Empirical Indicators of Psychobiological Needs of Pregnant Women: Integrative Review

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Abstract

Introduction: Pregnancy is a natural phenomenon whose evolution requires routine monitoring in order to promote well-being and comfort to the woman and her family.

Objective: To analyze the scientific literature on empirical indicators of the pregnant woman needs.

Method: This is an integrative review considering publications between years 2005 and 2014. Databases consulted were Cochrane, CI-NAHL, Lilacs, Pubmed, Scopus and Journal of Midwifery. It was used as inclusion criteria articles published in full that dealt indicators related to the need of women during pregnancy. In 36 articles selected 64 indicators were identified consistent to the physiological needs of pregnant women.

Results: The results show imbalances especially eating habits, physical activity, depression and anxiety. It was found low supply of treatments and tests relating to prenatal program.

Conclusion: The reviewed publications indicate the existence of gaps in the psychobiological level of the pregnant woman. This situation is worrying when it is assumed that pregnant women not getting their needs met, they are predisposed to injuries to their health and of the conceptus and of the household as a social cell.

Introduction

Pregnancy is a natural phenomenon whose evolution requires routine monitoring in order to promote well-being and comfort to the woman and her family. In this line of reasoning there is the intention...
to host the pregnant woman with its peculiarities. In this context, it is still considered the existence of the discomforts commonly present in the course of gestational stage.

Regarding the needs of women during pregnancy, it is understood that these are associated with numerous physiological and/or emotional changes experienced by women during pregnancy period. Thus, one must consider: socio-demographic profile, lifestyle, previous and current gestational history, family history, physical and physiological condition as well as presence of pre-existing pathologies. In addition, it is necessary to analyze laboratory tests, vaccine regimen and emotional context for being essential data for prenatal care [1].

Prenatal care constitutes an effective appeal to ensure: evolution of pregnancy; monitoring of physical, physiological and emotional changes; outcome of childbirth, postpartum and successful breastfeeding. In this regard, the Ministry of Health (MH) recommends ensure coverage and quality of women’s monitoring during pregnancy and of fetus in view of citizenship rights. The actions to be developed imply to accompany in detail all the way gravid puerperal process. Therefore, it is necessary commitment, empathy, respect and listening to customers committed those that cater to pregnant women. Moreover, it is necessary to be aware of the biological aspects and the physical, social, psychological, spiritual and cultural changes of pregnant women [2].

Most often, physiological and physical adjustments occurred in maternal organism raise doubts and discomforts in pregnant women. In this reasoning, studies show that prenatalist nurse is a professional able to inform to woman about the naturalness of these changes during pregnancy [3, 4].

Considering the manner in which nurse leads to care to pregnant, emphasizes the nursing consultation (NC) as a means to facilitate the nursing process (NP) in order to provide worthy assistance to individual or community. This involves the existence of dynamic equilibrium processes between living beings arising from interaction of these with external environment. Thus, it is necessary that Nurse has based on the theory of human needs (THN) in the performance of their actions [5].

As regards of pregnancy, the assistance becomes relevant because when it is not possible to stabilize the changes in the dynamics of the experiences of pregnant women, needs arise classified as psychobiological, psychosocial and psychospiritual. These, not being met or even conducted improperly allows for presence of discomforts, which can lead to pregnant to a pathological condition but also to influence the development and/or fetal birth. Therefore, it is imperative to meet the needs of pregnant women in order to maintain of well-being maternal and fetal. However, it is observed in care practice that this is not reality in the prenatal care services.

In the framework of Prenatal is understood to be important to consider human needs affected of women during pregnancy. Among these, in this article, the physiological needs are discussed because of the relevance of discomfort expressed by pregnant women during antenatal visit. The physiological needs relate to propensities of individual bodies to develop forces, impairment or unconscious energies that come without planning in psychobiological level. Thus, such needs can be presented by trends such as: to food, to sleep, to have sex and to preserve health [6].

