Depression - the scale of the problem in women

Kułak-Bejda A.*[1 A,B,C,D,E,F], Bejda G.[2,A,B,F], Waszkiewicz N.[1 E,F]

1. Department of Psychiatry, Medical University of Białystok, Bialystok, Poland
2. The School of Medical Science in Białystok, Bialystok, Poland

---

A- Conception and study design; **B** - Collection of data; **C** - Data analysis; **D** - Writing the paper; **E**- Review article; **F** - Approval of the final version of the article; **G** - Other (please specify)

ABSTRACT

It is estimated that the prevalence of depression throughout life ranges from 14.4% to 18% of the population and affects women twice as often as men. In 2019, symptoms that may indicate depression affected 19.2% of women, which was characteristic for all age groups. The group of women in 2019 less often (13.2%) experienced symptoms that may indicate depression than five years ago (18.7%), in 2014. The paper reviews the available literature on depression in women. The results are discussed in a sub-chapter: Introduction, Epidemiology of depression in Poland, Epidemiology of depression in women, Selected clinical aspects of depression in women, Depression in the menopause, Postpartum depression,Summary.
Keywords:depression, women

DOI: 10.5604/01.3001.0016.1751

*Corresponding author
Agnieszka Kułak-Bejda
Department of Psychiatry, Medical University of Białystok, Bialystok, Poland
agnieszka.kulak.bejda@gmail.com

Received: 24.06.2022
Accepted: 22.11.2022
Progress in Health Sciences
Vol. 12(2) 2022 pp 78-89

INTRODUCTION

Depression is a systemic disease that significantly affects the quality of life and the ability to function in every area (both social and professional) of life. It is considered the most common mental disorder in the world, the fourth most serious health problem in the world, and the twentieth most important cause of disability [1], and fourth place on the list of causes of sickness disability in the world (2002) [2].

Epidemiology

According to data from the World Health Organization (WHO), one in four people in Europe may suffer from depression at least once in their lifetime, and 3 out of 4 people who suffer from it do not receive proper treatment [3]. Currently, depression affects at least 350 million people worldwide [4]. It is predicted that in 2030 it will be the second most frequent cause of disability in the world in highly developed countries and the third in low-developed countries [2], and in terms of the total global burden of non-communicable diseases, it will overtake cardiovascular disease and become the most common disease [1].

A study conducted in the years 2001-2003 in the United States (sample of 9,282 adults) showed the presence of mood disorders in the group of 20.8% of respondents, major depression - in 16.6%, dysthymia - in 2.5% and bipolar disorders - in 3.9% of respondents [5]. Furthermore, the European Study of the Epidemiology of Mental Disorders (ESEMeD) found that 14% of the study population had experienced a mood disorder during their lifetime [6].

In Spain, in a group of 5,473 people, major depressive disorders occurred during life in 10.6% and in the last year in 4.0% of the surveyed people [7.]

In 2011, the European College of Neuropsychopharmacology (ECNP) and the European Bra-in Council (EBC) published a report entitled "Extent and frequency of disease and mental disorders in Europe in 2010". The study covered a total population of 514 million people from all European Union countries, including Switzerland, Iceland, and Norway. The analysis looked at mental disorders, including depression, bipolar disorder, anxiety disorders, insomnia, addiction, and schizophrenia, and neurological disorders, including stroke, epilepsy, Parkinson's disease, and multiple sclerosis.It was found that every year 164.8 million inhabitants of the European Union (38.2%) suffered from mental health disorders, including anxiety disorders (14%), insomnia (7%), depression (6.9 %), somatic disorders (6.3%), ADHD in children and adolescents (5%), and dementia (1-30%) [8].

2017 WHO report shows that more than one in twenty Europeans experience depression. The greatest number is India (56.6 million - 4.5% of the population), China (54.8 million - 4.2% of the population), and the United States (17.5 million - 5.9% of all Americans) [9]. In Europe, 6.3% (2.8 million) of Ukrainians, 5.9% (75 thousand) of Estonians, 5.7% (593 thousand) of Greeks, and 578 thousand Poles struggle with it. Portuguese, 5.6% (511 thousand), Belarusians, 5.4% (207 thousand), Moldovans, 5.2% (2.4 million), Spaniards, and 5.1% (1.8 million) Poles [9].

In 2017, according to IHME (The Institute for Health Metrics and Evaluation) estimates, among European countries, the percentage of people suffering from depression was higher than 5%, the highest in Portugal, Finland, Estonia, Sweden, and Lithuania [10].

The Global Burden of Disease study conducted by the Institute for Health Metrics and Evaluation (IHME) allowed for the conclusion that depressive disorders (major depressions - F32, F33, and dysthymia - F34.1 according to ICD-10) were the second most common (after anxiety disorders) occurring mental disorders. In the European Union countries, depressive disorders concerned 20.7 million people (4.2% of the population), and for bipolar disorders - 4.5 million people (1% of the population) [11].

In determining the health situation of the population, the indicator of disability-adjusted life years (DALY) is also used, which takes into account the impact of the disease on life expectancy and the reduction of the quality of life related to disability and invalidity [12]. One DALY unit represents the loss of one year of healthy life due to premature death (due to disease) or disability. In the European Union, in 2017, DALY for depression (F32, F33, F34.1 according to ICD-10) amounted to 3.4 million and corresponded to 2.23% of the total number of DALYs. The share of DALYs caused by depression was highest in Sweden, Ireland, and France among DALYs due to all diseases [13]. In Poland, the DALY value due to depression was 1.27%, and it was one of the lowest in the European Union. Only Romania and Bulgaria had lower values [13].

A UN (United Nations) report from May 2020 showed that 264 million people suffered from depression before the pandemic, and suicide was the second most common cause of death among people aged 15-29 [14]. The April 2020 study in Ethiopia noted a threefold increase in depression symptoms compared to pre-pandemic data. It also turned out that people fighting the SARS-CoV-2 coronavirus on the so-called front lines (healthcare workers and long-term care professionals) are particularly vulnerable to the psychological effects of the current epidemiological situation. The need for psychological support was reported in Canada by 47% of medical workers, in China by 50% by symptoms of depression, 45% by anxiety, and 34% by insomnia. In Pakistan, many healthcare workers reported moderate (42%) to severe (26%) mental stress. The

report clearly shows that women are more exposed to the adverse psychological effects of COVID-19 than men. The Indian population during the pandemic showed that it was experienced by 66% of women vs. 34% of men. Especially pregnant women and those who have just given birth to a child are exposed to mental stress. The above is probably due to difficult access to medical services, limited social support and fear of infection [14].

EPIDEMIOLOGY OF DEPRESSION IN POLAND

According to the data of the National Health Fund (National Health Fund), in the years 1990–2010 the number of patients with depression (F32, F33, F34.1 according to ICD-10) in Poland increased [10].

