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The risk of anxiety disorders in women in the first year postpartum – the results from the postpartum depression prevention program "Next Stop: MUM"

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Summary

Aim. The purpose of the study was to examine the severity of anxiety symptoms and the co-occurrence of anxiety disorders and mood disorders in a group of women in the first year after childbirth participating in the program for the prevention of postpartum depression.

Material and methods. The study included 1,514 women who were screened by midwives during a patronage visit and were followed up, and 10,454 women who took part in an online screening conducted on the project website. The Edinburgh Postnatal Depression Scale was used for screening, including factor analysis to assess the anxiety subscale, and the GAD-2 questionnaire was used too.

Results. The risk of anxiety disorders was observed in 9.5% of women during the patronage visit and, depending on the survey method, 21.2% (ESDP 3 A) or 13.2% (GAD-2) in the follow-up study up to 9 months postpartum. In the online study, 62.8% of women obtained results indicating a high risk of anxiety disorders. For comparison, the result of 12 points and more indicating the risk of depression was obtained by 6.3% in the first month after childbirth and 14.3% in the follow-up study. The results show that anxiety disorders and mood disorders are significantly related ($r = 0.631$; $p < 0.01$).

Conclusions. The risk of having anxiety disorders after childbirth is higher or similar to that of mood disorders. It is warranted to extend screening to anxiety disorders and to develop a rapid pathway of early psychological/psychiatric intervention for women in need.

Key words: anxiety disorders, postpartum depression, Edinburgh Postnatal Depression Scale

Introduction

Pregnancy and a baby's birth are among the most significant changes experienced in adulthood. Pregnancy and early motherhood are a period of intense change: the woman is undergoing a neurobiological and psychological reorganization that involves

the transition from being an individual to being in a dyad and from being a child to finding herself as a parent of a child [1, 2]. Strong feelings accompany these changes: from love, care, and admiration for a newborn to being overwhelmed by new responsibilities, often related to lack of sleep and recovery of the body affected by pregnancy and childbirth. Even when everything runs smoothly and without major complications, it is impossible not to experience stress during this intense period. Of course, after a period of destabilization, there is a new organization. However, according to studies, regardless of culture, at this stage of life there is an increased risk of experiencing mental difficulties – postpartum depression (PPD) affects approximately 12-20% of women [3, 4]. A less known and similarly common problem is generalized anxiety disorder (GAD), affecting approximately 13-16% of women in the perinatal period [5, 6]. Due to the prevalence of low mood and anxiety in this period, it can be challenging to clearly distinguish common stress and what already is a part of perinatal mental illness. As in the case of mood disorders, the difficulty in diagnosing GAD in the postpartum period is to recognize the usual and frequent worry of a young mother and what is already a pathological severity of symptoms. Both downplaying and pathologizing ordinary experiences may lead to greater stress and loneliness in the mother. It is recommended that screening for the severity of depressive symptoms should be accompanied by screening for anxiety to help identify individuals who may be experiencing clinical severity of anxiety [7-9].

As with the recommendations in the standard of maternity care for mood disorders [10], knowledge of risk factors for the illness can help healthcare professionals identify women at risk for anxiety disorders. The most common fears concern the welfare of the fetus and newborn after childbirth, the mother's health, the health and possible diseases of the partner, and the mortality of her parents [11]. Psychological difficulties observed in women reporting anxiety disorders include difficulties in identifying and describing feelings, coping improperly, blaming oneself, and denying reality [12]. A study by Furtado et al. [13] showed that the intolerance of uncertainty, the intensification of symptoms of depression and obsessive-compulsive behaviour in pregnancy predict a significant increase in anxiety symptoms after childbirth. Another risk factor for developing anxiety disorders is the attitude towards one's body and health. Women who describe their health as good, average, or poor are twice as likely to experience anxiety disorders as women who describe their health as very good or excellent [14].

The knowledge of medical staff about the available screening tests that identify mothers experiencing an increased level of anxiety and the knowledge of risk factors can facilitate the care of patients in need and improve the process of providing them with the necessary support. This type of knowledge may also be particularly important when the medical staff wants to understand to what extent the symptoms reported by the patient relate to the emotional and physical spheres. Presenting uncertainty as the "normal" state of a young mother – a natural feeling associated with her new role, caring for a newborn baby, and getting to know its temperament – can help a woman cope with uncertainty after the birth of a child. On the other hand, identifying women with increased or clinical severity of anxiety may enable them to be given adequate specialist help at an early stage.