These needs are classified as: oxygenation, hydration, nutrition, elimination, sleep and rest, physical activity, sexuality and reproduction, physical security and environment, body and environmental care as well as physical integrity. In addition to these, it cites regulation which relates to cell growth and functional development, vascular regulation, thermoregulation, neurological regulation, hormonal regulation, sensory perception, therapeutics and prevention [7]. Thus, it is understood that discomforts arising from the pregnancy status are related to these needs, which are represented by empirical indicators (EIS).

The described above considerations leads to question what the literature shows about the EIS of the physiological needs of women during preg-
nancy. The EIS concern signaling directed to identify or to draw attention to specific issues in order to get results in a health organization and should be periodically reviewed. Thus, preparation of these EIS requires search of conductors axes that point to the need to consider assistential, educational and management policies on health and the expectations of the clientele attended [8].

Thus, current study aimed to analyze the scientific production on the EIS related to physiological needs of pregnant women.

Method
This is an integrative review of scientific literature that had as sources of information published scientific articles in the databases: Cochrane reviews, Cumulative Index to Nursing and Allied Health Literature (CINAHL), Latin American and Caribbean Health Sciences (LILACS), Public Medline (PubMed), SciVerse Scopus (SCOPUS) and Journal Journal of Midwifery and Women’s Health (JMWH).

The integrative review is defined as a obtaining tool, identification, analysis and synthesis of literature directed to a specific theme. This is because this instrument allows not only build comprehensive analysis of knowledge produced as well as discussions on methods and results of the publications [9]. To develop an integrative review must be followed the steps: problem formulation, data collection or settings on the literature search, assessment and data analysis, presentation and interpretation of results [10]. These were adopted in current study.

For selection of the documents it was established the following inclusion criteria: articles published in full, between 2005 and 2014, in Portuguese, English or Spanish, available for free which discussed about the EIS related to the need of the pregnant woman. For the collection of information the following controlled and combined descriptors were used: nursing, prenatal care, pregnancy, primary health care. Moreover, the descriptor no controlling - human needs - constituted the research base during the search of EIS contained in the publications.

It is justified to investigate publications in the period of a decade, in perspective to consider greater amount of results in agreement with the physiological needs during pregnancy. Especially because this issue is specific and researchers have not approached to it frequently.

In order to systematize the collected data and to facilitate book report of these articles it was developed a instrument consisting: indexing database, title, reference, language, objective, method, population, results, human needs, classification and EIS of pregnancy.

By using the controlled and combined descriptors, search resulted in 2809 selected articles. By applying of criteria for inclusion of free and full availability, the number of investigations was reduced to 494. It was noteworthy excluded articles published in more than one database. From these findings, on first analysis, title and summary of each of the papers were read. This aimed to choose those who would discourse on the EIS related to physiological needs of pregnant women. After this stage it was proceeded to second reading resulting 36 publications distributed in the databases searched as shown in Table 1.

In order to organize the research arising from the readings of articles, the system of virtual folders files was adopted. Each folder was named for each database investigated where it was allocated scientific productions to be analyzed. Following, it was proceeded with reading and identification of EIS followed by analysis and discussion.

Results
In the 36 publications that constituted the corpus of analysis it was identified 64 EIS related to psychobiological needs of the pregnant woman as shown in Table 2.
Table 1. Quantitative studies available in the databases arising from the integrative review. Natal, RN. Brazil, 2014.

