

Factors associated to knowledge and opinion of gynecologists and obstetricians about the Brazilian legislation on abortion

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Abstract

Introduction: Unsafe abortion accounts for about 12% of maternal deaths in Brazil, although many of these women could meet the requirements for legal abortion in this country. Physicians' inappropriate knowledge of the law may be playing a role in this situation. **Objective:** To evaluate which factors are associated with the level of information and the opinion of the Brazilian gynecologists-obstetricians concerning abortion laws. **Methods:** Questionnaires (14.320) were sent to all physicians affiliated to the Brazilian Federation of Gynecology and Obstetrics Associations (FEBRASGO), and 30.2% were returned completed. **Results:** Most of respondents showed a good knowledge of the situations in which abortion is allowed but not about the documents required to carry out a legal abortion. However, most of them knew about the need for a judicial order in case of abortion of malformed fetus. Knowledge was associated with age, number of children and years of practice. **Discussion and Conclusions:** Poor knowledge on the requirements to carry out an abortion within the law may be a main factor responsible for the lack of access to legal abortion in Brazil.

Keywords Legal abortion. Knowledge. Opinion. Obstetricians/gynecologists. Brazil.

Resumo

Introdução: Estima-se que 12% dos casos de mortalidade materna no Brasil sejam consequência de aborto clandestino. Muitas dessas mulheres cumpriam as condições para interrupção legal da gestação; entretanto, a prática do aborto previsto em lei em hospitais públicos é exceção, provavelmente por desconhecimento dos médicos a respeito da legislação brasileira referente ao aborto. **Objetivo:** Avaliar o conhecimento e a opinião dos ginecologistas e obstetras filiados à Federação Brasileira das Associações de Ginecologia e Obstetrícia (FEBRASGO) sobre a legislação brasileira referente ao aborto, e sua correlação com algumas características socio-demográficas dos entrevistados. **Métodos:** Foram enviados 14.320 questionários para serem respondidos por todos os membros da FEBRASGO, com taxa de resposta de 30,2% (4.323 questionários). **Resultados:** A maioria apresentou uma boa compreensão das situações previstas na legislação e baixo conhecimento a respeito dos documentos necessários para a realização do aborto, exceto nos casos de malformação congênita grave, apresentando associação com a idade, tempo de prática e número de filhos. **Discussão e Conclusões:** A pouca informação sobre os requerimentos legais para realizar um aborto permitido pela lei pode ser um dos principais fatores responsáveis pela falta de acesso ao aborto legal no Brasil.

Palavras-chave: Aborto legal. Conhecimento. Opinião. Tocoginecologistas. Brasil.

Introduction

Unsafe abortion remains a major health problem in the world, since nearly 46 million of the 210 million pregnancies that occur each year terminate in induced abortion¹, and nearly half of them are estimated to be unsafe². The large number of induced abortions simply reflect that unplanned pregnancies continue to occur mostly because contraceptive methods are not widely accessible to the people who need them, and also because all methods have some risk of failure^{3,4}. Induced abortions are unsafe mostly because in many countries the law regarding voluntary pregnancy termination remains very restrictive, leading many women to seek for clandestine and unsafe procedures¹.

Brazil is among the developing countries where the abortion law, which dates from 1940, considers abortion as a crime, although the woman and the physician who carries out the abortion cannot be convicted if the pregnancy threatens the woman's life or when it was consequence of rape⁵. In fact, even women who are legally entitled to have an abortion end up having it unsafely⁴. Albeit not permitted by law, abortion for severe fetal malformation by judicial order is granted more often than following rape⁶.

Up to 1997, only four public hospitals had officially carried out legal abortions after rape. Since that year the Brazilian Federation of Gynecology and Obstetrics Associations (FEBRASGO) in a partnership with other organizations, has encouraged the implementation of legal abortion services in public hospitals throughout the country. Today, the number of public health services available for legal abortions has increased significantly, around 63 by the end of 2001, which is still totally inadequate for the needs of the Brazilian population⁷.

Part of the delay in the implementation of new services can be attributed to physicians' resistance. One of the factors influencing that resistance probably is the poor information about the law and on how to perform the procedure. With the purpose

of contributing to the understanding of the role of physicians as an obstacle for faster implementation of legal abortion services, we decided to evaluate some of the socio-demographic variables that may affect their knowledge and opinion on Brazilian abortion law.

Methods

This was a cross sectional study carried out among all gynecologists/obstetricians affiliated to FEBRASGO, which officially sponsored the study. FEBRASGO facilitated the distribution of questionnaires specifically prepared for this study, by including them in the "*Jornal da FEBRASGO*", a monthly publication with news from the association, distributed monthly to all its members. A structured questionnaire containing only questions with coded answers to be self responded was used to obtain the information. The questionnaire was pre-tested with ten gynecologists and obstetricians (six females and four males) in their first year of residency at the Woman's Hospital (CAISM), State University of Campinas, São Paulo, Brazil.

The questionnaire was sent to all 14,320 gynecologists and obstetricians affiliated to FEBRASGO, although there was no way to check how many of them actually received the form. The package sent to physicians contained:

- the questionnaire;
- a letter inviting them to participate in the study and also instructions on how to fill out the questionnaire and send it back;
- a code number to participate in a raffle of six Palm-Top computers;
- a pre-paid envelope in which to send the questionnaire back to researchers. The code number identified the returned questionnaire but was detached immediately upon receipt and kept in a transparent box until the final date established for participation in the raffle (April 30, 2003). Respondents were

supposed to keep a copy of the code number, which was required for claiming the prize after the raffle. However, there was no way of identifying individual respondents and their anonymity was guaranteed.

This package was included with the November/December 2002 issue of the "*Jornal*", distributed in January 2003. It was again included in the January/February 2003 issue, distributed in late February, with instructions to discard it if recipients had already completed and returned the questionnaire.

The questionnaire included information on age, sex and marital status of respondents, the number of living children they had, the geographic region of residence, the years of practice in gynecology and obstetrics, the type of service in which they practiced, and their knowledge and opinion on Brazil's abortion law, among other questions.

Physicians' knowledge on the Brazilian law on abortion was evaluated using three multiple-choice questions, and classifying the answers as appropriate or inappropriate. The three questions and the choices were as follows:

- *In which situation (s) does Brazilian law allow an induced abortion carried out by a physician?*
 - 1| Very severe fetal malformation
 - 2| Mother or father HIV +
 - 3| Contraceptive failure
 - 4| Single and the father doesn't accept the baby
 - 5| Pregnancy after rape
 - 6| Financial problems
 - 7| Psychological or emotional disorders
 - 8| To save the mother's life

Answers 5 **and** 8 were classified as appropriate and any other answer, including or not 5 and 8, was considered as inappropriate.

- *Which are the documents required to carry out the abortion according to the law?*

- l1| Registry of the occurrence at a law enforcement agency
- l2| Judicial order
- l3| Written request of pregnancy termination signed by the woman
- l4| Statements by three physicians
- l5| Statement of a forensic physician
- l6| Written request of pregnancy termination signed by one of the parents or guardian when the pregnant woman is under 21 years of age
- l7| Nothing
- l8| I don't know

If the respondent marked alternatives 2 and/or 5 and/or 7 and/or 8 the knowledge was classified as inappropriate. Those who did not mark any of those four alternatives were classified as with adequate knowledge.

- *Which are the documents required to legally induce an abortion in cases of severe fetal malformation, without any chance of fetal survival?*

- l1| Judicial order
- l2| Written request of pregnancy termination signed by the woman
- l3| Statements by three physicians
- l4| Written request of pregnancy termination signed by one of the parents, when the pregnant woman is under 21 years old
- l5| Nothing
- l6| I don't know

Any combination that includes alternative 1 (and not alternative 5 or / and 6) was classified as appropriate. All other combinations were classified as in inappropriate knowledge.

Two multiple-choice questions were asked concerning physicians' opinion on abortion, and the answers were classified as conservative or liberal.

The first question was:

- *"-What do you think about the Brazilian law on abortion?"* Respondents could choose among the following answers:
 - l1| It should not be changed

- l2| Abortion should be legal in any situation
- l3| Brazilian law should allow abortion in some additional circumstances
- l4| I'm not sure about it

Those who marked alternatives 1 or 4 were classified as Conservatives, and those who marked alternatives 2 or 3 were classified as Liberal.

The second question was:

- *"In which situations should abortion be permitted in Brazil?"*

Respondents could mark any of the following answers:

- l1| Very severe fetal malformation
- l2| If the mother or father are HIV +
- l3| In case of contraceptive failure
- l4| If a woman is single and the father doesn't accept the baby
- l5| Pregnancy after rape
- l6| Woman has financial problems
- l7| Woman has psychological or emotional disorders
- l8| To save the mother's life
- l9| It should be permitted in any circumstance
- l10| Never

Those who marked number 9, or both 5, 8 **and** any other condition, were classified as Liberal. Any other alternative answer was classified as Conservative.

Between February 10th and September 30th 2003, 4,332 out of 14,320 questionnaires were returned, although 9 of them were blank leaving 4,323 for analysis, giving a response rate of 30.2%. Data were missing in some questionnaires for all variables as follows: age 46, sex 26, marital status 27, region of residence 10, number of children 20, years of practice 103, type of practice 131. Given the great variability of missing data in each variable and that they always were a very small percentage of respondents, they are not mentioned in the results section.

Data entry was carried out in two separate databases by two different people

in order to check for consistency. SPSS software was used in all the procedures to enter, check and analyze data. The chi-square test was used in all contingency tables, and the significance level was set at 0.05⁹. Multiple logistic regression analysis was applied for five models (according to the five dependent variables), considering seven independent variables as possible predictors.

The participation of gynecologists and obstetricians in the study was voluntary and anonymous. The letter inviting physicians to participate in the study contained explanations about it, as well as all information required by the Brazilian Ministry of Health¹⁰. It was assumed that by answering and returning the questionnaire, respondents were giving their consent to participate. Anonymity was assured by identifying the questionnaire only by a number. The research protocol was evaluated and approved by the Ethical Committee on Research of the School of Medicine, State University of Campinas, SP, Brazil.

Results

Characteristics of respondents

The respondents were almost evenly distributed into three age groups: those younger than 40, 40 to 49 years of age, and those older than 49. There were slightly more males than females and almost 88% were living as a couple. About half of the respondents had one or two living children, whereas 27% had three or more and just over 22% had no children (Table 1).

Nearly 60% of participants were from the south-eastern region of Brazil, less than 20% from the south of the country, and just over 20% from other regions, which was close to the proportion of FEBRASGO members in the same regions (58%, 15% and 27% respectively). Less than 8% of the respondents were working exclusively in public healthcare and 51.7% of them had between 11 to 25 years of practice as an obstetrician-gynecologist (Table 1).

Appropriate knowledge about abortion law was shown by 83.0% of respondents, while only 15.3% had appropriate knowledge of the documents required to carry out a legal abortion and 79.0% of the documents needed to perform an abortion in case of severe fetal malformation. A judicial order was marked as a requirement to carry out an abortion permitted by the law by 66.1% of the respondents, and 79% declared that it was required for pregnancy termination in case of a severely malformed fetus. On the other hand, 80.2% showed a liberal opinion with reference to possible changes in the Brazilian law and 87.5% about the circumstances in which abortion should be allowed (data not shown in tables).

Association of socio-demographic characteristics with knowledge of law and regulations concerning to abortion

In the bivariate analysis it appears that the older the respondent, the longer the period of time they had worked as gynecologists obstetricians and the higher the number of children they had, the lower their knowledge of the circumstances in which Brazilian law does not condemn abortion and of the documents required to carry out an abortion in case of fetal malformation incompatible with extra-uterine life. However, the proportion of respondents who had appropriate knowledge of the documents required to carry out an abortion permitted by current law was almost twice as high among physicians 50 years old or older or with more than 25 years of practice than among those with less than 40 years old or up to 10 years of practice. It was also significantly higher among physicians with three or more children than among those with two or less children (Table 2).

No difference in knowledge of abortion law according to the sex of respondents or between physicians who had exclusively public health practice and those with some or exclusive private practice was found and the only difference according to marital

Table 1 – Distribution of respondents according to selected socio-demographic characteristics.
Tabela 1 – Distribuição dos entrevistados de acordo com características sociodemográficas.