Considering that anxiety and depressive disorders often coexist, many clinicians use the term "perinatal mood and anxiety disorders", which includes the common symptoms of depression, anxiety, obsessive-compulsive disorder and post-traumatic stress [15]. Although much is said about the phenomenon of postpartum depression, still 85% of women do not receive treatment [16]. In the case of mood disorders, the percentage of diagnoses and treatments is lower in the group of pregnant women and new mothers than in the population: 14% vs. 26% [17]. In the case of anxiety disorders, this problem is likely to be even more common.

The new standard of perinatal care in Poland, introduced in 2019, requires that the risk of developing postpartum depression and the severity of symptoms of depression should be assessed twice during pregnancy and twice after childbirth – this is a big change in mental health prevention. Assessment of the risk and severity of symptoms of depression should be carried out between weeks 11 and 14 and between weeks 33 and 37 of pregnancy. Also, in the postpartum period, the midwife must assess the woman's mental state, including the risk of postpartum depression [10]. In this article, we postulate that screening for anxiety symptoms should be included in this systemic approach, which would be a simple and low-cost solution allowing for the identification of women with this disorder and early intervention for those in need.

The task of conducting screening tests and reporting the results, which has been placed on midwives and gynecologists, is not an easy and obvious one. To support the medical staff in their new task, in 2018, the Ministry of Health announced a competition to select implementers of the postpartum depression prevention program. The main goal of the project "Next Stop: MUM", defined by the program's authors, is to increase the early detection of postpartum depression through education and specialized training for medical staff and performing screening tests for postpartum depression in the first year after giving birth. The Ministry of Health recommended the Edinburgh Postnatal Depression Scale (EPDS) for screening for the severity of depression symptoms. In Poland, the program is currently implemented in four regions. It includes screening, training of medical staff, supervision for nurses and midwives participating in the program, and early psychological intervention – three free psychological consultations and support groups for mothers in the first year after childbirth.

In the northern region, the competition was won by the Institute of Psychology of the University of Gdansk and the consortium Copernicus Podmiot Leczniczy Sp. z o.o. The program evaluation conducted by the program implementers drew our attention to an interesting regularity: psychologists consulting young mothers under the program pointed to the prevalence of diagnoses of generalized anxiety disorder, panic attacks, and obsessive-compulsive disorder. With reference to the regularities observed by psychologists, the following research questions were asked:

1. If and what percentage of women experience anxiety disorders in the postpartum examination?
2. Are there differences in the severity of anxiety symptoms in the results of online anxiety screening tests and in the tests conducted in person by a midwife?
3. Do anxiety disorders and depressive disorders coexist in women in the first year postpartum, and to what extent?

Method

Aim of study

In our naturalistic study of women taking part in the preventive program for maternal postpartum depression, we wanted to find out whether there was a relationship between postpartum depression and anxiety disorders. Additionally, our goal was to check the magnitude of co-occurrence of the above-mentioned difficulties among women in the first year after childbirth who participated in the study conducted by midwives and online on the website of the project "Next Stop: MUM". Furthermore, we wanted to determine the mean scores achieved on the postpartum depression scale and the mean level of anxiety in women in the postpartum period (the first 12 months after childbirth).

Procedure

Analyzed data were collected within the framework of the project "Next Stop: MUM" which is a part of the National Health Policy Program of the Ministry of Health, entitled: "The Program of education and prevention of postpartum depression" (no. POWR.05.01.00-00-0001/15). The project is implemented on the basis of a contract with the Ministry of Health and is a part of the Operational Program: Knowledge Education Development 2014 – 2020. The Ethics Board of the Faculty of Social Sciences at the University of Gdansk approved this study protocol (decision no. 20/2019). All methods were carried out per the Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments involving human data collection. The analyzed data come from two stages of data collection: (1) by midwives and nurses during visits to the primary healthcare clinic in the first year postpartum (women provide written consent for the collection of such data) and (2) as part of a follow-up study, during which the medical staff monitors the correct implementation of the program and the Edinburgh Postnatal Depression Scale is administered again, and at this stage willing mothers also participate in additional surveys (women again provide consent for data collection). The data used in the study are also gathered from a website of the project, where mothers can independently and anonymously fill out the EPDS. Participants of the online version of the study are informed that providing additional sociodemographic data is voluntary and serves purposes related to research and conducting the program.