<table>
<thead>
<tr>
<th>Databases and Periodical</th>
<th>Abstracts</th>
<th>Eliminated by the exclusion criteria</th>
<th>Full papers available</th>
<th>After first reading</th>
<th>Eliminated by repetition</th>
<th>After second reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cinahl</td>
<td>896</td>
<td>796</td>
<td>100</td>
<td>35</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Cochrane</td>
<td>144</td>
<td>46</td>
<td>98</td>
<td>28</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Lilacs</td>
<td>188</td>
<td>145</td>
<td>43</td>
<td>32</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pubmed</td>
<td>515</td>
<td>483</td>
<td>32</td>
<td>9</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Scopus</td>
<td>554</td>
<td>384</td>
<td>170</td>
<td>62</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>JMWH</td>
<td>512</td>
<td>461</td>
<td>51</td>
<td>26</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>2809</td>
<td>2315</td>
<td>494</td>
<td>192</td>
<td>13</td>
<td>36</td>
</tr>
</tbody>
</table>

Source: Research data.

Table 1. Distribution of empirical indicators according to the physiological needs of the pregnant woman. Natal, RN. Brazil, 2014.

<table>
<thead>
<tr>
<th>Psychobiological needs</th>
<th>Empirical indicators</th>
<th>n</th>
<th>%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition</td>
<td>Inadequate eating habits</td>
<td>6</td>
<td>9.4</td>
</tr>
<tr>
<td></td>
<td>Insufficient weight gain</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Obesity risk</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Nausea</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Poor appetite</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Elimination</td>
<td>Vomiting</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Stress Urinary Incontinence</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Urinary tract infections</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Sleep and rest</td>
<td>A few hours of sleep</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Physical activity</td>
<td>Lack of physical activity</td>
<td>4</td>
<td>6.3</td>
</tr>
<tr>
<td></td>
<td>Decreased sexual desire during pregnancy</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Physical security and environment</td>
<td>Physical partner violence</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Physical integrity</td>
<td>Toothaches and inflammation in the gingiva</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Lumbosacral pain or pelvic loin</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Regulation: cellular growth and functional development</td>
<td>Anemia</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Vascular regulation</td>
<td>Presence of edema in the lower limbs</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td>Neurological regulation</td>
<td>Depression</td>
<td>13</td>
<td>20.3</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>8</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Source: Research data.

Table 1. Distribution of empirical indicators according to the physiological needs of the pregnant woman. Natal, RN. Brazil, 2014.

<table>
<thead>
<tr>
<th>Psychobiological needs</th>
<th>Empirical indicators</th>
<th>n</th>
<th>%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapeutic and prevention</td>
<td>Infrequently dental care</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Late onset of prenatal care</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Low number of gynecological examinations</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Prevalence of sexually transmitted diseases</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Absence of testing for screening syphilis in late pregnancy</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Low number of the examination of the breasts</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Failure to carry out prenatal</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Low frequency of prenatal consultations</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Scarce approach of the emotional aspects of pregnancy by professionals</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Failure in care and attention towards pregnant women</td>
<td>1</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Low adherence of pregnant women to the treatments offered by prenatal program</td>
<td>1</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Total                                                |                                                    | 64  | 100.0    |

*: The percentages were calculated based on frequency of indicators and not in number of indicators.
Font: research data.
Discussion

Within this approach the changes in the mother’s body are the result of general and local transformations that induce a series of physiological adaptations, attributed to hormonal and mechanical factors. This is because the maturity and fetal development require adjustments in energy metabolism of the pregnant woman. Moreover, cardiovascular hemodynamic regulation tends to increase heart rate and decrease blood volume and blood pressure levels and hemoglobin. The increase in vascularity causes tingling sensation and increased breast tenderness [11, 12].

It is emphasized that in the analysis corpus were not found EIS of pregnancy who were associated to psychobiological needs of: oxygenation, hydration, body and environmental care, thermoregulation, hormone regulation and sensory perception. The changes in the body of the pregnant and constant hormone level variations influence the physiological dynamic triggering nausea, vomiting, heartburn and constipation [11, 12].

Therefore, the changes of digestive system influence the need for nutrition of the pregnant woman. This is because the changes affect the need for women to acquire indispensable food for consumption and biological utilization of energy. In addition, changes interfere in nutrient acquisition at the cellular level, in order to maintain the health and the life of mother and child dyad.