Epidemiology of Psychiatric Disorders and Availability of Psychiatric Healthcare study conducted in 2008–2011 and based on 24,000 interviews in a group of people aged 18-64 . It showed that 23.4% of people were diagnosed with at least one mental disorder out of 18 disorders defined according to the International Classification of Diseases ICD-10 and the Classification of Mental Disorders of the American Psychiatric Association DSM-IV. Every fourth person experienced more than one disorder, and every twenty-fifth experienced three or more. Nearly a quarter of a million people have experienced several disorders simultaneously. Mood disorders accounted for a total of 3.5% (depression accounted for as much as 3%), which proves that they may affect nearly one million Poles of working age. Major depression was found in 3.0% of the respondents and minor - in 0.4% [15].

In 2019, the most frequently reported problems in Poland, persisting for at least half of the days in the two weeks preceding the study day, were: fatigue (9.4%) and lack of regular sleep (9.2%) [16]. Other sensations, which may be symptoms of depression, were indicated by less than 5% of the respondents. In general, according to the obtained results, symptoms that may indicate depression affected 16.1% of the population to varying degrees. Mild symptoms were mentioned by 11.9% of the respondents, moderate - by 2.7%, and severe and strong - 1.5%. The percentage of people indicating symptoms that could be evidence of this disease increased with the age of the respondents, and the older the person was, the more often they occurred. Among people aged 60-69, 20.0% of the respondents mentioned having symptoms that could indicate depression in the age group 70-79 - 30.9%, and those aged at least 80 - 47.3%. Symptoms suggesting depression, occurring in at least mild form (with the average for the whole population being 16.1%), concerned 36.1% of people with limitations (severe or not very serious) in everyday activities, and 23.2% of chronically and 56 patients—4% of people who rated their health poorly or very bad. Among city dwellers, symptoms that may indicate depression (regardless of their severity level) were 17.0% and 2.3 pp. more than among the countryside inhabitants. With moderately severe and severe symptoms, this difference was 0.5 pp, with low percentages (1.7% among urban residents and 1.2% among rural residents, the average for Poland was 1.5%) [16].

According to ZUS data, in the third quarter of 2020, the number of sick days due to depressive episodes was over 1.23 million, while a year earlier, it was less than 961 thousand, while due to recurrent depressive disorders, it increased from 492 thousand and up to 575 thousand [17].

EPIDEMIOLOGY OF DEPRESSION IN WOMEN

It is estimated that the prevalence of depression throughout life ranges from 14.4% to 18% of the population and affects women twice as often as men [18].

Birmaher et al. reported that while MDD (major depressive disorder)occurs in equal proportions in representatives of both sexes in childhood, it is associated with a higher incidence of depression in the group of girls as compared to boys in adolescence [19]. Richardson and Katzenellenbogen report he basis of this disproportion in hormonal, neurobiological and socio-cultural differences in the development of both sexes [20].

SAD (seasonal affective disorder) affects women four times more often than men and the incidence seems to decrease with age [21]. This was confirmed by Bergdahl et al. [22] and Sanchez et al. [23], stating a greater severity of depressive symptoms in women than in men, except in the group of older adults (over 85 years of age), where men predominated.

In a study conducted during the pandemic in northern Italy in a group of 281 mothers, symptoms of depression were shown in 26% and anxiety in 32% of respondents. Mothers who reported no exposure to SARS-CoV-2 during pregnancy and those who reported at least one direct or indirect exposure did not differ in affective symptoms. Risk of severe depression and anxiety was positively associated with pandemic-related prenatal emotional stress and negatively associated with perceived social support during pregnancy [24].

Khamees et al. assessed the level of anxiety and depression in 120 pregnant women, including 40% nulliparous women and 60% multiparous women. Both nulliparous and multiparous women had a fairly high probability of depression (44.2% of respondents had a score of $\geq$ 14 points) [25].

The American study showed that in a sample of 788 pregnant women, 21.1% showed no or minimal anxiety symptoms, 35.6% - had mild anxiety symptoms, 21.6% - had moderate anxiety

symptoms, and 21.7% - had severe anxiety symptoms [26].

The EZOP study conducted in Poland in 2008–2011 showed that 4.0% of women were affected by major depression. Throughout life, bipolar I disorder and bipolar II disorder - 0.1%, occurred in 0.1% of the study sample, equally often in women and men. Dysthymia ever occurred in 0.9% of the examined women during their lifetime [15].

Health data from the 2014 European Health Interview Survey found that more than one in twelve women (8.8%) reported experiencing chronic depression. The incidence of chronic depression increases with age. In the 55–64 age group, over 11.4% of women suffered from chronic depression. Between the ages of 65- 74, the incidence in women decreased to 9.8% and increased in the older age (75+), including 12.4% of women [1]. Grundy et al. reported this increase in old age because depression is associated with poor physical health, poorer financial conditions, and lower social support [27].

In 2017, 5.3% of women in the European Union suffered from depression. The highest percentages of women with depression were in Portugal and Finland (over 6.5%). In Poland, 3.2% of women suffered from depression in 2017 [10].

In 2019, symptoms that may indicate depression affected 19.2% of women, which was characteristic for all age groups. The group of women in 2019 less often (13.2%) experienced symptoms that may indicate depression than five years ago (18.7%), in 2014 [16].

Interesting data was provided by the observational study by Dankowski et al., conducted from February to April 2021 in a group of patients who recently suffered from coronavirus disease (COVID-19), at least 28 days after diagnosis.

They showed that patients who had recently had COVID-19 showed increased anxiety and symptoms of depression, with these being more pronounced in women [28].

Sade et al. Assessed the risk of depression among pregnant women hospitalized during the COVID-19 pandemic compared with women hospitalized before the COVID-19 pandemic [29]. The study was cross-sectional among women hospitalized in the high-risk pregnancy units of the Soroka University Medical Center. All participating women completed the Edinburgh Postnatal Depression Scale (EPDSThe results were compared between women hospitalized in the period of strict COVID-19 isolation (March 19, 2020, and May 26, 2020) and women hospitalized before the COVID-19 pandemic. It turned out that women hospitalized in the period of strict COVID-19 isolation had a comparable risk of obtaining a high (> 10) EPDS score compared to women hospitalized before the COVID-19 pandemic ($p = 0.498$) These results remained similar in the multivariate logistic regression model considering maternal age, ethnicity, and known mood disorder (adjusted odds ratio (OR) 1.0, 95% CI 0.52–1.93, $p = 0.985$) [29].

Durankuş and Aksu found 35.4% of pregnant women above 13 in EPDS [30]. The authors also found a statistically significant effect of COVID-19 on mental health, social isolation, and mean scores in the Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI). Efekty te były bardziej nasilone w grupie niż w grupie kontrolnej (stan psy-chiczny: 8 369 ± 2 003, izolacja społeczna: 8 000 ± 2,507, średnie wyniki BDI: odpowiednio 20 565 ± 6605 i BAI :22 087 ± 8689) [30].