The data presented in the article come from the program carried out in the northern region by the consortium Copernicus Podmiot Leczniczy Sp. z o.o. together with the Institute of Psychology of the University of Gdansk and the Foundation of Creative Women from Warsaw. The program is implemented in three voivodships: Pomerania, Kuyavia-Pomerania and Warmia-Masuria[1].

[1] Funding in the amount of 2,114,838.59 PLN was received, the contract was signed at the end of April 2021, and in May, actions related to the implementation of the project began.

Participants

Our study included 2,865 moms randomly selected from 7,345 women screened for postpartum depression by a midwife as part of the project "Next Stop: MUM". Among the 2,865 women contacted via telephone, 1,514 agreed to participate in our follow-up study, and 1,351 declined (response rate: 53%). All of the women provided their consent to participate in the study during the first stage (participation, data processing, data reporting and monitoring).

Among the women who participated in the two stages of the study (examination performed by a midwife and telephone follow-up), 55.7% had higher education, 30.4% – secondary, 7.8% – vocational, 3.6% – lower secondary, and 1.7% – elementary education. In the case of 0.8% of participants, no data was collected. A total of 69.8% of women were married, 27.9% were in an informal relationship, 1.3% were single parents, and 0.5% had other marital status, while 0.5% of participants did not provide such data in the survey completed in the first stage of the study. As for the place of residence: 30.8% of women lived in the countryside, 43.7% – large city (with over 250,000 residents), 14.6% – small city (up to 50,000 residents), and 9.2% – medium city (between 50,000 and 250,000 residents); 1.7% – no data. Among the respondents, 66% perceived their financial situation as good, 21.6% – very good, 11.0% – average, 0.6% – bad, 0.5% – very bad, and 0.3% – no data. Of note, 89.0% of women had no history of affective disorders, 5.5% had suffered from depression in the past, and 2.4% had a diagnosis of another psychiatric disorder in the past, while 3.1% did not provide any information on this subject. The mean age of participants was 29.98 years ($SD = 5.02$), whereas the mean gestational age at birth was 39.38 weeks ($SD = 10.04$). Of the women participating in the study, 66.8% had a natural birth, 28.1% had a C-section, 5.1% – no data. Moreover, 11.2% of women had an at-risk pregnancy, 85.2 % of women had a physiological pregnancy, and 3.6% – no data.

The study group also consisted of 10,545 women who took part in postpartum depression screening using the online EPDS questionnaire. Not all women participating in the online survey chose to provide additional sociodemographic data – it was not mandatory. Among the women who completed the online questionnaire, 61.8% had higher education, 19.9% – secondary, 2.8% – vocational, 1.5% – lower secondary, and 1.0% – elementary education; 13.8% – no data. Moreover, 61.5% of women were married, 22.5% were in an informal relationship, 1.8% were single parents, 0.6% had other marital status, and 13.6% provided no data. As for the place of residence: 18.8% of women lived in the countryside, 33.2% – large city (with over 250,000 residents), 14.2% – small city (up to 50,000 residents), and 19.5% – medium city (between 50,000 and 250,000 residents); 14.3% – no data. Among the participants, 39.6% perceived their financial situation as good, 18.9% – very good, 24.2% – average, 2.6% – bad, 0.6% – very bad, and 14.1% – no data. Of note, 63.8% of women had no history of affective disorders. The mean age of participants was 30.18 years ($SD = 5.13$), whereas the mean gestational age at birth was 38.99 weeks ($SD = 4.92$). Of the women participating in the study, 43.9% had natural birth, 33.4% had a C-section, and 22.7% – no data. A total of 17.8% of women had an at-risk pregnancy and 82.2 % had a physiological pregnancy.

Methods

Edinburgh Postnatal Depression Scale

The Edinburgh Postnatal Depression Scale comprises 10 questions; the maximum score is 30 points [19; Polish version: 20]. Scoring 12 or more points and/or selecting the answers confirming the desire for self-harm indicate the probability of postpartum depression. A high result requires a careful clinical assessment of the patient's mental state. The positive predictive value of EPDS is estimated to be 70% [19] and even 90% [21]. This questionnaire significantly improves detection rates of depression compared to routine care: 35.4% of mothers positively screened versus 6.3% [17, 22]. Wisner et al. [23] found that 86% of those with a screening result equal to or greater than 13 had a diagnosis of depression in a physical exam. According to the aforementioned authors, pregnant women experiencing mental disorders are six times more likely to score above 12 on EPDS than women who do not experience mental disorders [23]. The scale has already been successfully used in Polish studies assessing the occurrence of postpartum depression, which confirmed its high reliability (Cronbach's alpha coefficient – 0.90) [24].