Regarding the affected need for nutrition, research suggests inadequate eating habits associated to intake of high-calorie, hyperglycemic foods, low intake of fiber and lack of exercise. These eating habits aggravate course of pregnancy because they have the effect of obesity in pregnant women13-17. However, there is evidence of insufficient weight gain during this period related to psychological, social and cultural contexts [18].

About hypercaloric food study confirms that its consumption too much was considered cause of nausea and vomiting in a population of pregnant women [19]. According to the classification of psychobiological needs of THN when pregnant woman is vomiting it mean that it triggered the need for women to remove unwanted substances. Furthermore, this can occur by the presence of such substances in excessive amounts. In both cases vomiting occurs to maintain homeostasis [7].

Moreover, there is evidence that hypercaloric eating habits are related to behavioral changes attributed to women’s concerns about their well-being and delivery [20]. Concerning intake of foods high in sugar, study developed with group of pregnant women whose meals and snacks consisted of potential hyperglycemic content, found that acidogenic composition influences the appearance of inflammation in the gingiva and recurrent toothache [21].

It is noteworthy that stress present on the mother’s day causes increased appetite, especially when there is depression and anxiety associated with pregnancy [19, 22]. In this regard, research with pregnant women identified concurrence of depression, sleep and fatigue [23].

Regarding to urinary system, the pregnancy period causes ureters and renal pelvis dilatation. Furthermore, when it is associated to hormonal stimuli it produces atony and delayed diuresis flow predisposing to urinary tract infections [11, 12]. The recurrent urinary tract infections in pregnant women to concomitant anemia and sexually transmitted diseases has been identified in a survey that revealed low adherence of women to the treatments offered by prenatal program [24]. Regarding to the elimination, urinary incontinence reported by a population of primigravidae was minimized by pelvic exercise while no pharmacological strategy [25].

About the physical exercise, the pregnant woman’s ability to move about spontaneously sometimes is affected. This promotes the appearance of vascular, muscular, osteo-articular discomforts and difficulties in work out and to work. Physical activity is not always accepted by the pregnant woman often. This
is due to sedentary lifestyle, presence of nausea and vomiting in the first quarter or fatigue to a minimum effort [26]. However, low-impact exercise and stretching are welcome in pregnant woman opinion especially when there is discomfort as lumbosacral and/or lumbopelvic pain in women with little incentive for walking, low impact and stretching exercises are welcome in their opinion [27].

During the various transformations through which the woman passes, as gestation evolves, there are concerns about her body image and fetal well-being. This becomes more present in the third trimester of pregnancy and may decrease the pregnant woman’s sexual desire [28].

Faced that situation, according to THN, an imbalance in the classification of sexuality and reproduction occurs, interfering to the woman’s ability to add somatic and emotional aspects, and with that, to change the affective-sexual relationship to her partner. On the changes of sexuality during the pregnancy phase, young women financially dependent on the partner reported having suffered physical, emotional and sexual violence on the part of the partner due to the decrease of the libido and it can cause anxiety and depression [29].

With the arrival of the third trimester of pregnancy, a group of women who did the three main meals of the day, two snacks among them, moderate salt intake in the diet and intake of 6 to 9 glasses of water presented with lower limb edema [30]. This is due to the affected need of pregnant women in whom vital nutrients are not being delivered to the tissues, or unnecessary substances have remained in the bloodstream [7].

In the case of emotional changes, the pregnant woman can develop: anxiety, ambivalence about the desire to be pregnant or not, doubt about being pregnant and when to communicate to the partner. There is also the possibility of experiencing fear of losing the child, mood swings, emotional instability, introspection, passivity, changes in sexual desire and performance [31].

In view of the EIS categorized in the present study, depression and anxiety emerged in greater representativeness. Often the situation of intimate partner violence predisposed pregnant women to become depressed and anxious [29, 32]. This becomes relevant, since prenatal depression has been observed as a strong association with puerperal depression. In this regard, women who developed prenatal depression were 2.4 times more likely to present postpartum depression than those without previous history of these symptoms during pregnancy [33-35]. It should be emphasized that depressive symptoms are also related to the low support level of the partner during pregnancy [18].