Socio-demographic characteristics	n	%
Age (years)		
Up to 39	1,436	33.6
40 to 49	1,476	34.5
50 or over	1,365	31.9
Missing	46	
Sex		
Male	2,325	54.1
Female	1,972	45.9
Missing	26	
Marital status		
Ever married	3,777	87.9
Single	519	12.1
Missing	27	
Region of residence		
North	127	2.9
Northeast	597	13.8
Center-west	271	6.3
Southeast	2,521	58.5
South	797	18.5
Missing	10	
Number of children		
None	949	22.1
1 or 2	2,188	50.8
3 or more	1,166	27.1
Missing	20	
Years of practice as ObGyn		
Up to 10	1,103	26.1
11 to 25	2,181	51.7
More than 25	936	22.2
Missing	103	
Type of practice		
Only public	319*	7.6
Private (partial or total)	3,866*	92.4
Missing	131*	

status was a greater proportion of respondents who had appropriate knowledge of the documents required to carry out an abortion in case of severe fetal malformation among those who had never been married. There was no significant difference in knowledge about legal abortion according to the Region of Brazil respondents lived in, although those living in the North appear to have lesser knowledge than those from the other regions (Table 2).

All the above associations were also

analyzed using logistic regression to control for the interaction between the independent variables. After adjusting by all the other variables studied, age maintained its negative association with knowledge of the law and the documents required to perform an abortion in case of fetal malformation, but its positive correlation with knowledge of the documents required to perform a legal abortion disappeared. Moreover, after adjustment, the longer the period of time physicians had worked as gynecologists obstetricians

Table 2 – Percentage of physicians with appropriate knowledge about the law and regulations related to abortion, according to socio-demographic and medical practice variables.

Tabela 2 – Porcentagem de médicos com conhecimento adequado da legislação referente ao aborto, de acordo com a idade, tempo de profissão (em anos) e número de filhos.

Respondents' characteristics	Knowledge of law on abortion		
	When abortion is allowed	Documents required for legal Abortion	Documents required for abortion in fetal malformation
Age			
≤ 39	59.5	11.5	83.5
40 – 49	60.9	14.7	79.8
≥ 50	55.2	20.2	73.5
p-value	<0.01	<0.01	<0.01
Number of children			
0	58.1	14.2	82.5
1 – 2	60.2	14.2	79.4
≥ 3	55.5	18.0	75.6
p-value	0.03	0.01	<0.01
Sex			
Male	59.5	16,1	79.2
Female	57.3	14,3	79.0
p-value	0.15	0.10	0.96
Marital Status			
Single	55.9	13.4	83.9
Ever married	58.9	15.5	78.3
p-value	0.21	0.24	< 0,01
Region of residence			
North	52.8	14.2	75.2
Northeast	59.2	18.2	78.8
Center West	66.3	13.0	76.7
Southeast	58.0	15.7	79.9
South	57.6	13.1	77.9
p-value	0.06	0.08	0.43
Years of practice			
≤ 10	56.6	12.6	84.7
11 – 25	60.0	14.3	78.2
> 25	56.9	21.8	74.3
p-value	0.09	<0.01	<0.01
Type of practice			
Only public	56.1	18.0	81.6
Private (partial or total)	58.7	15.2	79.0
p-value	0.40	0.21	0.31

the greater the knowledge of law and regulations on abortion, including on documents required in case of fetal malformation, which had shown a negative correlation in the bivariate analysis. All other correlations of the bivariate analysis disappeared and new associations became evident: physicians

who worked exclusively in public services showed an almost 40% greater chance of knowing the documents required to perform an abortion and male physicians had a 20 to 25% greater chance of knowing abortion law and the documents required to perform an abortion for fetal malformation (Table 3).

Table 3 – Variables associated with appropriate knowledge on abortion legislation in Brazil in the logistics regression analysis.

Tabela 3 – Porcentagem de médicos com conhecimento adequado da legislação referente ao aborto de acordo com o sexo, tipo de atividade médica, estado civil e região de residência.