Edinburgh Postnatal Depression Scale for anxiety

The widely used EPDS assesses not only depression but also anxiety symptoms. In our study, we decided to also use the three-factor model of EPDS consisting of questions assessing depressive symptoms (items: 7-10), anxiety (items: 3-6), and anhedonia (items: 1 and 2) [25, 26]. The analyses presented in our study concern only the anxiety subscale (items 3-6).

GAD-2

The Generalized Anxiety Disorder 2-item (GAD-2) is a shorter version of the GAD-7 and uses only the first two items, which represent basic anxiety symptoms [27]. A score of 3 points is the preferred cut-off for identifying possible cases and in which further diagnostic evaluation for generalized anxiety disorder is warranted. A study by Plummer et al. [28] found that using a cut-off score of 3, the GAD-2 has a sensitivity of 86% and specificity of 83% for diagnosing generalized anxiety disorder and is recommended by NICE guidelines [29].

Results

In order to find answers to the research questions posed, appropriate statistical analyses were carried out using the SPSS statistical software version 27.0. Analyses were performed to determine descriptive statistics, Pearson's *r* correlation analysis, and analysis of differences between means using the *t*-test. Analysis of the incidence of clinical outcomes was carried out based on cut-off points (for information on the cut-off points, see the Methods section).

The severity of postpartum depression and anxiety symptoms

The first stage of the statistical analyses consisted in determining the differences between the average EPDS score in the initial assessment (provided by a midwife) and in the follow-up study (n = 1,360 participants). There was significant difference (t = – 12.53, p < 0.001, Cohen's d = – 0.348) between the initial score (M = 4.39, SD = 4.08) and final result (M = 6.05, SD = 5.03). These values were moderately correlated with each other (r = 0.46, p < 0.001). A clinical outcome (12 points and above), indicating an increased severity of depression symptoms and thus a greater likelihood of a diagnosis of postpartum depression, was obtained in the initial screening by 6.3% of participants, and in the final assessment by14.3%.

Additionally, we carried out an analysis of the anxiety factor extracted from the EPDS scale (for details of the EPDS factorial structure, see the Methods section), and we found that there was a significant difference between the average 'anxiety' factor score in the initial assessment (provided by a healthcare professional) (M = 2.52, SD = 2.199) and in the follow-up study (M = 3.18, SD = 228) *(*t = 7.954, p = <0.001, Cohen's d = 2.62). These values were moderately correlated (r = 0.318, p < 0.001). A higher clinical score (6 points and above), indicating an increased severity of anxiety symptoms, was obtained in the initial screening by 10.1% of participants, and in the final assessment by 21.2%.

The assessment of anxiety symptoms on the basis of GAD-2 was provided only during the follow-up study and the mean score obtained by women was 1.13 (SD = 1.39, Min. = 0, Max. = 6, n = 641). A clinical result (3 points and above), indicating an increased severity of anxiety symptoms and thus a greater likelihood of generalized anxiety disorder, was obtained by 13.4% of the respondents. It is worth noting that the mean score obtained in the first item of the GAD-2 (M = 0.61, SD = 0.78), which indicates the intensification of the feeling of nervousness, anxiety, and strong tension, was significantly greater (t = 3.018, p = 0.003, Cohen's d = 0.119) than the mean score obtained by women in the second item of the GAD-2 (M = 0.52, SD = 0.81).

Table 1. **EPDS, 'EPDS anxiety factor' and GAD-2 during initial screening and follow-up assessment**

	Screening	
	Initial M (SD)	Follow-up M (SD)
EPDS	4.48 (4.05); (n = 1512)	6.05 (5.03); (n = 1350)
Anxiety factor	2.52 (2.199); (n = 1509)	3.09 (2.28); (n = 1350)
GAD-2	no data	1.13 (1.39); (n = 641)

Note. Follow-up screening was provided by psychology graduate students from the University of Gdansk, via telephone conversation.