In addition, the existence of other children to create, the occurrence of unplanned pregnancies, possible worsening of maternal health and previous experience of stillbirth are predisposing factors for the development of gestational depression [36]. Although many situations are seen as promoting pregnancy depression, the low satisfaction of the woman to her partner cannot be disregarded, since this circumstance has been associated to the stress of the pregnant woman and from there the environment becomes conducive to the onset of depression [34]. In addition, the presence of stress and depression in women of low educational level who did not cohabitate with the partner and experienced a previous abortion situation were observed [35].

Among the classifications of psychobiological needs, whose EIS were distributed, the most frequent was the therapeutics and prevention. This refers to the individual’s need to seek professional attention in order to ensure dignified health care for promotion, maintenance and recovery. It’s also considered the intention of preventing diseases and health problems, readapt or enable essential functions for personal well-being [7].

Regarding the themes and actions available to women in the prenatal care program, the way in which professionals conduct discussions leads to conflicts in the pregnant woman when the infor-
mation received in the office is compared to those of her social and family life [37]. This fact becomes worrying because the approach is fundamental as a strategy to clarify, conquer and maintain the pregnant woman in the services offered in order to promote and/or recover her health.

In this regard, a study showed that the participation of pregnant women in the search for and maintenance of treatments available such as anemia, smoking, urinary infections and sexually transmitted diseases is minimal. When investigating the possible causes of women's abstinence from health care, testimonials revealed that the low cordiality and the way health professionals explain the step-by-step of the necessary treatments discourage pregnant women from seeking and/or staying in Health services offered [24].

Added to this is the finding of low levels of coverage of basic actions, such as screening tests for syphilis, breasts, gynecological and dental care. This is exacerbated when the actions cited are not part of the prenatal care routine, although there are professionals able to provide care [38-40]. It is worth mentioning that the frequent and continuous contact of the pregnant woman with the health professional favors the relationship of trust. This strengthens women's interest in initiating prenatal care and reinforcing the actions offered by the health service [41].

The EIS research of the psychobiological needs of pregnant women indicates imbalances with emphasis on eating habits, absence of physical activity, depression and anxiety. There is also a small number of treatments and exams that are inherent to the prenatal program in line with the low adherence of pregnant women to the services available. This leads to inquire about the focus of prenatal care offered to the woman during pregnancy.

It is understood that prenatal care requires considering human needs and, thus, investigating the particularities of each pregnant woman in a systematized manner. Thus, it is intended to consolidate quality prenatal care and improve maternal and fetal well-being. However, there are weaknesses that indicate failures in approaching and welcoming women during prenatal consultations.

Conclusions

The publications analyzed based on the classification of human needs indicate the existence of gaps in the psychobiological level of women during pregnancy. This reality is worrisome when it is admitted that the pregnant women not having their needs met are predisposed to aggravate their health as well as the concept and the family as social cell.

It is understood that prenatal care requires considering human needs and, thus, investigating the particularities of each pregnant woman in a systematized manner. Thus, the consolidation of quality prenatal care and the improvement of maternal and fetal well-being can be achieved. However, there are weaknesses that indicate failures in approaching and welcoming women during prenatal consultations.

In the perspective of offering gestational assistance consistent with the praxis of the nursing care process, it is necessary that the Nursing Consultation to the pregnant woman takes effect. Because according to Resolution 358/2009 of the Brazilian Federal Council of Nursing, it is part of the Nursing Process. Therefore, for its application, it is imperative to consider client evaluation data, diagnosis, nursing prescription and results. Therefore, the EP must be based on a theory that focuses on the psychobiological level of the pregnant woman in order to keep it in balance during the puerperal pregnancy cycle.

References