A study by the Kaiser Family Foundation in the publication of 2021, one year after the outbreak of the pandemic [31], points out that during a pandemic, women with children report symptoms of anxiety and depressive disorders more often (49%) than men with children (40%). The UN report from May 2020 clearly shows that women are more exposed to the negative psychological effects of COVID-19 than men. Research on the Indian population during the pandemic found that it was experienced by 66% of women vs. 34% of men. Especially pregnant women and those who have just given birth to a child are exposed to mental stress. The above is probably caused by demanding access to medical services, limited social support, and fear of infection [32].

In a study conducted in northern Italy, among a group of 281 mothers, 26% of the respondents showed depressive symptoms, and 32% of the respondents. Mothers who reported no exposure to SARS-CoV-2 during pregnancy and those who reported at least one direct or indirect exposure did not differ in affective symptoms. The risk of severe depression and anxiety was positively associated with pandemic-related prenatal emotional stress and negatively associated with perceived social support during pregnancy [24].

Khamees et al. assessed the level of anxiety and depression in 120 pregnant women, including 40% nulliparous and 60% multiparous women. The mean anxiety scores for nulliparous and multiparous women were 45.27 ± 10.78 and 47.28 ± 10.62. Both nulliparous and multiparous women had a relatively high probability of developing depression. Fifty-three percent obtained a score of ≥ 14 points [25].

The American study showed that in a sample of 788 pregnant women, 21.1% showed no or minimal anxiety symptoms, 35.6% - had mild anxiety symptoms, 21.6% - had moderate anxiety symptoms, and 21.7% - had severe anxiety symptoms. anxiety symptoms [26]

About 25-50% of people suffering from depression self-harm and attempt suicide, which accounts for almost 10% of deaths among these people [33]. Approximately 20–55% of people undergo treatment [34].

The World Health Organization estimates that 800,000 People commit suicide, and suicide attempts are up to 20 times higher. It is estimated that every 40 seconds in the world, someone takes their own life. According to the World Bank, the estimated suicide rate is 10.5/100 thousand, including (4.6/100 thousand) women. In highly developed countries, the number of suicides is higher - 11.64/100 thousand, while in medium-developed countries - 7.93/100 thousand [35]. Data from the Police Headquarters shows that in the first five months of 2021, there were almost 5.7 thousand. Suicide attacks, including nearly 1.7 thousand in women vs. 4.8 thous. In 2020 - 4.8 thousand, including 1.3 thousand women). This result is greater than the observed two years (in 2019) in the same period - 4.9 thousand. (including women - 1.3 thousand). In the analyzed period, as many as 2.2 thousand suicide bombings ended in death [36].

SELECTED CLINICAL ASPECTS OF DEPRESSION IN WOMEN

According to the World Health Organization (WHO), depression manifests as sadness, loss of interests and pleasure, guilt, low self-esteem, sleep, and appetite disorders, fatigue, and decreased concentration, and is accompanied by thoughts of self-harm or suicide [37]. These symptoms must persist continuously for at least two weeks to be diagnosed with depression. The causative agents of the disease are various and complex factors, such as hereditary factors, severe diseases, personality traits, living conditions, or negative experiences that last a long time. Additional factors in the development of depression are chronic stress, disturbances of circadian rhythms (more work, less sleep), which is favored by modern times - civilization changes, an increase in the pace of life, and the economic crisis. It has been shown that the rate of depression symptoms for the population with primary or secondary education was more than twice as high as for the population with higher education. There was also a correlation between income and symptoms of depression. In all countries, those with the lowest income versus the highest income were more likely to report experiencing symptoms of depression. At the EU level, the rate of depression in the lowest-income group was three times higher than in the highest-income group [37]. It is also estimated that in 85% of cases, depression is accompanied by other health problems, including 30% of people with four or even more additional conditions, such as rheumatoid arthritis, diabetes, ailments related to the abuse of psychoactive substances, e.g., in alcohol and drugs [1]. In 2018, the WHO presented a study confirming that people with mental disorders and suffering from other treatable diseases (e.g., hypertension, rheumatism, digestive system diseases) live 10-20 years shorter than the general population [38].

It is believed that depression factors in women may be [39]:

- Marital status - depression occurs less frequently in single women than married women. The risk of developing depressive symptoms is related not only to being married but also to its quality. Difficulties in relationships with a partner may contribute to the onset of depression and affect its course and recurrence. One of the risk factors for depression is the lack of an intimate, trust-based relationship with a partner. The marital situation also significantly impacts the course of treatment of the disease. For example, prolonged marital conflict is a major stress in life; it deprives partners of an essential source of support and lowers self-esteem. On the other hand, the improvement of partnerships causes faster disappearance of the disease's symptoms and reduces the risk of relapses. The relationship with a spouse has a more significant influence on the well-being and depressive style of thinking in women than in men.
- Professional situation - especially the lack of work. It has been proven that professional work makes women more resistant to negative life events. This is most likely due to the "hidden functions" of employment.
  Professional work organizes the day's program, allows social contacts, activity, a sense of purposefulness, control, and raises social status. Cognitive processes - it was found that women generally have lower self-esteem than men and focus more on themselves and their emotions than on taking action in response to negative life events. In addition, they focus more on depressive experiences and are less involved in activities that could distract them from depressive thoughts and thus improve their well-being.
- The postpartum period contributes to the widespread occurrence of mood disorders, the most important of which are: postpartum sadness, postpartum depression, postpartum psychosis, and euphoria (postpartum hypomania).
- The period of menopause.

Addis and Mahalig suggest that women's most common causes of depression are related to interpersonal problems and conflicts [40]. In addition, in women, internalising symptoms are noted more often than in men [41] and hypochondriacs [42].

Research shows that anxiety disorders, depressive disorders, and bipolar disorders are more common in women than men. It is believed that these gender differences may be related to women being more likely to report mental health problems [43]. Wenzel et al. [44] claim that women carriers of the depression gene fall into depression, and men -

carriers of the same gene - become addicted to alcohol. Moreover, according to Silverstein et al., Learned helplessness is more common among women [45]. Newman et al. also emphasize that the commonly accepted social norms allow the expression of depressive feelings (e.g., despair, crying in the face of loss) more by women than by men. However, they disapprove of their anger and anger [46] women are more likely to react with mood disorders and more likely to experience unpleasant events in their lives. Hormonal fluctuations in the menstrual cycle may also make women more susceptible to depression [47]. According to Samm et al. [48] and Bergdahl et al. [22], among girls and women, the focus on emotional and somatic symptoms of depressive disorders, such as, for example, negative self-image, depressed mood, physical ailments) are dominant. In boys and men, abulia, apathy, psychomotor slowing, loss of motivation, and discouragement are dominant [49]. In women, in difficult situations, the stress-coping style focused on relieving negative emotions prevails, and among men, the task-oriented style focused on problem-solving. In Dudek's research [39], 117 girls participated, first and second-grade students (average age 17.5). Two girls said in an interview that they were diagnosed with depression and regularly used psychological help. It turned out that the girls often experienced emotional states indicating depression (on average 33.82 ± 9.52 on the Beck scale). In addition, 76.1% experience or have experienced conditions in the past that indicate the existence of severe depression [39]. Butwicka and Gmitrowicz suggest more frequent occurrences of somatization in the course of depression in women may be associated with a higher level of anxiety, which often accompanies depression as a symptom [51]. In women over 85 years of age the causes of depression include a sense of loneliness and a negative self-image, and in men - deterioration of health, chronic diseases, and social factors [52].

