significant variation, contingent on the type of toxin involved, the amount ingested, and the time passed before medical care was administered. Of the 4,711 cases with known outcomes, 144 (3.06%) were fatal. Nonetheless, the outcomes were favorable for the remaining cases, with or without lasting sequelae.
Conclusions: The ongoing prevalence of suicide and suicide attempts among children and adolescents is a prominent issue in public health. Our research emphasizes the crucial necessity to address suicide, as it remains one of the primary causes of mortality in young individuals.

Disclosure of Interest: None Declared

EPV1076

Understanding collective suicides in Morocco: A 35-year epidemiological study

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Introduction: Suicide is a major public health concern, ranking among the leading causes of death worldwide.
Objectives: This study investigated the epidemiological features of collective suicide incidents in Morocco.
Methods: We performed a retrospective analysis of suicidal poisoning cases recorded by the Moroccan Poison Control Center (MPCC) over a 35-year period.
Results: During the study's duration, the MPCC recorded 168 suicide cases. The mean age of those involved in these incidents was 23.9 years, with a female-to-male ratio of 1.57. The majority of those affected were adolescents and young adults, specifically between 15 and 34 years of age. Pesticides and drugs were the most commonly used methods of suicide and accounted for 31.1% and 20.1% of the cases, respectively. The majority of incidents occurred in the home environment and were primarily caused by oral exposure. The symptoms of poisoning varied according to the consumed substance, amount ingested, and elapsed time until medical treatment. The symptoms included disturbances in the neurological, gastrointestinal, respiratory, and cardiovascular systems. Of the 100 cases with known outcomes, one person died due to poisoning, whereas the remaining cases survived, although some enduring complications.

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Conclusions: Suicide accounted for 1.3% of global mortality, ranking as the 17th most common cause of death in 2019, according to data from the World Health Organization (WHO). This trend emphasizes the urgent need for continuous efforts at all levels to address and mitigate this rapidly growing issue.

Disclosure of Interest: None Declared

O0031

Investigation of peripheral inflammatory biomarkers in association with suicide risk in major depression

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Introduction: Suicide is the most severe consequence of major depressive disorder (MDD). The most novel researches assume the role of immunological dysregulation in the background – several studies have reported alterations of inflammatory cells related to both MDD and suicidal behaviour (SB).
Objectives: Changes in the number of certain immune cells and their ratios have been proposed as potential biomarkers of suicide risk (SR). The aim of our research was to investigate alterations of these values related not only to MDD as an assumed inflammatory state, but also to an increased risk of SB.
Methods: In our restrospective cohort study carried out between January 2015 and January 2020, we investigated laboratory parameters of psychiatric patients diagnosed with MDD (n=101). Individuals with recent (≤48 hours prior) suicide attempt (SA) (n=22) and with past SA (>48 hours prior) (n=19) represented the high SR group. MDD patients with no history of SA (n=60) composed the intermediate SR group. We compared the number of neutrophil granulocytes, monocytes, lymphocytes, platelets, leukocytes, neutrophil-to-lymphocyte (NLR), monocyte-to-lymphocyte (MLR), platelet-to-lymphocyte ratio (PLR), red blood cell distribution width (RDW) and erythrocyte sedimentation rate (ESR). Furthermore, we evaluated alterations of these parameters related to antidepressant (AD) treatment, which has been proved to have anti-inflammatory effects. Statistical analyses were carried out using GraphPad 9.5.0 and MedCalc 16.8 programmes.
Results: We found a significant increase in neutrophil granulocyte count (p=0.016), NLR (p=0.031, Fig. 1), monocyte count (p≤0.0001), MLR (p=0.005, Fig. 2), leukocyte count (p=0.048) and ESR (p=0.037) in patients with recent SA compared to patients with no history of SA. Moreover, there was a significant elevation in monocyte count (p≤0.0001), MLR (p=0.020, Fig. 3), ESR (p=0.041) and RDW (p=0.037) in patients with high SR compared to patients with intermediate SR. AD treatment resulted in a significant decrease in neutrophil granulocyte count (p=0.0163) and NLR (p=0.016), however, it did not affect the rest of the parameters.

Image:

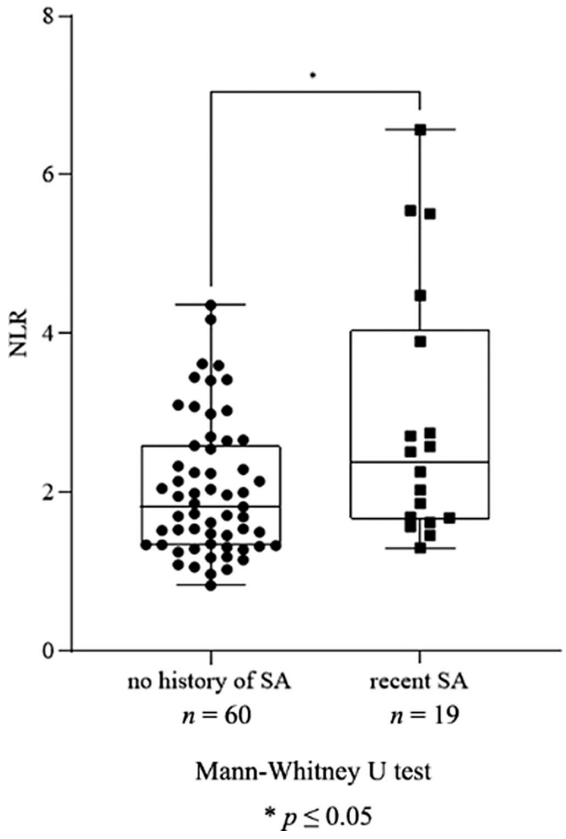


Image 2:

