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**Multicentric research**

**Postpartum Depression - a serious, dangerous, disabling, extremely frequent condition that is almost completely ignored in Romania**

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**Abstract**

In Romania, as anywhere in the world, postpartum depression is considered to be the most frequent health problem in the postpartum period.

Unfortunately, as it will be later explained, in Romania, in the majority of cases, patients, their families and relatives (as well as the medical staff in charge of the patient) treat the postpartum depression and its serious possible implications superficially.

Therefore and especially in order to precisely establish the perception of postpartum depression and its consequences in a targeted population, but also to evaluate indirectly the level of importance given to it by doctors (as well as the other healthcare professionals), we have designed in the year of 2019 in the Department of Obstetrics and Gynecology of "St.Pantelimon" Emergency Clinical Hospital from Bucharest a populational study that anonymously interviewed 112 pregnant women hospitalized in the clinic between 24.02.2019 and 25.03.2019.

Our interview was mostly generated by an extensive master study that was conducted in the clinic on this topic, but after seeing the results we have considered it mandatory to summarize and publish them.

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## 1. Introduction

In Romania, as anywhere in the world (Anderson, 2019; Committee Opinion N0. 757 Committee on Obstetric Practice [ACOG], 2018; Daniela Stanescu et al., 2018; Davé et al., 2010; Joy, Mattingly, & Templeton, 2019; Kendell et al., 1987; Management of perinatal mood disorders [SIGN 127], 2012; Manea et al., 2019; O'Hara et al., 1984; Parekh, 2018; Pregnancy and Postpartum Disorders | Mental Health America, n.d.; Presidential Task Force on Redefining the Postpartum Care Committee, 2018; U.S. Preventive Services Task Force, 2010), postpartum depression is "the most frequent health problem during the postpartum period". It is estimated that, globally, "one in seven women experiences postpartum depression" (Parekh, 2018) and that "postpartum depression is, in fact, the most common and frequent birth complication" (Anderson, 2019).

Unfortunately, as it will be later explained, in Romania, in the majority of cases, patients, their families and relatives (as well as the medical staff in charge of the patient) treat the postpartum depression and its serious possible implications superficially (Jacotă–Alexe, 2019).

Thus and especially in order to measure with precision the perception of postpartum depression and its consequences in targeted population, but also to indirectly estimate the level of importance given to it by the doctors (as well as the other healthcare professionals), we have designed in the year of 2019 in the Department of Obstetrics and Gynecology of "St. Pantelimon" Emergency Clinical Hospital of Bucharest a populational study that has anonymously interviewed of pregnant women (N=112) hospitalized in the clinic between the February. 24<sup>th</sup>, 2019 and March 25<sup>th</sup>, 2019.

Our interviews were by and large a part of a master's study conducted in the clinic on this topic, but after seeing the results, we considered it mandatory to summarize and publish them.

Hence, this article summarizes the concept, the causes, the modern diagnostics and therapeutic methods of postpartum depression, but also the work method, results, the discussions and conclusions of a more extensive study, leading to a Masters degree thesis which was presented in 2019 in "Carol Davila" University of Medicine and Pharmacy in Bucharest (the references to the study are indexed in the bibliography).

From the very beginning we must specify some mandatory marks: most authors and recent studies (ACOG, 2018; Daniela Stanescu et al., 2018; Davé et al., 2010; Jacotă–Alexe, 2019; Joy, Mattingly, & Templeton, 2019; Manas, 2019; Manea et al., 2019; Parekh, 2018) conclude that there are three distinctive clinical situations that must be very clearly distinguished: "Postpartum sadness" also known as "Baby Blues" (BB), "Postpartum Depression" (PPD) and "Postpartum Psychosis" (PPP). Generically, the three clinical situations mentioned above are grouped under the term of "Postpartum mental disorders" (PMD) in the specialized literature (Jacotă–Alexe, 2019; Manea et al., 2019; Pregnancy and Postpartum Disorders, n.d.). PMD were initially assimilated into a "group of disorders specifically related to pregnancy and childbirth, therefore, it has been considered a distinct diagnosis among other mental illnesses. However, recent data suggests that postpartum mental disorders cannot be distinguished from other mental disorders that can occur at any other moment in a woman's life" (Manea et al., 2019).

PS -or otherwise known as BB- is defined as a minor change in the mental and psycho-emotional status of a woman during the immediate postpartum period. Thus, mild mood disorders, continuous crying, irritability and anxiety, excessive worrying, confusion, lack of energy, inability to sleep, lack of confidence and feeling overwhelmed are a constellation of common symptoms in PS, that can be present during the first days after childbirth. They reach a maximum intensity after 4 or 5 days postpartum and then they disappear spontaneously within the first 14 days postpartum, without affecting the mother's ability to resume taking care of her child again (Jacotă–Alexe, 2019; Manea et al., 2019).

PPD is defined as a more serious disorder of the psycho-emotional status, with patients experiencing more severe symptoms (e.g. lack of interest or pleasure in being alive, lack of energy and motivation to do specific things, feel guilty, lack of hope and show low interest in their own child) and/or symptoms that are persistent for more than two weeks. In these cases, patients require to be evaluated by a physician in order to be included in the postpartum depression category.

"In the postpartum period, depression is often characterized as severe sadness, anxiety or despair and these symptoms often affect the mother's ability to take care of her own child. PPD is often associated with a high risk for both the mother and her newborn" (Manea et al., 2019).

Another definition, much more general, given by the American College of Obstetricians and Gynecologists (ACOG) introduces the term of “Perinatal Depression” (PND) defined as “any major or minor episode of depression that appears during pregnancy or in the first 12 months after birth” (ACOG, 2018). According to ACOG, PND is “the most common medical complication from pregnancy and postpartum affecting one in seven women (ACOG, 2018).

Postpartum Psychosis (PPP) is defined as a very severe psychiatric disease but, fortunately, it is more rare (Pregnancy and Postpartum Disorders, n.d.) that “includes all the signs and symptoms of the postpartum depression plus the mother's thoughts of auto mutilation or suicide and/or her thoughts to harm the baby” (Manea et al., 2019).

It is even more interesting that recent studies suggest that the newborn's father may suffer from “postpartum depression” (though with a much lower incidence rate) also known as “Paternal Postpartum Depression” (PPD) thus postpartum depression is not present only in mothers. Moreover, it has been observed amongst family members who adopt a child a type of postpartum depression, “Post Adoption Depression” (PAD) which increasingly is becoming a topic of discussion (Coping With Postpartum Depression and Anxiety, 2018; Manas, 2019).

All of these studies seem to prove that there is, in fact, a certain link between these forms of depression and the major changes that occur in the daily routine of those who have to take care of a newborn or an infant (Jacotă–Alexe, 2019).

A very recent study suggests (Anderson, 2020) that most patients who suffer from depressive episodes and/or bipolar disorder during their adult life (47-50%) are in reality victims of psycho-emotional and/or physical abuse (including sexual) that took place in their childhood. By the term ‘abuse’ it is included a very large spectrum of inappropriate behavior for a children's psycho-emotional status ranging from forms of authoritative educational model with punishments to emotional, physical and sexual abuse, all being intensely experienced by the child (Anderson, 2020).

In addition, in recent literature it is pointed out that postpartum depression affects one in four (Daniela Stanescu et al., 2018; O’Hara et al., 1984) or down to one in ten women who deliver a baby (ACOG, 2018; Anderson, 2019; Daniela Stanescu et al., 2018; Petrovai, 2009; Presidential Task Force on Redefining the Postpartum Care Committee, 2018). In other words, different health care specialists estimate that worldwide, 10 to 25 % of the women who deliver a baby face postpartum depression, an incidence that is not just high, but extremely high.

Furthermore, the World Health Organization (WHO) and the American Academy of Pediatrics (AAP) consider that, at a global level, every year, “more than 400.000 children are born by

mothers who develop postpartum depression after the delivery" (Joy, Mattingly, & Templeton, 2019; Norwitz & Lye, 2009).

Even though only 10-15% of these mothers develop long-lasting term psychological dysfunctions (the persistent form of postpartum depression), it seems that "0,1-0,2 % of them will experience the most severe form of depression, called postpartum psychosis" (Jacotă–Alexe, 2019; Joy, Mattingly, & Templeton, 2019; Kendell et al., 1987; O'Hara et al., 1984; SIGN 127, 2012; U.S. Preventive Services Task Force, 2010).

The rest of the patients, meaning 85-90% of the mothers who develop symptoms that may be associated with postpartum depression, can be categorized as patients who go, in fact, through the baby blues (the so called "postpartum sadness", lasting for a few days).

Thus, if we admit that in Romania about 200.000 children are born every year (Ionescu et al., 2017) and apply, with a quite simple exercise of imagination, the percentages quoted above, it results that, in Romania, in every year, approximately 170.000 women manifest the phenomenon called "baby blues" ("postpartum sadness") (85% of the postpartum women); roughly 20.000-30.000 women suffer from postpartum depression (10-15% of postpartum women) (nearly 28.571 cases of postpartum depression from 200.000 births) and approximately 200-400 women suffer from postpartum psychosis (approximately 0,1-0,2 % of postpartum women).

In this layout, postpartum depression and its incidence are beginning to look like a real public health issue, equally ignored by the patients, their relatives, the medical staff and the authorities.

Obviously, the consequences of the statistical data are immediately seen: every year, in Romania, 200 - 400 infants (in their first months of life) are nursed by mothers with postpartum psychosis (meaning severe postpartum depression associated with thoughts of harming the baby and/or self-harming thoughts and/or suicidal thoughts), and approximately 28.000 infants (in their first months of life) are nursed by mothers with postpartum depression with a greatly diminished sense of focus, judgement, and self-control (Lucci & Otta, 2013).

Of course, all of these dramatic situations take place somewhere, far away at these families' homes as far as possible from the sight of the authorities and specialists who are capable to diagnose and indicate an adequate multidisciplinary treatment.

Regardless of the definition and personal perception of postpartum depression, most authors consider that the risk factors for postpartum depression can be classified, depending on their type, in: hormonal factors, psycho-social factors and biological vulnerabilities.

Hormonal factors imply, most probably, the dramatic and rapid decrease of progesterone and estrogen levels in the first 48 hours postpartum (Daniela Stanescu et al., 2018; Jacotă–Alexe, 2019; Joy, Mattingly, & Templeton, 2019; Norwitz & Lye, 2009), together with the dramatic decrease of plasmatic cortisol level (Bloch et al., 2000; Daniela Stanescu et al., 2018; Jacotă–Alexe, 2019; Joy, Mattingly, & Templeton, 2019; Norwitz & Lye, 2009), even though "the plasmatic levels of these hormones and of prolactin's in women with postpartum depression do not have a statistically significant difference when compared to the level of the same hormones in mothers who don't have postpartum depression" (Joy, Mattingly, & Templeton, 2019).

As we know, during pregnancy, the level of women's sexual hormones (estrogens and progesterone) is ten times higher than in non-pregnant woman, thus the sudden decrease of these hormones' levels can lead to significant consequences for the woman's body.

A partial, but possible explanation of this phenomenon could be a particularly high sensitivity of the patients who develop postpartum depression to small variations in the plasmatic levels of these hormones (estrogens, progesterone, cortisol) compared to an absent (or certainly diminished) sensitivity to these hormonal changes in women without postpartum depression (Bloch et al., 2000; Jacotă–Alexe, 2019; Joy, Mattingly, & Templeton, 2019).

Modern medicine has yet to find out how exactly these hormones and their variations get to influence the human psychological status. For now, we know for sure that they have a special role because the newest and most successful methods of treatment of postpartum depression thrive to change "the abnormal settings" of this psychological status in only a few hours by administering Brexanolone (the brand-name drug "Zulresso" by Sage Therapeutics Pharmaceutical Company), its active substance contains nothing more than a metabolite of progesterone (Allopregnanolone) which seems to efficiently modulate the GABA-receptors (the receptors of Gama-Amino-Butiric Acid) from the cerebral tissue of the patients with postpartum depression (Boggs, 2018; Brauser, 2018; Davenport, 2019; Jacotă–Alexe, 2019; Tucker, 2018).

There are studies that demonstrate a higher risk of developing postpartum depression in patients with premenstrual dysphoric disorder (PMDD - severe premenstrual syndrome that affects the social and professional life of a woman) compared to those who do not have such a disorder (Scaunasu et al., 2016), this fact probably implies a neuro-hormonal component of the phenomenon.

Recent studies show that some patients, with a certain psychological, economic and social status are more vulnerable to develop postpartum depression than others. This risk category includes the women who struggle with (Daniela Stanescu et al., 2018; Gjerdingen et al., 2014; Jacotă–

Alexe, 2019; Joy, Mattingly, & Templeton, 2019; Lancaster et al., 2010; Nelson et al., 2013; Woolhouse et al., 2012; Wu et al., 2012): the lack appropriate social and/or familial support; discordant marriage or with a lot of problems (an unhappy marriage, lack of support from the partner); recent negative events in the personal life (death of a relative, divorce, dismissal, important social or economic loss, etc.); social and economic instability; the death or a severe illnesses of the newborn represents a major risk factor for postpartum depression (in this situation both the newborn's death / illnesses and the delivery are causes of the postpartum depression, but it is hard to determine which one is the main one; probably, the "postpartum" factors aggravate the pre-existing cause of the depression = death/ severe illness of the newborn); difficult and/or traumatic birth; financial difficulties, poverty; loss of long term material support (dismissal, bankruptcy, etc.); undesirable pregnancy; social stigma (teenagers, sexually abused patients, extramarital pregnancy, etc.); domestic violence (in the limited or extended family); alcoholism, drug consumption at least in one family member, disorganized family; pregnancy and birth in adolescence (adolescents have a much higher risk of developing postpartum depression compared to adults); extreme and/or extended stress (Daniela Stanescu et al., 2018; Gjerdingen et al., 2014; Jacotă–Alexe, 2019; Joy, Mattingly, & Templeton, 2019; Lancaster et al., 2010; Nelson et al., 2013; Woolhouse et al., 2012; Wu et al., 2012).

When referring to individual biological vulnerabilities, the patients with personal and familial history of depression or "mood disorders" have a high risk of developing postpartum depression (Lancaster et al., 2010). Furthermore, patients who are diagnosed with depression during the current pregnancy also have a high risk for postpartum depression (pregnancy finalized with birth accompanied by postpartum depression).

However, the most important biological risk factor seems to be the patient's personal history of postpartum depression, in this case the risk of recurrence in the future childbirths is 90% (Jacotă–Alexe, 2019; Joy, Mattingly, & Templeton, 2019; Sharma et al., 2009, 2010).

A large sample study conducted by Silverman et al. (2017) showed that postpartum depression is 20 times more frequent in patients with personal history of depression (patients with a personal history of depression develop postpartum depression 20 times more frequent than those without personal history).

Regarding the diagnosis and screening of postpartum depression, American College of Obstetricians and Gynecologists (ACOG, 2018; Presidential Task Force on Redefining the Postpartum Care Committee, 2018) considers the screening of the patients for postpartum

depression to be absolutely mandatory, especially of those considered to have risk factors (especially if these risk factors are classified as moderate or severe).

Therefore, ACOG Resolutions with No. 736 (May, 2018) and 757 (November 2018) recommend that "all obstetrician-gynecologists and the entire staff engaged in pregnancy and postnatal health care should screen intensively for the depressive and anxious symptomatology during the entire pregnancy and postpartum period, using standardized and validated tools every time they have a chance to do so (pre- or postnatal visit)" (ACOG, 2018; Presidential Task Force on Redefining the Postpartum Care Committee, 2018).

The standardized and validated tools are exactly the depression scales such as Edinburgh Scale (the simplest and most used one, with only 10 questions), Hamilton Scale (Hamilton, 1960, 1967), Beck Depression Inventory Scale or Beck Depression Inventory II Scale (Beck & Steer, 1984; Beck, Steer, & Brown, 1996; Beck, Steer, & Carbin, 1988) which has 21 questions to be answered in 10 minutes and a specificity of 97-100% (ACOG, 2018).

Every score should be interpreted according to the clinical context, especially if the patient has risk factors, but a "negative" test does not exclude the onset of depression (ACOG, 2018; Presidential Task Force on Redefining the Postpartum Care Committee, 2018). Every patient with a positive test should be referred to a specialist (psychiatrist and therapeutic psychologist – preferably working in the maternity where the test is performed).

Regarding the treatment of this disabling disorder, among a series of antidepressants (intensively used in the past and today), social and familial support, qualified psychotherapy (which should never be missing), an extremely promising drug deserves a special mention - numerous studies and articles were dedicated to this type of treatment, which has been recently approved by the United States Food and Drug Administration (Boggs, 2018; Brauser, 2018; Cassoobhoy, 2019; Davenport, 2019; Jacotă–Alexe, 2019; Tucker, 2018).

Zulresso (Brexanolone) was developed by Sage Therapeutics and was tested in some very important therapeutic trials and proved its extreme efficacy in substantially reducing depressing symptoms in patients with postpartum depression (Boggs, 2018; Brauser, 2018; Cassoobhoy, 2019; Davenport, 2019; Jacotă–Alexe, 2019; Tucker, 2018).

In fact, Zulresso (Brexanolone) is the formula for intravenous administration of allopregnanolone, the substance representing an endogenous progesterone metabolite (Boggs, 2018; Brauser, 2018; Cassoobhoy, 2019; Davenport, 2019; Jacotă–Alexe, 2019; Tucker, 2018). Brexanolone's way of action seems to differ from those of the usual antidepressants used until now, the active substance being chemically identical with an endogenous allopregnanolone (progesterone metabolite) whose plasmatic level seems to decrease immediately after delivery.

Brexanolone acts through positive modulation of Gamma-Aminobutyric Acid (GABA) receptors, receptors whose activity is highly disturbed immediately after delivery (Boggs, 2018; Brauser, 2018; Davenport, 2019; Jacotă–Alexe, 2019; Tucker, 2018).

As a natural consequence of these events and discoveries, the entire civilized medical society is waiting for new randomized trials results.

In fact, it will come a moment when almost all the medical specialties will have connections with clinical psychology and psychiatry (Caputo, 2013; Martikainen et al., 2002; Rowland & Motofei, 2015, 2017).

## **2. Materials and methods**

Despite the remarkable progresses and standardizations in this field, Romania seems to be in the prehistorical age: as it was shown in our study - the Romanian patients are completely ignoring this health problem.

Unfortunately, as it will be demonstrated below, even a great part of the qualified medical staff has the same attitude towards this disorder, which has determined us to publish this article.

Fully aware of the minimization of the postpartum depression by the targeted population (pregnant women) and its entourage (family, group of acquaintances and medical environment), we have designed a study based on an anonymous social interview to determine, as accurate as possible, the size of this "ignorance".

In the following paragraphs we will describe our study, the results and the major conclusions (Jacotă–Alexe, 2019), actually, hoping to sensitize the medical world towards the importance and complexity of this disabling disorder.

As an instrument for this "social interview" we have designed an anonymous questionnaire composed of 17 statistically distinct questions.

Our clinical and social study was conducted in the Department of Obstetrics and Gynecology of "St.Pantelimon" Emergency Clinical Hospital from Bucharest between February 24<sup>th</sup> 2019 and March 25<sup>th</sup> 2019. We have randomly chosen the period of time, looking for 30 calendar days, for a better statistical equity and validity.

The first part of the opinion questionnaire that we have designed contains a short introductory note (for presentation and information) and informs the respondents about the way they are supposed to complete the questionnaire the chosen answer was marked with an "X").

In the same introductory note, we have obtained the responder's tacit consent for participation in this prospective social study and the consent to publish the statistical data and the results of the study (strictly respecting the personal data confidentiality agreement).

In fact, the opinion questionnaire is totally anonymous, none of the participants' answers would make it possible to identify the responder. Simply filling in the questionnaire after reading (direct or indirect - in case of reading and comprehension disability) the "introductory note" (which undoubtedly specifies that once the respondent actively begins to complete the questionnaire represents, in fact, the unequivocal consent for participation in the study) constituted both the request and the acceptance of the informed consent for this clinical and social study.

In order to obtain real, sincere answers and to fully protect the respondents' identity, the inclusion and exclusion criteria and the method of collecting and processing the statistical data makes it impossible to identify the respondents, even by the people involved in the administration and management of the study.

In this manner, the only personal data collected during this study was the age (in fact, respondents' age range), the degree of schooling (in fact, range of schooling), rural or urban residency and if the patient has another children (relation about the parity, but not the exact parity).

Therefore, in this way the patient's answer doesn't imply any information that could lead to mother's or her children's subsequent identification. The people who distributed and helped to complete the questionnaire did not take part into the database formulation or statistical data analysis and vice versa. In this way, we could never identify the respondents, because, apart from it, after collecting the completed opinion questionnaires, they were randomly mixed up before being introduced into the database. The people who collected the data differed from those who have introduced it in the database and another category of people did the statistical analysis.

In this manner, practically no one can ever identify the respondents, so their answers and identity are almost anonymous.

In order to avoid the negative influence of the collected statistical data validity, we have conceived simple inclusion/exclusion criteria for our study participation: so, in the study there were included (only one time, despite the number of admissions in the hospital - single / multiple) all the pregnant women hospitalized during the period of the study in the Department of Obstetrics and Gynecology of "St.Pantelimon" Emergency Clinical Hospital in Bucharest that have accepted to participate in the study (after the team members

have explained the content, purpose and utility of the study into words they would understand, as well as the fact that their participation is free and unrecompensed in any way - participation unrewarded or unrecompensed with money, goods or any other form of services) and expressed verbally their consent in front of the research team.

We have excluded from the study all the pregnant patients admitted in the Department of Obstetrics and Gynecology of "St.Pantelimon" Emergency Clinical Hospital in Bucharest during the period of the study that have refused in any way the participation in our study, though their refuse has been expressed before the team could even finish to explain the reasons.

This means that all the pregnant women admitted in the clinic in this period who deliberately wished to participate in the study - were included (one time) and all those who refused (apart from the reason or the moment of refusal) - were excluded.

Also in order to respect precisely the ethical rules unanimously accepted for these studies, the participants in the study and the anonymous opinion questionnaire, weren't discriminated based on age, education, civil status, social or financial status, religious orientation or beliefs, ethnicity, sexual orientation, nationality, residency, material possibilities, profession, number of children, political view, etc.

The analysis of the collected data was performed using Epi Info – Version 7.2.3 (May 30, 2019, Centers for Disease Control and Prevention – CDC – Atlanta, Georgia, US), VassarStats: Website for Statistical Computation – <http://vassarstats.net/> and [Microsoft Excel 2019](#).

Therefore, the statistical study conceived and realized in this way, includes N=112 statistically analyzed valid cases.

Our anonymous opinion questionnaire contained 17 statistically distinct questions.

The first 4 questions analyze the demographic data mentioned above: age (in completed years) (10 age categories: under 14 y.o, 14-16 y.o, 17-18 y.o, 19-21 y.o, 22-25 y.o, 26-30 y.o, 31-35 y.o, 36-40 y.o, 41-45 y.o, 46 y.o and over); residency (urban / rural); responder's education degree (graduated / finished studies - 6 categories: 0-4 graduated classes, 5-8 graduated classes, 9-10 graduated classes, 11-12 graduated classes, faculty or post-secondary school, postgraduate studies) and the quality of having a baby / babies (nulliparity or primiparity was distinguished from multiparity) (binary answer possibility: Yes/No).

The next 13 statistical questions collected, in a direct and effective way, the data referring to the responder's knowledge about postpartum depression: the possibility of occurrence, the way and moment of the occurrence, the symptoms of the disease, etc., also the data about the measurements that would be taken in case of postpartum depression occurrence and of course,

the data referred to the interviewed subjects who wants to find out more about this topic and to get qualified help

So on, the 5th question asked the participant whether she has any knowledge (practical and/or theoretical) about postpartum depression with the possible binary answer: Yes / No.

The 6th question asked the participant whether she knows in a certain way what "postpartum depression" is (possibility of binary answer: Yes / No).

The 7th question asked the participant whether she considers the postpartum depression to be a disease (possibility of binary answer: Yes / No).

The 8<sup>th</sup> question was referred to the frequency of this issue (the occurrence of postpartum depression) in participant's acceptance. Thus, the possible answers were: very rare, rare, quite common in frequency, frequent, very frequent (a subjective view over the postpartum depression's frequency in participant's acceptance).

The 9th question was an extremely direct one: "Do you consider you could develop postpartum depression after delivery?" with the possible answers: Yes / No / I don't know

The 10th question was also a relative direct one: "If you would develop such a depression, when would its first signs and symptoms appear?", with seven possible answers (without absolutely excluding each other): 6 weeks postpartum, in the first days postpartum, in the first day postpartum, in the first 4 weeks postpartum, at 3 months postpartum, at one year postpartum, any time postpartum.

The 11th question was referred to postpartum depression's symptoms and was formulated like this: "If you would have this postpartum depression, what signs would alarm you?" and the following 15 answers (without absolutely excluding each other): the sense of sadness, the sense of great tiredness, insomnia, somnolence, anxiety, the fear that something bad could happen to your baby, the fear that something bad could happen to you, the feeling that you are not a good mother, the sense of panic, the feeling of unhappiness, unfulfillment, the feeling that you cannot control the situation, the feeling that things would never be the same as before, dissatisfaction for your own person, any of the above, none of the above.

The 12th question interviewed the respondent whether "she considers it is important to find out more about this depression", with the binary answer: Yes / No.

The 13th question asked the respondent if "her doctor has explicitly talked to her about these things (postpartum depression) up until now" with a binary answer: No / Yes.

The 14th question tried to verify if the responders from the study know that in case they developed postpartum depression, they need to ask for help and if they know how and to whom: "If you would suffer from this depression (postpartum), what do you think you should do?". The question had multiple answers (possibly associated): talk to a trusted person from your environment, to find help from your relative, to ask for a doctor's help, to ask for a psychologist's help, all of them, none of them.

The 15th question represented an addition to the previous one and interviewed the participant if she considers postpartum depression to be a danger-generating situation and if so, for whom: "Do you consider postpartum depression is a dangerous situation?". The possible answers were, as well, multiple: Dangerous - for yourself, for the baby, for yourself and the baby, not dangerous.

The 16th question asked directly the responders "do you consider that prenatal courses on this topic (postpartum depression) would help you?". The possible answers were: Yes / No / I don't know.

The 17th question (the last one) verified through direct interview the responder's acceptance get help at home by a qualified person in case of postpartum depression occurrence: "Do you consider that a person qualified in maternal and fetal issues could help you in solving these type of problems if they would visit you periodically at home, in postnatal? ". The possible answers were: Yes / No /I don't know.

As you can notice in our questionnaire, the questions and answers were formulated as simple as possible (still keeping a correct language and a polite addressing), in the manner that the participant can better understand the question and give the answers, despite the education or understanding degree. We tried that every question about postpartum depression to be simple and clearly as much as possible, avoiding to induce an automatic response of the responder (avoiding to suggest any particular answer).

Through meticulous study and the analyze of the answers of N=112 pregnant women, we tried, to sketch a robot figure of our patient's conception towards postpartum depression. From the multitude of the results of this anonymous interview (some discordant, but extremely interesting), we chose to public exactly the "robot figure" of our patients.

### 3. Results

This "robot figure" (in fact - a cumulation of answers / dominant features) of the patients from the group we have studied (N=112 pregnant women) looks like this: adult patient (26-30 years old), who lives in a city (urban residency), with low grades (5-8 grades), with one or more babies,

considers that she has no idea about what postpartum depression is, yet she believes it isn't a disease, it's just a rare situation which she cannot confront with. She admits that postpartum depression can develop at any time after delivery, the most alarming symptom is the fear that something bad could happen to her baby, so she wants to get more information about postpartum depression, she admits that she didn't get any information about this disorder from the healthcare provider, and she considers that whether she develops postpartum depression she should ask for help to a psychologist, also she considers that this depression could be a danger for her baby, she finds useful the prenatal courses on this and she would love having qualified home care provider (through periodical visits of qualified medical personnel) (Jacotă–Alexe, 2019).

These results called by us "dominant" are also presented in Table 1.

**Table 1:** Dominant results (“Robot figure”) of the anonymous opinion interview of (N=112) pregnant women hospitalized in the Department of Obstetrics and Gynecology of "St. Pantelimon" Emergency Clinical Hospital in Bucharest and included in the study

<b>Question:</b>	<b>Dominant answer</b>	<b>No. of dominant answers</b>	<b>Percentage (N = 112)</b>	<b>Special remarks:</b>
1. Age	<b>26-30 years old</b>	24	21,43%	Group of <b>patients predominant mature</b> , 85 patients were between 19-35 years old.
2. Residency	<b>Urban</b>	58	51,78%	Almost equal group.
3. Education	<b>5-8 graduated classes</b>	37	33,03%	<b>Certain undersized schooling:</b> 61 patients graduated 10 or less classes.
4. Do you have another child?	<b>Yes</b>	68	60,71%	<b>Possible “personal experiences” with PPD.</b>
5. Do you have any knowledge about postpartum depression?	<b>No</b>	62	55,35%	<b>Possible misunderstanding the question:</b> “do you know anyone who had PPD?”
6. Do you know what postpartum depression is?	<b>No</b>	58	51,78%	Almost equal group. But, <b>in fact, the patients don't know what PPD is</b>
7. Do you think PPD is a disease?	<b>No</b>	64	57,14%	<b>The dominant answer is incorrect</b>

8. You consider the frequency of PPD as:	<b>Rare</b>	35	31,25%	<b>The dominant answer is incorrect</b>
9. Do you consider you could develop PPD?	<b>No</b>	48	42,85%	<b>The dominant answer is incorrect</b>
10. When can PPD appear?	<b>Whenever after birth</b>	45	40,17%	The dominant answer is correct.
11. Do you consider the following to be signs/symptoms of PPD?	<b>The fear that something bad could happen to your baby</b>	80	71,42%	<b>Only 8 from 112 patients answered completely correct.</b>
12. Do you consider it useful to find out more about PPD?	<b>Yes</b>	91	81,25%	<b>Other 21 patients don't want any additional information</b>
13. Has your doctor explicitly talked to you about PPD up until now?	<b>No</b>	91	81,25%	-
14. What should you do if you had PPD?	<b>Ask for help at a psychologist</b>	62	55,35%	<b>Only 17 from 112 patients answered completely correct.</b>
15. PPD represents	<b>Potential danger to the child</b>	84	75,00%	75 patients answered completely correct (PPD = danger for both mother and child), but <b>19 patients consider that PPD “doesn't present any risk”</b>
16. Do you consider the prenatal courses on PPD useful?	<b>Yes</b>	80	71,42%	<b>14 patients consider these courses to be useless</b>
17. Do you consider the qualified home care to be useful (in case of PPD)?	<b>Yes</b>	92	82,14%	<b>10 patients consider the qualified home care useless</b>

#### 4. Discussions

The relevance of the condition treated is consistent, the literature on the subject fully expresses the need for the phenomenon to be taken into consideration.

Obviously, during our study we have multiple conclusions (Jacotă–Alexe, 2019), but we decided to summarize for this publishing that patients and some of the healthcare workers (unfortunately, even obstetricians) have a lack of knowledge about postpartum depression and its negative consequences on short, medium and long term.

The need is clear, since many of the symptoms present can appear in different forms. In fact, depending on the subjects, we can distinguish an inter-subjective level and a subjective level that responds to precise psychological dynamics. It is important to take into consideration the psychic structure of the subjects, in order to allow the emergence of the various figures involved especially in medical settings with reference to all difficulties related to hospitalization (Caputo, 2013; Conversano, 2019; Merlo, 2019b). Specifically, beyond personal data that highlight the origin of the subjects, the age group represents a fundamental fact. The different stages of development of the subjects specify for different manifestations that are often filtered by the possibilities of expression that the subject has (Settineri et al., 2019; Settineri, Frisone, Alibrandi, & Merlo, 2019). Clinical psychology does not provide for age frameworks, for example it is fully applicable regardless of whether it is subjects in childhood or in geriatric age. In the specific case, the expressive possibilities of the subjects vary depending on their degree of development. Secondly, the personality structures and psychopathological conditions present in the subjects filter these expressions.

With reference to the development area, it is known that the symptoms appear in compliance with the development stage in progress, therefore expressions such as anxiety and anguish are strongly influenced in their presentation (Merlo, 2019a). These psychological implications clearly have to do with both diagnostic and treatment processes, since alongside psychopharmacological therapies, there is a need for psychological support and psychotherapy (Settineri, Frisone, & Merlo, 2019).

This condition is often ignored and, even worse, both patients and medical staff consider that postpartum depression "is not a disease". This fact is highly relevant, and should make us think about the training courses of the students of the health professionals, since not all courses have programs that train operators with respect to realities of this type, whether they are psychological or purely medical (Behel & Rybarczyk, 2019; Caputo, 2013; Settineri et al., 2018) Moreover, this proves the need for a clinical psychologist at every 50 beds from an Obstetrical Clinic and also the need for a shrink for every Obstetrical Clinic.

However, the reality is quite different: postpartum depression is the most frequent medical problem in the puerperium (15% of the patients), is an extremely impairing condition (especially the moderate and severe stages) and a real issue in healthcare (85% of the patients can experience mild depressive syndromes in postnatal - Baby Blues) which involves usually the whole family with medium and long-term consequences. Moreover, the consequences can be tragic sometimes, because 0,1-0,2% of the patients after birth could have real postpartum psychosis that implies thoughts of self-harm and/or harm of the child.

In most cases, a patient's ability of self-care and caring for the child is, at least partially affected, with consequences on the infant's psychological and somatic development. The fact that the phenomenon is unknown represents a very relevant fact, since the effects of the pathology extend to various figures. Of course, the first two parts are represented by patients and health professionals. The phenomena subsequently extend to parental figures, spouses and families. Just think of a simple fact, if the phenomenon is already being ignored in the hospital it can only be worse in the environments outside the clinics.

First of all, the quality of care affects the development of children, since the relationships between the family context that can act as moderator and the temperamental development of the subject have been empirically highlighted (Parade, Armstrong, Dickstein, & Seifer, 2018). Data such as maternal postpartum depression, family functioning (Scoville & Duncan, 2018) and maternal sensitivity was detected as relevant factors. Their association with the possible changes in the child's temperament and emotional stability is strong, offering the perspective to implement their moderative role in order to avoid the development of psychological maladjustment (Beck, 1998; Carro, Grant, Gotlib, & Compas, 1993; Goodman, 2019; Grace, Evindar, & Stewart, 2003; Murray & Cooper, 1997). One of the most important steps to take is to highlight what can be considered risk and protection factors for the figures involved (Sun, Zhai, & Cao, 2018). Preventive and rehabilitative psychological interventions must take into account the various figures involved and the different options available (Letourneau, Dennis, Cosic, & Linder, 2017). As anticipated, the figures involved are manifold. As a first necessity, the reduction of the symptomatic range of the phenomenon which includes an intervention on the mother's fatigue and the implementation of the family support is needed, and can be considered useful for the compensation of the postpartum depression (Lee & Park, 2018). The findings in the literature suggest that professionals should support the needs of the whole family, including fathers, when mothers are diagnosed with PPD. Fathers support mothers during this difficult experience, but not without a greater load of stress for themselves.

In a recent research paper by O'Brien, Chesla, & Humphreys (2019), the authors suggested the fundamental role of health professionals. In particular, the recommendation due to the results that emerged was to extend support to the needs of the whole family of mothers diagnosed with postpartum depression. The implicated paternal figures of all the phenomena related to the condition are strongly affected by the pathology, to the point that several authors have postulated the presence of a sort of Paternal Postpartum Depression (Biebel & Alikhan, 2016; Goodman, 2004; Gressier, Tabat-Bouher, Cazas, & Hardy, 2015; Kim & Swein, 2007; Musser, Ahmed, Foli, & Coddington, 2013; Melrose, 2010; Misri, 2018; Stadlander, 2015). For all these reasons and many others, we consider that an efficient and qualified screening for postpartum depression and a *"National Program for Specialized Medical and Social Assistance for the Patients with Psycho-Affective Disorders determined by Pregnancy and Childbirth and their Families"* is needed most. Another conclusion of our study is that once the patients are exposed and submitted anonymously to the questionnaire, they substantially change the way of treating and recognizing the symptoms of postpartum depression; therefore the patients become aware of this health issue (when it occurs) and can immediately seek help for healthcare providers (Jacotă–Alexe, 2019).

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