

## Research Article

# Level of Knowledge of Obstetric Warning Signs in Pregnant Women of a Primary Care Unit in Tijuana

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## Abstract

**Background:** The causes of maternal morbidity and mortality reported worldwide are preventable conditions, there are multiple factors associated with the occurrence of these events. The knowledge of obstetric warning signs improves the early detection of problems and reduces the delay in emergency obstetric care, reducing the risk of developing complications. Any obstetric warning sign that occurs during pregnancy should be detected.

**Aim:** The purpose of this study is to determinate the level of knowledge of obstetric warning signs in pregnant women in Tijuana, Mexico.

**Design and Setting:** Descriptive cross-sectional study.

**Methods:** In 146 patients in the Family Medicine Unit #27, Tijuana, Mexico, a descriptive cross-sectional study was conducted in pregnant patients. We obtained general data such as age, schooling, marital status, number of consultations, stage of pregnancy, number of pregnancies, attitude towards obstetric warning signs, diffusion way of information and level of knowledge of obstetric warning signs. For statistical analysis, we applied descriptive statistics; for qualitative variables frequencies and percentages were used and for quantitative variables mean and standard deviation.

**Results:** The high level of knowledge among pregnant patients was 52% (n=76), medium level 32% (n=46) and low level 16% (n=23).

**Conclusion:** It is necessary to strengthen prenatal care and involve patients in health care.

**Keywords:** Obstetric Warning Signs; Pregnancy; Level of Knowledge

## Introduction

Prenatal control are the periodic actions and procedures performed by health personnel in the follow-up of pregnancy, all actions are focused on the prevention, diagnosis and treatment of factors that can condition maternal or perinatal morbidity and mortality, adequate control must have at least 4 consultations throughout pregnancy [1]. Maternal and child health is a fundamental objective in any society, it influences multiple essential aspects of the human being, biological and social reproduction [2]. Knowledge of obstetric warning signals improves the early detection of problems and reduces the delay in emergency obstetric care, reducing the risk of developing complications [3]. There are adverse events during pregnancy and puerperium that expose to serious situations and have economic, social and psychological consequences [4].

The causes of maternal morbidity and mortality reported worldwide during pregnancy, childbirth and puerperium are conditions susceptible to prevention, some examples are urinary tract infection, preeclampsia, eclampsia, premature rupture of membranes, hemorrhage, sepsis and complications of abortion, most of these deaths occur in developing countries indicating lack of access to health services or lack of information in this type of population [5-7]. The pathologies with the greatest impact on pregnant women is preeclampsia, a multifactorial, multisystemic complication and a

public health problem in Mexico and Latin America. Early detection of hypertensive diseases of pregnancy should be carried out by health personnel and the own patient [8-9]. The characteristic symptoms of hypertensive diseases are: headache, photopsies, abdominal pain, nausea, vomiting, tinnitus, hyperreflexia and pain in the epigastrium and right hypochondrium, each symptom reflects damage at different levels. In addition to maternal complications there are negative effects towards the fetus as a restriction of growth and death [10-12].

Urinary tract infections are the most frequent diseases during pregnancy, some of the characteristic symptoms of this disease are dysuria, tenesmus, hematuria, abdominal pain, dyspareunia and if the infection progresses to the upper urinary tract there may be fever, low weight at birth, intrauterine growth retardation, abortion or premature delivery [13]. Urinary tract infections are a common cause of bleeding in pregnancy. Transvaginal bleeding in any stage of pregnancy is a warning sign, a pregnant patient should go to the emergency department to determine the etiology of the bleeding. Hemorrhages are one of the main causes of mortality, the pregnant patient should be able to detect the abnormality and seek medical attention [14-15].

Another warning sign is the premature rupture of membranes, this condition can occur at any stage of pregnancy with many complications ranging from maternal infections to prolapse and

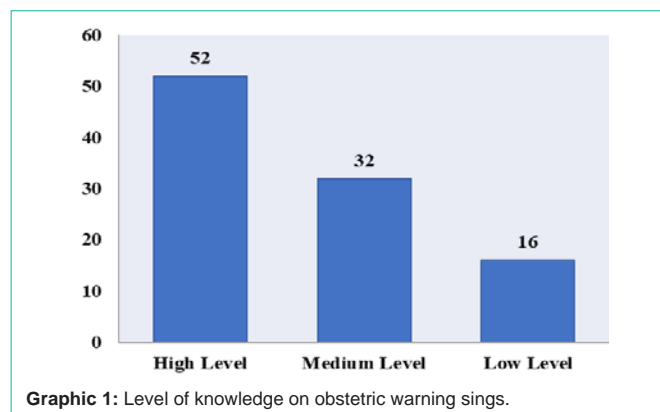
compression of the umbilical cord. The characteristic clinical presentation is the transvaginal loss of continuous or intermittent amniotic fluid, which should be notified immediately as it is associated with an increased risk of maternal infections [16]. The above signs and symptoms are obstetric warning signs that when presenting during pregnancy represent different degrees of morbidity and mortality, timely detection is important to prevent its multiple complications. The sociodemographic and obstetric factors associated with poor detection of signs and symptoms are age, ethnicity, marital status, schooling, number of pregnancies, pregnancy period and accessibility to health services [17-20].

All women should know the signs and symptoms of obstetric warning in order to seek medical attention and avoid complications. The level of knowledge is a fundamental tool to prevent maternal and fetal deaths, multiple researchers have created tools to assess the level of knowledge that pregnant women have and thus develop education strategies. González-Espejo (2016) published a validated instrument to determine the level of knowledge in pregnant women, this tool is a questionnaire of 48 questions to identify the level of knowledge and attitude towards this alert situation [21]. The main objective of the study is to determine the level of knowledge of obstetric warning signs in pregnant women in Tijuana, Mexico.

## Materials and Methods

A descriptive cross-sectional study was carried out, in the Family Medicine Unit #27 of the Instituto Mexicano del Seguro Social (IMSS), located in Tijuana, Mexico; patients were selected by a consecutive sampling techniques; that met the following inclusion criteria: any age, pregnancy, that accepted and signed informed consent; patients with psychiatric or neurological illness and health worker patients were not included and eliminated those who did not complete the survey or those with incomplete information. The following data were obtained directly from the patients: age, schooling, marital status, number of consultations, stage of pregnancy, number of pregnancies, attitude towards obstetric alarm signs, diffusion way of obstetric warning signs and level of knowledge of obstetric warning signs. The procedure for the data collection was as follows: age was calculated in years according to the year of birth; marital status was expressed by each patient; schooling, number of pregnancy and diffusion way were determined by asking directly to patients.

The level of knowledge of obstetric warning signs and attitude towards obstetric alarm signs were assessed with the questionnaire "Knowledge, skills and practices of obstetric warning signs and symptoms" with Cronbach's alpha of 0.896. The instrument consists of 3 areas: knowledge, attitudes and practices; each area evaluates two aspects: signs and symptoms with 8 items each, in total there are 48 items. Each response of knowledge and attitudes is on Likert scale with options from 1 to 5 (totally agree, agree, indifferent, disagree and totally disagree), the practice area has a dichotomous response (yes or no). With the answers you get a score from 1 to 5 points, in each area the score has a range of 16 to 80 points with a variation of score between each level of 21.3 points. The following scale is used to rate the level of knowledge of obstetric warning signs and symptoms: high level 16-37.3, medium level 37.4-58.6 and low 58.7 or more. The Attitude is evaluated as follows: favorable 16-37.3, indifferent 37.4-58.6 and unfavorable 58.7 or more. The practice item assesses the



presence of signs and symptoms during the current pregnancy and the actions before the sign.

The recollected data was integrated into data collection sheets and analyzed using the SPSS program version 20 in Spanish, where we applied descriptive statistics; for qualitative variables, frequencies and percentages were used and for quantitative variables, mean and standard deviation were used. The Kolmogorov-Smirnoff test was used to establish the normality of the data. The Protocol was authorized by the Local Committee of Research and Ethics in Health Research.

## Results

A total of 145 surveys were carried out on pregnant patients of the family medicine unit #27. The average age was  $25 \pm 4$  years; the age range was 16 to 39 years. In marital status 94% had a partner. In the number of prenatal control consultations, 52% had 2-3 consultations, 27% only one and 21% more than four. The most frequent schooling was high school with 46%, secondary 36%, bachelor's 10%, primary 7% and postgraduate 1%. The most frequent pregnancy stage was second trimester (49%), first trimester (28%) and third trimester (23%) in that order. The majority of patients were multigests (53%) compared with primigests (47%).

88% (n=128) of women received information on obstetric warning signs in pregnancy on at least one occasion and 12% (n=17) denied having received it, the most frequent way of information was health personnel with 87% (n=111). When analyzing the knowledge level results, the following results were obtained (graphic 1): 52% (n=76) showed a high level, 32% (n=46) medium level and 16% (n=23) low level; four patients with perfect rating. In attitude when recognizing an obstetric warning sign, 77% (n=112) showed a favorable attitude, 21% (n=30) indifferent and 2% (n=3) unfavorable.

## Discussion and Conclusion

The most important finding of the research was the low and medium level of knowledge found among the patients. This result shows us that important actions must be taken within prenatal control to make patients aware of the signs of obstetric warning, it is necessary to increase the level of knowledge in all levels involved in medical care. The most frequent level of knowledge was the high level (52.4 %); the high level of knowledge varies in the different studies published in Latin America, some authors show similar percentage values to our study [22] but other studies such as González-Espejo

obtained that only 22.4% had a high level of knowledge with the medium knowledge as more frequency [21].

Another important thing is that 17 patients denied having received information about obstetric warning signs in any time during their pregnancy. The above is an alarming fact since this topic is one of the most important points in the primary care of the pregnant woman and any health personnel has the obligation to inform and explain it. The most important way of information about obstetric warning signs was health personnel in 86.7%, within this category the family doctor was the most frequent with 53.1% which agrees with various studies such as Torres-Armas in Peru (2015) where he found that 60% of the patients obtained information by health personnel. This demonstrates the importance of health personnel in primary care, especially the family doctor.

As conclusion, in our study we obtained favorable results on the level of knowledge of obstetric warning signs but the low level of knowledge is found in 16% of the patients. This study on the level of knowledge of obstetric warning signs in the family medicine unit #27 can be used as a support tool in upcoming research on this topic. Among the strengths of the study is being short and direct with the possibility of resolving doubts in patients during the investigation. At the end of the interview, an information leaflet was given, the obstetric warning signs were clearly explained and examples of real situations focused on knowing the solution that the patients would have used were shown. It is necessary to strengthen prenatal care and involve patients in health care.

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