Silverstein [42, 53] demonstrated more often the prevalence of depression with accompanying somatic symptoms in women than in men. However, Courtenay [55] thinks that the differences in the severity of depressive symptoms in the group of men, compared to women, which are described in many studies, may result from an insufficient diagnosis of affective disorders in men and do not reflect the actual prevalence of the disease. Symptoms of depression in women most often concern the occurrence of sadness, depression, inability to feel joy, decreased interest, headaches, abdominal pain, chest pains, and neuralgia [56-62].

DEPRESSION IN THE MENOPAUSE

Menopause (menopause, climacteric period) is usually a natural biological process in which, in women (about 45-50 years of age), estrogen production is reduced and eventually stopped, which is associated initially with irregular menstrual cycles until their final stage. detention. It is estimated that the risk of depression in menopausal women is approximately 2–5 times higher than before the onset of menopausal changes and after menopause [63-69]. The development of depression requiring pharmacotherapy also probably depends on the age at which a woman reaches menopause - it is more common in the case of menopausal symptoms before the age of 45 (10-15%) and less frequent in women with menopause beginning at the age of 45- 48 years or later (5-6%). Data also suggest a higher frequency of depression among women going through postoperative menopause. Overall, it is estimated that up to 40% of women experience symptoms of depression during perimenopause, but it often goes undetected and untreated because many doctors are not screened and are unprepared for treatment options. Women who: previously suffered from depression, suffered from irritability following the use of oral contraceptives, had severe premenstrual tension and experienced severe postpartum mood disorders are more prone to such mood disorders [63-69].

The risk of perimenopausal depression is more significant in women with previously diagnosed depressive disorders requiring antidepressants. Other risk factors include premenstrual syndrome (PMS), depression during pregnancy or postpartum, dysphoric states caused by taking oral contraceptives, and postpartum blues (baby blues). The risk of depression in the discussed period is also higher due to the increased negative experience of lifestyle changes in the area of motherhood, family life, work, fertility, fitness, and physical attractiveness, as well as in women who are overly worried about others [63-69].

Women suffering from perimenopausal depression are often the first to experience somatic symptoms. They report anxiety, irritability, worse mood, anxiety symptoms and deterioration of sleep quality, and appetite disturbances (increase or decrease). These women also complain of subjectively more perceived hot flashes during sleep. However, menopausal sleep disturbances can also be associated with underlying sleep disturbances (such as restless legs syndrome or sleep apnea) or anxiety symptoms. Meanwhile, it is known that women who have chronic insomnia have a greater risk of developing depression. When the latter occurs in a perimenopausal woman, it often makes the severity of menopausal symptoms greater than that experienced by women who do not experience depression at that time. These symptoms should be differentiated from the symptoms of estrogen deficiency, which emphasizes the importance of cooperation between the gynecologist and psychiatrist [63-69].

The diagnosis of perimenopausal depression is sometimes difficult because women usually complain mainly of somatic symptoms of menopause, ignoring at the same time (for various reasons) experiencing psychological and emotional difficulties. Sometimes they are unaware that sadness, discouragement, fatigue, and other symptoms of depression are abnormal conditions that can be effectively treated. Sometimes it is shame, lack of support from loved ones, and helplessness, which can be a symptom of depression [63-69].

POSTPARTUM DEPRESSION

Postpartum depression (PPD) affects approximately 7-20% of women [70,71,72].

It is estimated that 50% of women suffering from PPD do not see a doctor [73,74]. Untreated, it can lead to unfavorable changes in the woman's relationship with the child, partner, and family and also have an adverse, long-term impact on the child's emotional development [73-79].

PPD can develop within a few to several weeks after childbirth, similar to an episode of major depression. However, it also has its specific features [73-79]. A frequent phenomenon is a young mother's obsessively recurring thoughts and fears, irresponsibility, or ineffectiveness. She cannot take care of her child optimally, and even inadvertently or under the influence of an unwanted impulse, may harm him. For this reason, contact with a child can be a stressful experience for a woman to avoid - usually accompanied by feelings of guilt, harm, or helplessness. The following symptoms are also characteristic: emotional lability, tearfulness, and numerous complaints about unbearable sadness, fatigue, not coping with the situation, demanding help, and emphasizing helplessness and the conviction about losing one's broadly understood attractiveness. A woman with PPD often believes that her child is unique and more difficult to care for than other children. A woman has a high level of anxiety, sometimes with excessive panic attacks, excessive worry, inadequate concern for her and her child's health, and hypochondriac fears. Women often complain about loneliness, abandonment, not being understood, and difficulties in showing feelings - especially love (loved ones, including a child). In PPD, there are usually no diurnal mood swings that are so characteristic of major depression not associated with childbirth. However, there is a dependence of well-being on current events and - unlike typical endogenous depression - a tendency to deteriorate mental state at the end of the day [73-79].

It is worth remembering that mothers (especially those who have given birth for the first time) may not be aware that what they experience goes beyond a woman's normal mental and physical state after childbirth. Also, the social / family pressure to be a good mother causes that a woman is often afraid or ashamed to admit to the ailments she feels [73-79].

The most important risk factors for DPP are considered [73-79]:

- previous positive history of ad incidents of depression (or bipolar disorder), including postpartum depression or depression during pregnancy,
- severe and prolonged postpartum sadness (baby blues) or postpartum hypomania,
- a family history of postpartum mood disorders
- occurrence of anxiety disorders before becoming pregnant,
- stressful life events during pregnancy and in the postpartum period,
- no partner,
- marital conflicts, dissatisfaction with the relationship, little support from the partner and the generational family, bad relationships with the mother, professional problems,
- unwanted or unplanned pregnancy,
- serious health problems of the baby immediately after birth,
- previous miscarriages or stillbirths,
- heavy, long-term childbirth,
- bad memories of the patient from the delivery.