Table 2. **Percentage of the scores obtained by postpartum women in direct screening and follow-up assessment for PPD with EPDS and for anxiety with GAD-2 and EPDS (regarding the cut-off points)**

		Screening	
	Cut-off points	Initial	Follow-up
EPDS	Normal range (0-9 points)	89.3%	65.5%
	Slightly increased (10-11 points)	4.2%	6.1%
	Increased – clinical score (12 points and more)	6.3%	14.3%
	No data	0.2%	14.1%
Anxiety factor	Normal range (0-5 points)	89.9%	78.8%
	Increased – clinical score (6 points and more)	10.1%	21.2%
GAD-2	Normal range (0-2 points)	no data	86.6%
	Increased – clinical score (3 points and more)	no data	13.4%

Note. Categories were extracted based on the EPDS's and GAD-2`s cut-off points. Follow-up screening was provided by psychology graduate students from the University of Gdansk, via telephone conversation.

The relationships between the severity of PPD and anxiety symptoms

In the next step, we decided to evaluate the relationships between the severity of postpartum depression and anxiety symptoms with correlation analysis (using Pearson's *r* correlation coefficient). A significantly strong, positive correlation between all tested variables was found. The obtained results show that anxiety symptoms measured by both the GAD-2 questionnaire and the EPDS 'anxiety factor' are significantly associated with postpartum depression symptoms. Detailed results of the above analyses are presented in Table 3.

Table 3. **Pearson's r correlation between the severity of PPD and anxiety symptoms among women participating in the follow-up study**

	Initial EPDS score	Follow-up EPDS score	Initial EPDS 'anxiety factor'	Follow-up EPDS 'anxiety factor'
GAD-2 score	0.33**	0.503**	0.286**	0.333**
Initial EPDS score	1	0.456**	0.812**	0.302**
Follow-up EPDS score	0.456**	1	0.405**	0.763**

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Initial EPDS 'anxiety factor'	0.812**	0.405**	1	0.315**
Follow-up EPDS 'anxiety factor'	0.302**	0.763**	0.315**	1

**p < 0.01 Note. Follow-up screening was provided by psychology graduate students from the University of Gdansk, via telephone conversation.

The severity of postpartum depression and anxiety symptoms in online self-screening for PPD on the website of the project "Next Stop: MUM"

Analogous analyses were conducted for the group of women (n = 10,454) who participated in an anonymous online EPDS questionnaire on the website of the project "Next Stop: MUM". A clinical score (12 points and above), indicating an increased severity of depression symptoms and thus a greater likelihood of the PPD diagnosis, was obtained in this group by 77.0% of participants. A clinical score (6 points and above) for the EPDS 'anxiety factor', indicating an increased severity of anxiety symptoms, was obtained by 62.8% of participants, and for GAD-2 (a clinical score of 3 points and above), was obtained by 63.7%.

Analyses of average scores of PDD and anxiety symptoms were also conducted. It was concluded that the mean postpartum depression symptom score in EPDS was 16.5 (SD = 5.975, Min. = 0, Max. = 30), the mean EPDS 'anxiety factor' score was 6.02 (SD = 2.05, Min. = 0, Max. = 9) and the mean GAD-2 score was 3.34 (SD = 1.777, Min. = 0, Max. = 6).

Table 4. **EPDS, `anxiety factor` and GAD-2 in the online self-screening**

	Online screening Mean (SD)
EPDS	16.5 (5.975); (n = 10454)
Anxiety factor	6.02 (2.050); (n = 10454)
GAD-2	3.46 (1.777); (n = 9015)

Note. Self-screening was conducted online via the "Next Stop: MUM" project's website.

Table 5. **Percentage of the scores obtained by postpartum women in the online self-screening for PPD with EPDS and for anxiety with GAD-2 and EPDS anxiety factor (regarding the cut-off points)**

	Cut-off points	Online screening
EPDS	Normal range (0-9 points)	14.7%
	Slightly increased (10-11 points)	8.3%
	Increased – clinical score (12 points and more)	77.0%

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Anxiety factor	Normal range (0-5 points)	37.2%
	Increased – clinical score (6 points and more)	62.8%
GAD-2	Normal range (0-2 points)	36.3%
	Increased – clinical score (3 points and more)	63.7%

Note. Categories were extracted based on the EPDS's and GAD-2`s cut-off points. Self-screening was conducted online via the "Next Stop: MUM" project's website.

