

# Prenatal testing – a study on patients’ knowledge and attitude

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## Abstract

**Introduction.** In an era of technology in full development, information has become very easily accessible. However, pregnant patients have important gaps in knowing the main methods of screening and antenatal diagnosis of fetal malformations. This study aims to achieve the “informed” and “uninformed” patients profile, and to present a fast score for the patient level of knowledge, in order to have a better physician – patient relationship. **Materials and method.** The study method was represented by a survey based on a structured interview, applied to 364 pregnant or postpartum patients of maximum 7 days, hospitalized between October 2016 and June 2017 at the “Prof. Dr. Panait Sirbu” Clinical Hospital of Obstetrics and Gynecology, from Bucharest. **Results and conclusions.** The level of knowledge has been influenced directly proportional in the most obvious and constant way by social-symbolic variables (level of education, degree of occupational resources, and origin environment). The higher the social-symbolic level, the higher the level of patient’s demand, the interest in the precision of the required diagnostic method in case of increased risk of malformation and additional information until the decision to interrupt the pregnancy in front of a positive diagnosis. **Keywords:** prenatal screening, prenatal diagnosis, information

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## Testarea prenatală – studiu despre cunoașterea și atitudinea pacienților

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## Rezumat

**Introducere.** Într-o eră a tehnologiei în plină dezvoltare, informarea a devenit foarte ușor accesibilă. Totuși, pacientele gravide prezintă lacune importante în cunoașterea principalelor metode de screening și diagnostic antenatal al malformațiilor fetale. Studiul de față își dorește să realizeze profilul pacientelor „informate” și, respectiv, „neinformate” și să prezinte un scor de calcul rapid al nivelului de cunoaștere pentru o mai bună relație medic – pacient. **Materiale și metodă.** Metoda studiului a fost reprezentată de ancheta de opinie pe baza unui interviu structurat, aplicat la 364 de paciente gravide sau lăuze de maximum 7 zile, internate în perioada octombrie 2016 – iunie 2017 în cadrul Spitalului Clinic de Obstetrică și Ginecologie „Prof. Dr. Panait Sirbu”, București. **Rezultate și concluzii.** Nivelul de cunoaștere a fost influențat direct proporțional în cel mai evident și constant mod de către variabilele social-simbolice (nivelul de educație, gradul resurselor ocupaționale și mediul de proveniență). Atitudinal, cu cât nivelul social-simbolic este mai înalt, cu atât pacientele dețin un nivel de exigență mai mare, interesându-se de precizia metodei de diagnostic necesare în cazul unui risc crescut de malformație și de informare suplimentară până la decizia de întrerupere a cursului sarcinii în fața unui diagnostic pozitiv. **Cuvinte-cheie:** screening prenatal, diagnostic prenatal, informare

## Introduction

The continuing evolutionary trend of medicine makes the need for patient information to be steadily increasing. Given the tendency of patients to initially appeal to the virtual environment (Internet), a source that is not always reliable, it is imperative to have an information protocol for them.

Worldwide, the overall focus is on optimizing the physician – patient relationship, with the aim of increasing their compliance with both diagnostic and treatment methods.

The implications of an abnormally genetic or structural conception product are complex, covering both the socioeconomic plan and the psychological plan.

This framework also creates a need for a study of the patient’s level of knowledge about the main antenatal

screening and diagnosis methods, correlating them with the main demographic characteristics (age, level of education, background, religion) and attempting to optimize, taking into consideration the results, the physician – patient relationship.

## Materials and method

The paper presents a retrospective study conducted between October 2016 and June 2017 at the “Prof. Dr. Panait Sirbu” Clinical Hospital of Obstetrics and Gynecology, from Bucharest.

The method of study is represented by the survey based on a structured interview. The tool used in this method is a self-applied questionnaire containing 31 closed and open questions. The lot studied consists of 364 cases, patients who answered the questions of