PPD should be differentiated from units such as [73-79]:

- Maternity Blues - (MB) (otherwise: postpartum blues, baby blues), affects 50-85% of women after childbirth. It is one of the physiological reactions of a woman to childbirth and is of a short-term, self-limiting nature. It develops within a few days after childbirth, reaching the maximum severity of symptoms on days 4-5, may last from several hours to several days, and usually disappears around the tenth day after delivery. Symptoms are: moderate depressed mood, emotional lability, tearfulness, tension, irritability, excessive sensitivity to stimuli, feeling exhausted, difficulty concentrating, frequent headaches, sleep disturbances, decreased appetite, and some feeling of hostility towards the husband. Does not require treatment
- Postpartum (puerperal) psychosis - (PP) - affects 0.1% of women and develops very rapidly in the period from a few days to several months after giving birth (most often within the first month). Its early symptoms are insomnia and lack sleep for several consecutive days, lack of hunger, agitation, irritability, dysphoria, avoiding contact with the child, and not taking care of the child. After some time, delusions and hallucinations about the

content related to the child or childbirth appear (e.g., belief that a demon has haunted the child, voices ordering the killing of oneself or the child).

Sometimes the image of the disease is accompanied by disturbances in consciousness, disorientation, and severe motor restlessness. It most often develops in women with previous diagnoses of bipolar disorder or schizophrenia.

Postpartum hypomania - PH is a condition observed in 10-20% of women after childbirth; this phenomenon is short-term and self-limiting. Within a few days after childbirth, a woman develops a significant elevation of mood, clumsiness, racing thoughts, multiplication of ideas, decreased need to sleep, and difficulties in focusing attention. As a rule, it does not require treatment. However, it should be remembered that it may herald the development of postpartum depression.

A common complication of postpartum depression is the recurrence of mood disorders after subsequent pregnancies (the risk reaches 30-50%) and an increased risk of developing recurrent depression or bipolar disorder (regardless of subsequent pregnancies and deliveries) [73-79]. Moreover, PPD can be a source of disturbances in partner and family functioning, and in addition, it significantly impedes the care of a child and adversely affects the process of its upbringing. A significant consequence of postpartum depression may be an adverse effect on the child's emotional, cognitive and social development. It has been found that children of mothers who suffered from postpartum depression (compared to children of healthy mothers) show much more motor hyperactivity and problems with concentration and also achieve worse results in tests measuring the level of intelligence. According to the research results, teachers perceive these children as more challenging to raise and less socially adapted. The negative influence of maternal depression affects boys to a greater extent. The most serious but rare complications of postpartum depression (more often occurring in the case of postpartum psychosis) include rejection of the child, the mother's suicide, or the dangerous behavior of a woman towards her child [73-79].

SUMMARY

Recently, the COVID-19 pandemic has contributed to a significant increase in the percentage of people suffering from depression and anxiety. In studies involving over 13,000 people from 12 countries, including Poland, the United States, Canada, Germany, France, Spain, Iran, and Pakistan, a smaller one was identified, numbering 2,734,000. People who already showed signs of depression, anxiety disorders, or post-traumatic stress disorder before the coronavirus pandemic. This group included 874 people from the United States, 255 from Poland, 246 from Canada, 205 from Spain, and 203 from Pakistan. It was checked how many of them experienced the deterioration of their mental health due to the epidemic. There were significant differences between countries - e.g., in the group of Polish respondents, it was 54%, in Canada, 80.9%; in Pakistan - 72.4%; in the United States - 67.5%; and in Turkey - 28.6%. The feeling of lack of control had the most negative impact on the psyche. This was followed by the female gender (79.4%), living in a city (84.6%), having a university degree (71.5%), working remotely at home (65%), and being in home isolation with a partner/family (82.8%), lack of interaction with others (56%) and dissatisfaction with the state's response to the epidemic (31%). Interestingly, the elderly felt the adverse effects of the pandemic to a lesser extent than younger people. Also, the more the respondents were "connected" to the Internet, the more psychological problems they experienced. All subjects complained of sleep disorders. The verification of results was confirmed in a study involving 318 patients of the American clinic in Houston dealing with mental disorders. The aim was to check whether the percentage of patients experiencing deterioration of their health is similar to people already diagnosed with disorders. It turned out that almost half of them felt worse, so much so that the current treatment had to be changed [80].

From April 2020 to January 2021, scientists from the University of Essex studied 150 pregnant women [82]. Symptoms of depression were present in as many as 47% of the respondents, and anxiety states in 60% of them (vs. previous studies showing the percentage of 17% and 23%, respectively), and pregnant women with severe symptoms of depression felt less connected with the unborn eaten. -that a child. The high rates of depression and anxiety during the pandemic suggest that mothers experience a mental crisis that can significantly interfere with and disrupt the mother-child relationship during pregnancy and potentially affect the outcomes of childbirth. as well as the subsequent development of the child [82].

Guvenc et al. [82] assessed the level of anxiety, depression, and knowledge in women after childbirth during the COVID-19 pandemic. The incidence of depression was 34.0%. The mean scores for the assessment of anxiety and knowledge about COVID-19 were 42.69 ± 9.93 and 9.69 ± 1.94, respectively. There was a statistically significant difference between the results of the anxiety assessment and the state of depression ($p < 0.001$) in women. Furthermore, there were statistically significant differences between the fear of contracting COVID-19 for oneself ($p = 0.01$) and infants ($p = 0.01$) and postpartum depression (PPD) [82]. On the other hand, Tereda et al. [83] investigated the incidence of postpartum depression and its relationship with social

support adapted to the self-assessment of the impact of COVID-19 in pregnant women admitted to the perinatal medical center in Japan. A cross-sectional study of 513 women underwent a monthly postpartum check-up between August 3 and November 27, 2020. Postpartum depression was measured using the Edinburgh Postnatal Depression Scale. Social support was measured using the Multidimensional Perceived Social Support Scale, and the score was dichotomized using the Youden index. Postpartum depression was observed in 35 (7.6%) of 461 women: 25 (26.6%) and 10 (2.7%) in the low and high support groups, respectively. Women in the low support group were significantly more likely to experience postpartum depression than women in the high support group (odds ratio [OR] 11.7; 95% confidence interval [CI] 5.4-27.3; p <0.001). In addition, no interaction was observed between social support and the effect of COVID-19 on postpartum depression (p = 0.32) [83].