Respondents' Characteristics	Adequate knowledge on abortion legislation					
	When abortion is allowed		Documents required for legal abortion		Documents required for abortion in fetal malformation	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Age (years)	0.93	(0.91 – 0.95)	—	—	0.95	(0.93 – 0.97)
Years of practice	1.07	(1.05 – 1.09)	1.02	(1.02 – 1.03)	1.03	(1.01 – 1.06)
Public service only	—	—	1.38	(1.01 – 1.88)	—	—
Sex (male)	1.25	(1.09 – 1.43)	—	—	1.21	(1.03 – 1.43)

Association of socio-demographic characteristics with physicians' opinion concerning abortion law

There was no significant difference in opinion about when abortion should be permitted by the law according to the respondents' age or years of practice. However, the proportion of respondents with a liberal opinion with reference to the abortion law was significantly greater among those with fewer children (Table 4).

Male respondents had a slightly more liberal opinion than females, which reached statistical significance when the circumstances in which abortion should be permitted were studied. There was a significant difference in the proportion of physicians who had a liberal opinion on the circumstances abortion should be allowed by region of residence. The percentage with liberal opinion was almost 15 percentage points lower in the North than in the South, while there was practically no difference between south and southeast. There was no statistically significant difference in opinion on legal abortion between physicians who had exclusively public health practice and those with some or exclusive private practice (Table 5).

After adjusting for all other variables studied, age maintained its negative association, and years of practice and living in the south/southeast regions their positive association, with broadening the circumstances in which abortion should be

allowed. The positive association of being male with this same opinion became significant after adjustment.

The positive association of being male and the negative association of number of children with opinion in favor to liberal changes in the law were also maintained after adjustment (Table 5).

Discussion

The results of the present study show that the majority of Brazilian gynecologists-obstetricians have an appropriate knowledge of the Brazilian law dealing with abortion, but poor information on which are the official procedures required to comply with the law. In contrast, most of them have good knowledge of what is required to induce an abortion in cases of severe fetal malformations, which would be incompatible with extra-uterine life. Around 80% of the respondents had appropriate knowledge of the law and of the legal requirements to interrupt a pregnancy with severe fetal malformation while only 15% knew the documents required to carry out a legal abortion.

These results are in agreement with the findings of Loureiro and Vieira among physicians of emergency services in Ribeirão Preto - São Paulo, who found that over 90% had good knowledge of the current law and of the conditions to carry out an abortion in case of fetal

Table 4 – Percentage of physicians with a liberal opinion on the legality of abortion in Brazil, according to age, years of practice and number of children of the respondents.

Tabela 4 – Porcentagem de médicos com opinião liberal sobre a legalização do aborto no Brasil de acordo com a idade, tempo de profissão (em anos) e número de filhos.

Respondents' characteristics	Liberal opinion on legality of abortion in Brazil	
	Changes in Brazilian Law ⁽¹⁾	Circumstances in which abortion should be allowed ⁽²⁾
Age		
≤39	79.5	81.4
40 – 49	81.1	79.8
≥50	79.2	74.4
p-value	0.40	< 0.01
Number of children		
0	80.2	80.8
1 – 2	81.9	79.9
≥3	76.4	74.4
p-value	<0.01	< 0.01
Sex		
Male	81.5	79.8
Female	78.2	77.3
p-value	< 0.01	0.06
Marital Status		
Single	80.0	77.4
Ever married	80.0	78.7
p-value	> 0.99	0.53
Region of residence		
North	74.2	67.2
Northeast	77.5	73.0
Center West	80.9	77.4
Southeast	80.2	79.7
South	82.0	81.9
p-value	0.14	<0.01
Years of practice		
≤10	79.6	80.0
11 – 25	80.4	79.9
> 25	79.2	74.0
p-value	0.73	< 0.01
Type of practice		
Only public	81.2	75.3
Private (partial or total)	79.7	78.8
p-value	0.59	0.17

⁽¹⁾ Abortion law should be changed to permit it in additional circumstances or in all situations.

⁽²⁾ Abortion should be allowed in the current and others circumstances, or in all situations

⁽¹⁾ O aborto legal deve ser mudado para permitir outras situações ou todas as situações

⁽²⁾ O abortamento deve ser permitido nas circunstâncias atuais e outras, ou em todas situações

malformation, but only just over 30% knew the documentation required to perform a legal abortion¹¹. Even worse results were found in a research held in Mexico City with medical students, which found that only 38% were aware of the abortion laws

and 68% knew about the situations in which abortion is forbidden by their Penal Code¹².