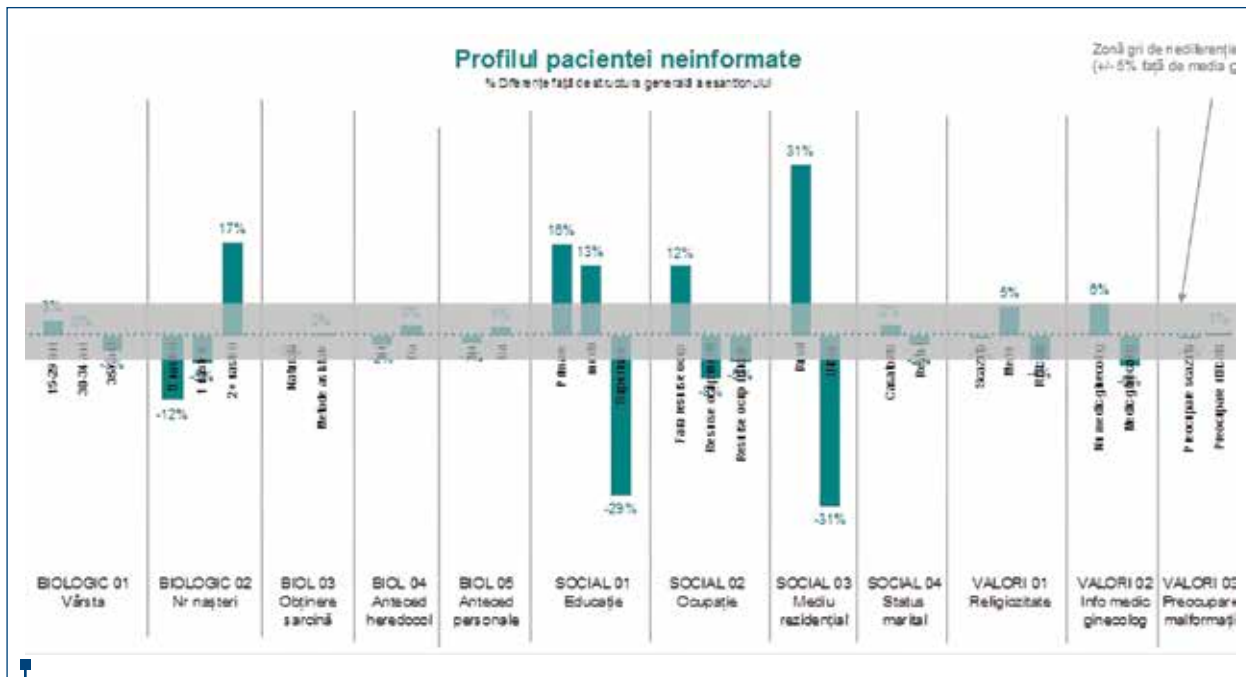


Figure 1. Profile of uninformed patients. Percentage of difference from the general profile of the sample

the questionnaire and signed the informed consent for the data processing.

For the statistical analysis of the data we used the SPSS software package (Statistical Package for Social Sciences). To make graphical presentations of the results, we used the Excel software in the Microsoft Office software package.

## Results

In order to identify the informed and uninformed patients profile, we built a cumulative (additive) index based on the questionnaire indicators in the correct answers and the wrong answers.

For the analysis of the profile, we focused on two extreme categories: low knowledge and high knowledge,