The relationships between the severity of PPD and anxiety symptoms in women during the first year postpartum

In the next step, the relationship between the severity of PDD and anxiety symptoms was analyzed using correlation analysis (using Pearson's *r* correlation coefficient). A significant, strong, positive correlation between all tested variables was found. The obtained results show that anxiety symptoms measured by both the GAD-2 questionnaire and EPDS 'anxiety factor' are significantly associated with postpartum depression symptoms. Detailed results of the above analyses are presented in Table 6.

Table 6. **Pearson's r correlation between the severity of PPD and anxiety symptoms among women participating in the online screening**

	EPDS score	EPDS 'anxiety factor'
GAD-2 score	0.631**	0.54**
EPDS score	1	0.759**
EPDS 'anxiety factor'	0.759**	1

** $p < 0.01$. Note. Self-screening was conducted online via the "Next Stop: MUM" project's website.

Discussion

The conducted analyses made it possible to find answers to the research questions posed.

1. Our research shows that, depending on the timing of the measurement, from 10% to more than 20% of postpartum women experience an increase in anxiety symptoms.
2. Women who have used online screening have significantly higher scores than mothers who have participated in screening performed by a midwife or follow-up telephone interview.
3. Anxiety disorders and mood disorders often coexist.

Re. 1.

According to the literature review presented in the introduction, anxiety disorders are common in the first year after childbirth. Most likely due to the lack of screening and the low percentage of women receiving treatment, mothers are often left without adequate support. The mental healthcare system in Poland is overloaded and the waiting period

for consultations with a psychiatrist or psychologist under free health services is long; as a result, women in the perinatal period have considerable difficulty finding adequate help. The standard waiting time for an appointment with a psychiatrist or psychotherapist under the National Health Fund in Poland ranges from four weeks to one year in large cities in the northern region of Poland[2]. Knowledge about free places providing psychological and psychiatric support may not be enough and it is not always propagated by gynecologists and midwives. Free help can be found in Mental Health Centers[3], which are obliged to provide a consultation within 72 hours from registration. Ultimately, such centers are to be in every county, but currently there are 40 of them in Poland. Assistance is also provided by various NGOs (e.g., the "Good parent good start" program of the *Dajemy Dzieciom Siłę* Foundation, as well as the Child and Family Center dealing with perinatal disorders in women). In addition, as part of the "Next Stop: MUM" project, which is part of the Ministry of Health's National Health Policy Program, women who score more than 10 points in the EPDS have the opportunity to participate in three free psychological consultations without having to wait for a long time.

Nevertheless, systemic efforts should be made to create an effective psychological and psychiatric care system for women in the perinatal period. Information on places providing free psychiatric/psychological counselling is not generally available. However, providing contact information to mental health institutions operating in a given county on a gynecological discharge summary from maternity hospitals could be one of the solutions facilitating finding help.

Re. 2

In the online survey assessing the severity of anxiety symptoms, high scores were obtained by over 60% of women, and in the study with a midwife – 10%. Perhaps the anonymous nature of an online assessment is associated with greater freedom in disclosing information about one's mental state. We found similar results in the literature: in a study by Mule et al. [30], approximately 20% of women in the perinatal period did not fully reveal truthful information about their mental state at screening. In a study by Forder et al. [31], as many as 38.9% of 1,597 Australian women reported feeling uncomfortable when medical staff discussed symptoms of depression or anxiety with them. According to Mule et al. [30], women do not reveal their true feelings, both because of the fear of stigmatization (they do not want to be perceived as bad mothers) and self-stigma, as well as a lack of trust in the midwife. With online surveys, these dilemmas disappear. As women may differ in the level of trust in their doctor or midwife as well as in the level of anxiety associated with stigmatization, being able to choose the screening method may be helpful. In addition, perhaps women experiencing depressive and anxiety symptoms may be more motivated to fill out an online survey to assess their well-being and receive feedback. Information about the anonymous online PPD and anxiety screening platform should be an important step in the healthcare professional's meeting with the mother.

[2] https://terminyleczenia.nfz.gov.pl (retrieved: 1.06.2023).

[3] www.czp.org.pl.

Re. 3.

Our study also showed that depressive symptoms and anxiety symptoms coexist. The obtained results confirm that when dealing with a young mother with emotional difficulties who asks for help from professionals, the diagnosis should not be limited to depression. This may result in lower identification of the number of women who need help and mask the actual clinical picture. Anxiety can both accompany depression, and it can also be the predominant difficulty with which the young mother reports. The coexistence of these two diagnoses affects the treatment process and its duration.