The large difference between the percentages with appropriate knowledge of the documents required for legal abortion

Table 5 – Variables associated with a liberal opinion related to changes on the abortion law in Brazil, in the logistics regression analysis.

Tabela 5 – Porcentagem de médicos com opinião liberal sobre a legalização do aborto no Brasil de acordo com o sexo, tipo de atividade médica, estado civil e região de residência.

Respondents' characteristics	Liberal Changes in Brazilian Law ⁽¹⁾		Broadening circumstances in which abortion should be allowed ⁽²⁾	
	OR	(95% CI)	OR	(95% CI)
Age (years)	—	—	0.95	0.93 – 0.97
Time of practice	—	—	1.03	1.01 – 1.05
Sex (male)	1.33	(1.13 – 1.56)	1.33	1.13 – 1.57
Number of children (>2)	0.68	(0.57 – 0.82)	—	—
Region of residence (South-Southeast)	—	—	1.41	1.18 – 1.68

⁽¹⁾ Abortion law should be changed to permit it in additional circumstances or in all situations.

⁽²⁾ Abortion should be allowed in the current and others circumstances, or in all situations

⁽¹⁾ O aborto legal deve ser mudado para permitir outras situações ou todas as situações

⁽²⁾ O abortamento deve ser permitido nas circunstâncias atuais e outras, ou em todas situações

and for abortion in a malformed fetus may be highly influenced by the generalized concept that a judicial order is always required to legally terminate pregnancy. This is, in fact, required in case of severely malformed fetus, which is not specifically set forth in the current law, and favors a high proportion of correct answers to that question. In contrast, the judicial order is not required when a woman complies with the conditions included as exclusion of culpability in the Brazilian Penal Code, but as most physicians still believe it is needed, it leads to a low rate of appropriate answers on the documentation required for a legal abortion.

On the other hand, the great majority of respondents were in favor of more liberal abortion laws, just over 80% when asked in general and close to 88% when particular reasons for abortion were questioned, which is also consistent with the data from Ribeirão Preto mentioned above¹⁰. These results are also in line with findings in other Latin-American countries. Gogna et al. showed that more than 70% of the gynecologists-obstetricians from Buenos Aires-Argentina would add some more circumstances to the two situations in which abortion was allowed in their country¹³. Also in Nicaragua, where

abortion is permitted only to save the mother's life, McNaughton et al. found that more than 90% of gynecologists-obstetricians believed that other indications for abortion should be legalized¹⁴.

A few differences in knowledge and opinion according to the physician's characteristics were found. The higher percentage of those who were younger and with less years of practice, and who had appropriate knowledge of the laws on abortion and of the documents required to carry out an abortion in case of severe fetal malformation, may be an indication of the greater attention that medical schools have given to legal abortion during the past 10 years. It can also be related to the practical experience acquired while working in emergency services that receive women with abortion complications and victims of rape, which have rapidly increased in number in recent years¹⁵. As most doctors working in emergency services are young, 80% under 30 years of age in the study of Loureiro and Vieira¹¹, they would be more exposed to abortion and to the conditions in which it is legal. The multiple regression analysis showed that the negative association with years of practice was not real, and probably confounded by age, as the association became positive with all

indicators of knowledge after adjustment.

In contrast, however, there is a direct association between age and years of practice with appropriate knowledge of the documents required to carry out an abortion within the current law. The very low proportion, just 15% in general and close to 10% among those under 39 years of age or 10 years of practice, shows a failure of medical schools and residencies in obstetrics and gynecology to prepare doctors to respond to the needs of women who are legally eligible to have a pregnancy termination within the current law. The higher proportion of older physicians with more years of practice with this knowledge may indicate that it is acquired in daily practice, far from the institutions responsible for the education of physicians and specialists in gynecology and obstetrics.

Number of children maintained an association with knowledge about legal abortion that was similar to that observed for the respondents' age. This was most probably the result of the known association between age and number of children as suggested by the lack of association after adjustment. However, it may also be influenced by a lower interest in the subject by those with 3 or more children who show a more conservative opinion with reference to legal abortion¹⁶.

The lack of correlation between knowledge of legal abortion and sex of respondents in the bi-variant analysis and the greater knowledge by males after adjustment was unexpected as we thought women would be more interested and then better informed than men on this subject. The results seem to indicate that our assumption was wrong, as also found by Loureiro and Vieira¹¹.