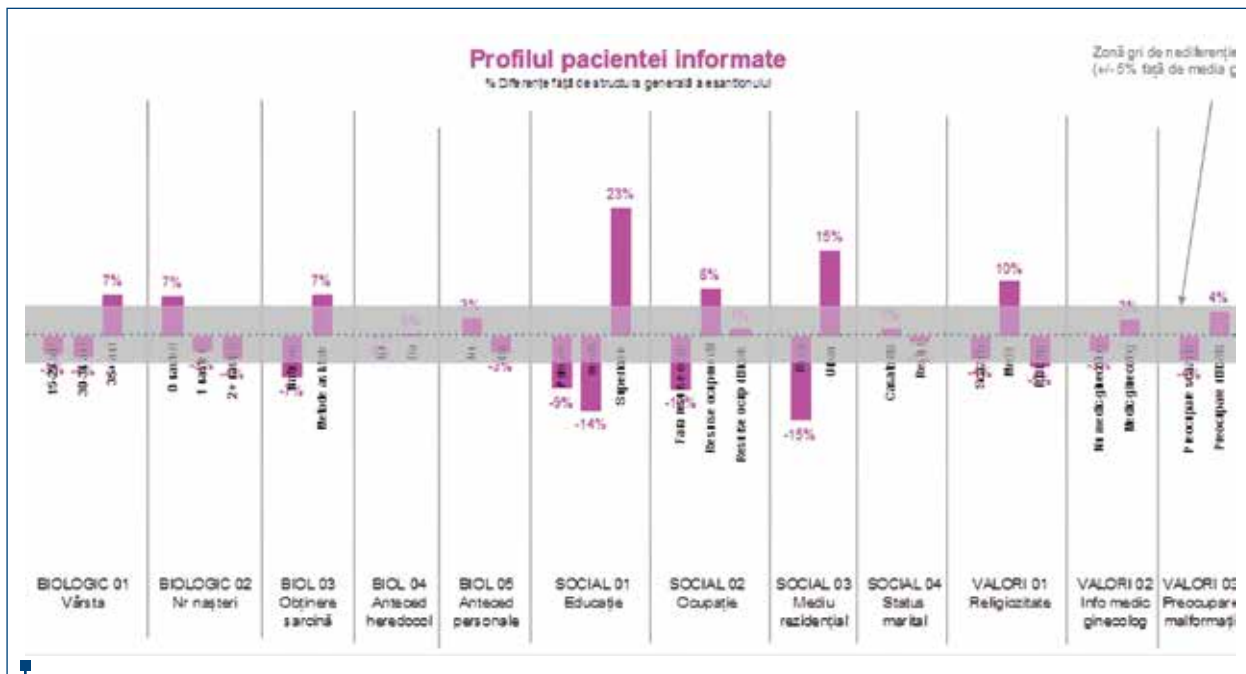


Figure 2. Profile of informed patients. Percentage of difference from the general profile of the sample

**Table 1** Rapid evaluation of the level of information for patients

		POINTS	SCORE
<b>AGE</b>	35+ YEARS	+ 1	□□
<b>NUMBER OF BIRTHS</b>	0 2+	+ 1 - 1	□□
<b>EDUCATION</b>	PRIMARY MEDIUM HIGHER	- 2 - 1 + 2	□□
<b>OCCUPATION</b>	UNEMPLOYED EMPLOYED	- 1 + 1	□□
<b>RESIDENCE</b>	RURAL AREA URBAN AREA	- 2 + 2	□□
<b>CONSIDER USEFUL THE EARLY ESTIMATION OF RISK MALFORMATION</b>	NO YES	- 1 + 1	□□
<b>TOTAL</b>			□□

hereinafter referred to as “uninformed patients” and “informed patients”, respectively. The category of medium knowledge was removed from the analysis, representing a medium, non-differentiating level. In order to express clearly the profiles of these two uninformed and informed categories of patients, we analyzed the differences in their profiles from the general profile of the population (as approximated by the general profile of the sample).

The uninformed patient has a higher probability to:

- Have a greater number of births: at least two (+17% of the overall difference).
- Be less educated: not to have higher education, especially primary education (+16% primary education, +13% medium education).
- Not to have her own occupational resources: pupil/student/unemployed/without occupation (+12%).
- Live in rural areas (+31%, the highest intensity variable).
- Consider useless the early estimation of the risk of malformation (+9%).

The informed patient has a higher probability to:

- Be older: over 35 years (+7% of the overall difference).
- Not to have previous births: (+7%).
- Have a previous ART pregnancy (+7%).
- Have higher education (+23%, the highest differentiation variable).
- Have average occupational resources: employed, without management position at work (+8%).
- Be in urban area (+15%).
- Have an average level of religiosity (+10%).
- Consider useful the early estimation of the risk of malformation (+7%).

Based on the analysis of these differentiations, we propose the following score for assessing the patients' level of knowledge of fetal malformations and their main

screening and diagnosis methods. The range in which this score varies is between -4 and 8. We propose as a warning score anything less than 2.

We consider that calculating this score is useful for obstetric medical practice, making it easier to identify categories of patients with a deficiency of knowledge.

## Conclusions

The level of knowledge has been influenced directly proportional in the most obvious and constant way by the social-symbolic variables (level of education, degree of occupational resources, and environment of origin). The higher the socio-symbolic level, the higher the level of patient's demand and the interest in the precision of the required diagnostic method in case of increased risk of malformation and additional information before deciding to interrupt the course of pregnancy in front of a positive diagnosis. The hypothesis of the paper that socio-symbolic resources directly influence both the level of knowledge and the attitude towards fetal malformations, antenatal screening and diagnosis is thus verified.

Based on the analysis of the patient's level of knowledge and its correlations with biological, socioeconomic and value resources, it becomes evident the need to optimize the level of knowledge of all patients, with a particular focus on the lowest-knowledge categories. ■

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**Conflict of interests:** The authors declare no conflict of interests.