Research on depression allows for the conclusion that in the case of depression of the main caregiver, the consequences of the disease, especially if left untreated, also affect the child. Although few studies have looked at the effects of maternal anxiety on short- and long-term development in the infant compared to studies on maternal mood disorders, the available evidence suggests that maternal generalized anxiety disorder has a negative effect on the development of the nervous system and growth of the infant. Uguz et al. [32] found that generalized maternal anxiety during pregnancy led to significantly lower levels of brain-derived neurotrophic factor, potentially adversely affecting the development of the fetal nervous system. Stein et al. [33] showed that recurrent negative thinking in mothers diagnosed with generalized anxiety disorder was associated with less activity and less involvement in interactions with infants. Moreover, these babies appeared withdrawn. In a study by Arteche et al. [34], women with postpartum depression or generalized anxiety were less likely to adequately recognize the happy faces of babies. This indicates the legitimacy of providing the possibility of obtaining quick psychological help – if the mother needs it – in the period of great dependence of the infant on the main caregiver, who is usually the mother in the first months of life. However, a necessary step in ensuring support for such an individual is the universality of screening tests for both postpartum depression and anxiety disorders.

Conclusion

We treat the obtained results as an important factor in developing the currently conducted screening tests in the perinatal period. Postpartum anxiety disorders are as common as mood disorders. Below, we present suggestions for actions that can be relatively easily implemented in clinical practice in primary care:

1. Identification of women in need of psychological help. Screening for increased levels of anxiety is relatively easy to perform. For example, the tool commonly used to assess depressive disorders (Edinburgh Postnatal Depression Scale) can be used to screen for anxiety. The total score of the four items in this scale (3, 4, 5, 6) is highly correlated with the results of the questionnaires assessing anxiety disorders. Additionally, a widely used tool to assess anxiety disorders is the GAD-7 questionnaire and its shortened version GAD-2[4] – available free of charge. In the two-item version, a score of 4 or higher indicates an increased level of anxiety.

[4] Polish language version: Patient Health Questionnaire (PHQ) Screeners. Free Download | phqscreeners.

In such a situation, the full GAD-7 test should be performed and the midwife/doctor should talk with the mother about her well-being and indicate places where help can be obtained (groups for mothers, psychological consultation, consultation with a psychiatrist). Extending the current screening test (most often carried out using the EPDS or Patient Health Questionnaire-9 (PHQ-9)) with anxiety screening would not significantly change the time or costs associated with conducting the tests.

2. Treatment of anxiety disorders. Effective treatment of anxiety disorders in the postpartum period should, first of all, be quickly available and implemented in a way that takes into account the organizational difficulties of this period of life (e.g., also online). Mothers of infants and young children may more often experience difficulties in simply moving around the city or organizing a fixed hour for therapy [35]. Feeding, changing diapers, the need to find child care, and dependence on others can all influence the regularity of women attending sessions. The possibility of using remote consultations seems to be a reasonable solution for this group of patients – Polish experience in the implementation of assistance programs shows that women are eager to use this form of support. In the case of anxiety disorders, both psychological intervention of low and high intensity depending on the severity of symptoms and pharmacotherapy are recommended [36]. Importantly, the coexistence of depression and anxiety disorders changes the course of both these diseases and affects the treatment and its effects. Treatment choice depends on the severity of anxiety and depression symptoms. Cognitive-behavioural therapy, interpersonal therapy, learning to relax, and mindfulness are indicated in the case of mild symptoms. Support groups for mothers are also helpful and can help normalize the anxiety they experience. Moderate- or severe-intensity anxiety disorders require pharmacotherapy and combining therapy with pharmacological treatment. SSRIs/SNRIs are drugs of first choice. If symptoms worsen, short-term use of benzodiazepines is recommended [37]. It is worth highlighting that pharmacological treatment of anxiety disorders is possible during lactation [38] and is safe for the infant [39, 40].

However, the condition for implementing treatment is, as mentioned, identifying those who require such support, preventing women with symptoms of the illness from isolating themselves and encouraging them to seek psychological help. Therefore, it is so important to notice the fears and difficulties of postpartum women and not to minimize them. Psychoeducation, including information on the common occurrence of anxiety symptoms, is a key component in overcoming denial and stigma and accelerates the initiation of an effective intervention.

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