In November 2020, almost every second Pole was afraid that his mental health would worsen due to the second wave of the pandemic. The UCE RESEARCH and SYNO Poland study in February 2021 was conducted for psychology.pl platform among 1,026 adult Poles, as many as 42% declared that the COVID-19 outbreak worsened their mental health [84]. Nearly 80% of people currently in a more vulnerable mental state did not have these kinds of problems before the pandemic outbreak. Almost 70% of the respondents reporting complaints have not sought professional help. The respondents identified social isolation (49.2%) as the main reason for the deterioration of their condition, as the fear that someone close to them would get sick (42%) or they would become infected with CVID-19 (34.6%). The most frequently indicated symptoms of the weakened mental condition were depressed mood (51%), sleep disturbances (48.5%), anxiety (37.4%), and frequent feeling of anxiety (36.7%). As many as 78.3% of people complaining of the above symptoms did not have them before the pandemic. Mental health deterioration was noticed much more often by women than men. The problem mainly concerned 47.3% of people aged 23-35 and 45.2% aged 18-22, with higher or primary education and earning over 9,000. PLN, or less than 1 thousand. PLN net per month. The inhabitants of the voivodship usually reported this problem. Greater Poland and Masovia, including people from centers of 20-49 thousand or over 500,000 population. It turned out that 69.8% of the respondents did not seek specialist help in treating the indicated ailments. People aged 18-22 and 56-80, most often respondents from the voivodship, were not looking for it. Lublin and Silesia, including towns with a population of 5-19 thousand with population and cities with 200-499 thousand. Residents, mostly with secondary or higher education, earn from 7,000 to nearly 9,000 PLN on hand [84].

Psychoeducation should be promoted to people struggling with the abovementioned problems. Psychoeducation is very important in treating depression, not only for people directly affected but also for people whose relatives suffer from it. It allows to understand what depression is and is not. However, it is worth emphasizing that effective psychotherapy is only one that is based on proven sources and comes from specialists.

ORCID

Bejda Grzegorz
https://orcid.org/0000-0002-4829-0292
Kułak-Bejda Agnieszka
https://orcid.org/0000-0001-6334-9371
Waszkiewicz Napoleon
https://orcid.org/0000-0002-7021-5133

Acknowledgements

The author would like to thank the who participated in our study.

Conflıcts of ınterest

The authors have declared no conflict of interest

REFERENCES

1. Zdrowie psychiczne w Unii Europejskiej. Opracowania tematyczne OT–674, Biuro Analiz, Dokumentacji i Korespondencji, Kancelaria Senatu, Warszawa, 2019 (Polish).
2. Mathers C., Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. PLoS Med 2006 Nov;3(11):e442.
3. Naczelna Izba Pielęgniarek i Położnych, Komunikat prasowy z okazji Światowego Dnia Zdrowia 2017 [Internet], [cited 2022 May 11]. Available from: Depresja - porozmawiajmy, https://nipip.pl/depresja-porozmawiajmy/ (P{olish)
4. Depression. WHO [Internet], [cited 2022 May 11]. Available from: http://www. who.int/ mediacentre/factsheets/fs369/en/.
5. Kessler R.C., Berglund P., Demler O., Jin R., Merikangas KR, Walters EE.: Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication, Arch Gen Psychiatry, 2005 Jun;62(6):593-602.
6. Alonso J., Angermever MC, Bernert S., Bruffaerts R., Brugha TS, Bryson H., De Girolamo G., Graaf R., Demyttenaere K., Gasquet I., Haro J.M., Katz .J.., Kessler R.C., Kovess V., Lépine J.P., Ormel J., Polidori G., Russo L.J., Vilagut G., Almansa J., Arbabzadeh-Bouchez S., Autonell J., Bernal M., Buist-Bouwman M.A., Codony M., Domingo-Salvany

A., Ferrer M., Joo S.S., Martínez-Alonso M., Matschinger H., Mazzi F., Morgan Z., Morosini P., Palacín C., Romera B., Taub N., W A M Vollebergh W.A.M. Prevalence of mental disorders in Europe: results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project, Acta Psychiatr Scand Suppl, 2004;(420):21-7.

7. Gabilondo, A., Rojas-Farreras, S., Vilagut, G., Haro, J.M., Fernández, A., Pinto-Meza, A., alonso, J., 2010. Epidemiology of major depressive episode in a southern European country: results from the ESEMeD–Spain project. J Affect Disord. 2010 Jan;120(1-3):76-85.
8. Wittchen H U, F Jacobi, J Rehm, A Gustavsson, M Svensson, B Jönsson, J Olesen, C Allgulander, J Alonso, C Faravelli, L Fratiglioni, P Jennum, R Lieb, A Maercker, J van Os, M Preisig, L Salvador-Carulla, R Simon, H-C Steinhausen: The size and burden of mental disorders and other disorders of the brain in Europe 2010, Eur Neuropsychopharmacol, 2011 Sep;21(9):655-79.
9. Twarze depresji [Internet], [cited 2022 May 11]. Available from: https://twarzedepresji.pl/wp-content/uploads/2018/09/Depresja-na-%C5%9Bwiecie-WHO-MSD-MER-2017.2-eng.pdf (Polish).
10. NFZ o Zdrowiu. Depresja, Centrala Narodowego Funduszu Zdrowia, Warszawa, 2020 (Polish).
11. IHME, 2020 https://www.healthdata.org/
12. Wysocki MJ, Sakowska I, Car J. Miary obciążeń zdrowotno-społecznych - nowe mierniki sytuacji zdrowotnej ludności. Przegl Epidemiol. 2005, 59, 125-134 (Polish).
13. Health Metrics and Evaluation (IHME) [Internet], [cited 2022 May 11]. Available from: https://www.un.org/sites/un2.un.org/files/un_policy_brief-covid_and_mental_health_final.pdf
14. Raport z badań: Epidemiologia zaburzeń psychiatrycznych i dostęp do psychiatrycznej opieki zdrowotnej—EZOP Polska" [Internet], [cited 2022 May 11]. Available from: https://ezop.edu.pl/wyni ki/. (Polish).
15. Stan zdrowia ludności Polski w 2019, Źródło danych GUS, [Internet], [cited 2022 May 11]. Available from: https://stat.gov.pl/ obszary-tematyczne/zdrowie/zdrowie/stan-zdrowia-ludnosci-polski-w-2019-r-,26,1. html (Polish).
16. [Internet], [cited 2022 May 11]. Available from: https://www.zus.pl/documents/10182/39590/Absencja+chorobowa_raport_2020.pdf/6ba 50f53-bbab-dc1c-f4bf-f874fdbc2561 (Polish).
17. Łoza B., Parnowski T. Nowa depresja. Nowe leczenie. Warszawa 2012: 56−58 (Polish).
18. Birmaher B., N.D. Ryan, D.E. Williamson, D.A. Brent, J. Kaufman, R.E. Dahlet al., Childhood and adolescent depression: a review of the past 10 years. Part I. "J Am Acad Child Adolesc Psychiatry" 1996, nr 35 (11), s. 1427–1439
19. Richardson L. P., R. Katzenellenbogen, Childhood and adolescent de- pression: the role of primary care providers in diagnosis and treatment, "Curr Probl Pediatr Adolesc Health Care" 2005, nr 35 (1), s. 6–24
20. Bilikiewicz A., Stanisław Pużyński, Jacek Wciórka, Janusz Rybakowski: Psychiatria. T. 2. Wrocław: Urban & Parner, 2003; Dawid Semple, Roger Smyth, Jonathan Burns, Rajan Darjee, Andrew McIntosh: Oksfordzki podręcznik psychiatrii. Lublin: Czelej, 2007 (Polish).
21. Bergdahl E, Allard P, Alex L, Lundman B, Gustafson Y. Gender differences in depression among the very old. International Psychogeriatrics 2007; 19: 1125–1140
22. Sanchez M, Levenson M, Buz J, Aldwin C. Gender and age differences in depression on sample of spanish elderly. Gerontol. 2008; 48: 172
23. Grumi S., Provenzi L., Accorsi P., Biasucci G. et al.: Depression and Anxiety in Mothers Who Were Pregnant During the COVID-19 Outbreak in Northern Italy: The Role of Pandemic-Related Emotional Stress and Perceived Social Support, Front Psychiatry, 2021 Sep 3;12:716488. doi: 10.3389/fpsyt.2021.716488
24. Khamees RE, Taha OT, Ali YTM.: Anxiety and depression during pregnancy in the era of COVID-19, J Perinat Med, 2021, Jun 2;49(6):674-677. doi: 10.1515/jpm-2021-0181
25. Preis H., Mahaffey B., Heiselman C., Lobel M. Pandemic-related pregnancy stress and anxiety among women pregnant during the coronavirus disease 2019 pandemic, Am J Obstet Gynecol MFM. 2020 Aug; 2(3): 100155.
26. Grundy E,.T. van den Broek and K. Keenan, Number of children, partnership status, and laterlife depression in eastern and western Europe, J Gerontol B Psychol Sci Soc Sci., 2019 Jan 10;74(2):353-63.
27. Dankowski R., Sacharczuk W., Duszyńska D., Mikołajewska W., Szałek-Goralewska A, Łojko-Dankowska A., Szyszka A., Łojko D.: Objawy depresji i lęku u pacjentów po przebyciu choroby koronawirusowej (COVID-19), Neuropsychiatria i Neuropsychologia 2021; 16, 1–2: 11–16 (Polish).
28. Sade S., Sheiner E., Wainstock T., hermon N, Salem SY, Koset T, Battat TL, Oron S., Pariente G.: Risk for Depressive Symptoms among Hospitalized Women in High-Risk