On the other hand, the lack of correlation between marital status and knowledge was not a surprise. The higher proportion of single people with adequate knowledge of the documentation required to carry out an abortion of malformed fetus may be just the result of the younger age of those who were never married than of

those who were ever married, as it disappeared after adjustment.

The lack of association between the type of service where physicians worked and knowledge of legal abortion in the bi-variant analysis was misleading, because after adjustment those working exclusively in public services showed an almost 40% greater chance of knowing the documentation required to carry out a legal abortion. On the other hand, the separation in exclusively public and with some private practice may have been inefficient in identifying possible differences, because most respondents worked both in the public and private sector.

Finally, although at first sight it appears that a lower proportion of respondents from the North had appropriate knowledge of abortion than those from the other regions, the differences were not significant, suggesting that the knowledge of this subject is widely disseminated throughout the country.

As to the opinion on abortion, there were very few differences according to the characteristics of respondents, within a framework of a high proportion who were in favor of more liberal law than the currently existing one. The proportion of respondents with a liberal opinion was lower among those with more children, which is in line with the literature that shows a more conservative opinion on abortion among people with higher fertility¹⁶.

The greater percentage of male than of female physicians with a liberal opinion about the circumstances in which abortion should be legal is not really in disagreement with other authors who found a non-significant difference in the same direction¹⁷. The other clear correlation was with region of the country, with an increase in the percentage with a more liberal opinion the more to the south the respondents lived. This association fits with other indicators of social and economic differences by regions, such as infant mortality and literacy rate^{18,19}. Although all respondents in theory belong

to the same socio economic group, being all physicians, they may be influenced in their opinion by the environment prevailing where they live.

This is the first study about factors associated with knowledge and opinion of gynecologists and obstetricians that intend to cover the universe of all specialists who are members of FEBRASGO. Although the practice of gynecology and obstetrics does not require membership to FEBRASGO, those who are not members of the society are a small minority.

It can be argued that a minority of gynecologists and obstetricians answered the questionnaire. The problem faced by every study carried out by mailing questionnaires is the relatively low rate of response, which reached 30% in this study, not very different from what is generally found in other studies with the same method of data collecting²⁰. It is obvious that with that rate of response we cannot claim that the results obtained necessarily correspond to the universe of Brazilian obstetrician gynecologists. However, the consistency of the global results across the respondents with very different characteristics seems to indicate that the results found in this sample are not radically different from what would be observed if all gynecologists and obstetricians had answered. In other words, the results in the universe of gynecologists/obstetricians will most probably be within the limits of the answers given by the youngest and the oldest respondents, or between the response of those living in the North and those living in the South of the country.

The main conclusion that these results provide is that in spite of the efforts of FEBRASGO and other organizations, and the existence of a clear Norm of the Ministry of Health that has been widely publicized since 1998²¹, gynecologists and obstetricians still are not aware that a judicial order is not required to carry out an abortion in a woman who requests it and meets one of the two circumstances

exempted from guilt by the Penal Code⁵. This is even more relevant when we consider the opinion of the gynecologists and obstetricians who were favorable to include other circumstances in which abortion can be done in addition to the current circumstances. It means that greater efforts should be made to educate our colleagues so that women victims of rape or bearing a pregnancy that will put their lives at risk may be provided the appropriate medical treatment which is provided by the Brazilian legislation, regulated by the Ministry of Health and promoted by FEBRASGO.

The greater knowledge by years of practice seems to indicate that this information is gained after leaving medical school, suggesting a failure of our schools of medicine. It is expected that this situation will change as many teaching hospitals from public universities are providing legal abortion services. The continuous education of those already in practice is generally in the hands of professional associations. FEBRASGO has been doing its part with great efficiency, as the question of sexual violence and abortion has become a frequent subject in Medical Congresses and courses. It appears that a greater involvement of the Federal Board of Medicine and of the Regional Council of Medicine of each state will be decisive to the promotion of the sexual and reproductive rights of women in general and to facilitate the access to abortion within the law, as recommended by the Cairo Conference plan of action²². FEBRASGO leadership will be extremely important to encourage that involvement.

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