Pregnancy Units during the COVID-19 Pandemic, J Clin Med., 2020 Jul 31;9(8):2449.
29. Durankuş F., Aksu E.: Effects of the COVID-19 pandemic on anxiety and depressive symptoms in pregnant women: a preliminary study, J Matern Fetal Neonatal Med., 2020 May 18;1-7.
30. Panchal N. , Rabah Kamal , Cynthia Cox, Rachel Garfield The Implications of COVID-19 for Mental Health and Substance Use, [Internet], [cited 2022 May 11]. Available from:https://abtcoun seling.com/wp-conte nt/ uploads/2020/09/The-Implications-of-COVI D-19-for-Mental-Health-and-Substance-Us e-_-KFF.pdf
31. [Internet], [cited 2022 May 11]. Available from: https://www.un.org/sites/un2.un.org/ files/un_policy_brief-covid_and_mental_ he alth_final.pdf
32. Zung W. Broadhead W. Roth M.: Częstość występowania objawów depresyjnych u pacjentów podstawowej opieki zdrowotnej. Lęk i Depresja 1996, 1:10-23 (Polish).
33. Krzyżowski J.: Z gabinetu prywatnego. Depresja. Medyk 2016 (Polish).
34. World Health Organization. Preventing suicide: A global imperative. Geneva. 2014
35. [Internet], [cited 2022 May 11]. Available from: https://www.money.pl/gospodarka/fa talne-statystyki-dotyczace-samobojstw-cora z-czesciej-powodem-sa-finanse-666709449 2355456a.html (Polish).
36. EUROSTAT, 2017 [Internet], [cited 2022 May 11]. Available from: https://ec.europa. eu/eurostat/web/products-statistical-books/- /ks-ha-17-001.
37. Management of physical health conditions in adults with severe mental disorders WHO Guidelines. WHO 2018, [Internet], [cited 2022 May 11]. Available from: https://apps.who.int/iris/bitstream/handle/1066 5/275718/ 9789241550383-eng.pdf
38. Dudek D., Siwek M.: Zaburzenia nastroju u kobiet. Dyskusje o depresji, 2006; 26 (Polish).
39. Addis ME, Mahalik JR: Men, masculinity, and the contexts of help seeking. Am Psychol 2003; Jan;58(1):5-14.
40. Genuchi MC, Mitsunaga LK: Sex differences in masculine depression: externalizing symptoms as a primary feature of depression in men. J Mens Stud 2015; 23(3): 243–51.
41. Silverstein B: Gender differences in the prevalence of somatic versus pure depression: a replication. Am J Psychiatry 2002; Jun;159(6):1051-2.
42. OECD/EU, Health at a Glance: Europe 2018, State Of Health In The EU Cycle, 2018.
43. Wenzel A, Steer RA, Beck AT. Are there any gender differences in frequency of self-reported somatic symptoms of depression? J. Affect. Disord. 2005; Dec;89(1-3):177-81.
44. Silverstein B, Lynch AD. Gender differences in depression: the role played by paternal attitudes of male superiority and maternal modeling of gender-related limitations. Sex Roles 1998; 38(7-8): 539–55.
45. Newman J, Fuqua D, Gray E, Simpson D. Gender differences in the relationship of anger and depression in a clinical sample. J. Counsel. Develop. 2006; 84(2): 157–61.
46. Kendler KS, Thornton LM, Prescott CA. Gender differences in the rates of exposure to stressful life events and sensitivity to depre-sssogenic effects. Am. J. Psychiatry 2001; Apr;158(4):587-93.
47. Samm A, Varnik A, Tooding LM, Sisask M, Kolves K, von Knorring AL. Children's Depression Inventory in Estonia. Single items and factor structure by age and gender. Eur. Child Adolesc. Psychiatry 2008; Apr; 17(3):162-70.
48. Puura K, Almqvist F, Tamminen T, Piha J, Kumpulainen K, Rasanen E, Moilanen I, Koivisto AM. Children with symptoms of depression – what do the adults see? J. Child Psychol. Psychiatry 1998; May;39(4):577-85.
49. Li C, DiGiuseppe R, Froh J. The roles of sex, gender, and coping in adolescent depression. Adolesc. 2006; Fall;41(163):409-15.
50. Butwicka A, Gmitrowicz A. Różnice w występowaniu objawów somatycznych i przebiegu epizodu depresyjnego kobiet i mężczyzn. Psychiatr. Prakt. Ogólnolek. 2006; 6: 155–160 (Polish).
51. Heikkinen RL, Kauppinen M. Depressive symptoms in late life: a 10-year follow-up. Arch. Gerontol. Geriatr. 2004; May-Jun;38(3):239-50.
52. Silverstein B. Gender difference in the prevalence of clinical depression: the role played by depression associated with somatic symptoms. Am. J. Psychiatry 1999; Mar; 156(3):480-2
53. Uebelacker LA, Strong D, Weinstock LM, Miller I. Use of item response theory to understand differential functioning of DSM-IV major depression symptoms by race, ethnicity and gender. Psychol. Med. 2009; Apr;39(4):591-601.
54. Courtenay WH. Engendering health: social constructionist examination of men's health beliefs and behaviours. Psychol. Men Mascul. 2000; 1(1): 4–15.
55. Magovcevic M, Addis ME: The Masculine Depression Scale: development and psychometric evaluation. Psychol Men Masc 2008; 9(3): 117–32.
56. Martin LA, Neighbors HW, Griffith DM: The experience of symptoms of depression in men

vs women: analysis of the National Comorbidity Survey Replication. JAMA Psychiatry 2013; Oct;70(10):1100-6.
57. Rice SM, Fallon BJ, Aucote HM, Möller-Leimkühler H.M. Development and preliminary validation of the Male Depression Risk Scale: furthering the assess-ment of depression in men. J Affect Disord 2013; Dec;151(3):950-8;
58. Rutz W, Walinder J, Von Knorring L., Rihmer Z., Pihlgren H. Prevention of depression and suicide by education and medication: impact on male suicidality. An update from the Gotland study. Int J Psychiatry Clin Pract 1997; 1(1): 39–46.
59. Sher L: Per capita income is related to suicide rates in men but not in women. J Mens Health Gend 2006 Mar; 3(1): 39–42.
60. Wälinder J, Rutz W: Male depression and suicide. Int Clin Psychopharmacol 2001 Mar; 16: supl. S21–S24.
61. Winkler D, Pjrek E, Kasper S: Anger attacks in depression – evidence for a male depressive syndrome. Psychother Psychosom 2005; 74(5):303-7.
62. Altschuler L.L.: The use of SSRIs in depressive disorders specific to women. J. Clin. Psychiatry, 2002; 63 (Suppl. 7): 3–8;
63. Burt V.K., Stein K.: Epidemiology of depression throughout the female life cycle. J. Clin. Psychiatry, 2002; 63 (Suppl 7): 9–15;
64. Freeman E.W., Sammel M.D., Lin H., Nelson D.B. Associations of hormones and menopausal status with depressed mood in women with no history of depression. Arch. Gen. Psychiatry, 2006; Apr;63(4):375-82.
65. Parry B.L.: Perimenopausal depression. Am. J. Psychiatry, 2008; Apr;27(4):377-9.
66. Rajewska J., Rybakowski J.K.: Depression in premenstrual women: gonadal hormones and serotonergic system assessed by D-fenflura mine challenge test. Prog. Neuropsycho-pharmacol. Biol. Psychiatry, 2003 Jun; 27(4):705-9.
67. Rasgon N.L., Altshuler L.L., Fairbanks L.A. i wsp.: Estrogen replacement theraphy in the treatment of major depressive disorder in perimenopausal women. J. Clin. Psychiatry, 2002; 63(Suppl. 7): 45–48;
68. Sloan D.M., Kornstein S.G.: Gender differ-ences in depression and response to antidepres-sant treatment. Psychiatr. Clin. North Am., 2003; Sep;26(3):581-94.
69. Cameron A.D.: Psychiatria. Urban & Partner, Wrocław, 2005 (Polish)
70. Koszewska I.: O depresji w ciąży i po porodzie. Wydawnictwo Lekarskie PZWL, Warszawa, 2010 (Polish)
71. Meder J.: Problemy zdrowia psychicznego kobiet. Biblioteka Psychiatrii Polskiej, Kraków, 2003 (Polish).
72. Spinelli M.: Postpartum psychosis: detection of risk and management. Am. J. Psychiatry 2009; Apr;166(4):405-8.
73. Siwek M, Dominika Dudek. „Depresja poporodowa. Czynniki ryzyka, wykrywanie" [w:] Problemy zdrowia psychicznego kobiet, Meder J. (red.).Biblioteka Psychiatrii Pol-skiej, Kraków, 2003 (Polish).
74. Siwek M. Szczególne populacje kliniczne a zaburzenia ze spektrum dwubiegunowego, – wykład na konferencji: Medycyny Praktycznej Psychiatrii „Kontrowersje w psychiatrii", Kraków, 2011 (Polish).
75. Maliszewska K., Preis K., Terapia depresji poporodowej – aktualny stan wiedzy, Ann. Acad. Med. Gedan. 2014: 44: 105-11 (Polish).
76. Chrzan-Dętkoś M., Dyduch-Maroszek A., Humięcka A., Karasiewicz K. Uwarunkowania i konsekwencje depresji poporodowej, Psychoterapia 2012; 2(161): 55–63 (Polish).
77. Bałkowiec-Iskra E., Niewada M. Depresja poporodowa – rozpoznawanie i leczenie, Przewk Lek, 2002; 5(11/12): 104-110 (Polish).
78. Iracka E., Lewicka M. Występowanie depresji poporodowej wśród położnic, EJMT, 2014; 3(4): 60-66 (Polish).
79. Kossakowska K. Profilaktyka depresji poporodowej – rola personelu medycznego w rozpoznawaniu czynników ryzyka i symptomów choroby, Med. Og Nauk Zdr. 2013; 19(4): 463–468 (Polish).
80. Gobbi S, Płomecka MB, Ashraf Z, Radziński P, Neckels R et al. Worsening of Preexisting Psychiatric Conditions During the COVID-19 Pandemic, Front Psychiatry. 2020; 11: 581426.
81. Filippetti M.L., Clarke A.D.F., Rigati S.: The mental health crisis of expectant women in the UK: effects of the COVID-19 pandemic on prenatal mental health, antenatal attachment and social suport, BMC Pregnancy and Childbirth, Jan 26;22(1):68.
82. Guvenc G, Yesilcinar İ, Ozkececi F, Öksüz E, Ozkececi CF, Konukbay D, Kok G, Karasahin KE. Anxiety, depression, and know ledge level in postpartum women during the COVID-19 pandemic. Perspect Psychiatr Care. 2021 Jul;57(3):1449-58.
83. Terada S, Kinjo K, Fukuda Y. The relationship between postpartum depression and social sup-port during the COVID-19 pandemic: A cross-sectional study. J Obstet Gynaecol Res. 2021 Oct;47(10):3524-31.
84. [Internet], [cited 2022 May 11]. Available from: https://uce-pl.com/news/blisko-co-trze ci-polak-w-czasie-pandemii-skarzy-sie-na-pogorszenie-zdrowia-psychicznego (Polish).