



Legislation, knowledge and attitudes of health professionals in Mexico regarding abortion

Legislación, conocimientos y actitudes de profesionales médicos en relación al aborto en México

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ABSTRACT The purpose of this study is to describe the knowledge and attitudes regarding abortion of a sample of health professionals in Mexico. In particular, we aim to explore their association with the practice of abortion and the care of post-abortion complications, taking into consideration the present legal framework in Mexico. The data come from an anonymous and computerized survey applied to participants attending a national meeting of gynecology and obstetrics in Mexico in 2009 (n = 418). The attitudes of health professionals in relation to abortion play a key role in promoting access to both medical and surgical abortion services. We did not find a statistical association between living in a largely restrictive federal entity and the practice of abortions, which may be explained by the lack of knowledge that these survey participants had about abortion laws in their federal entity. This lack of knowledge about abortion legislation can hinder a woman's access to these services even when the legal framework such access.

KEY WORDS Legislation; Abortion; Abortion, Legal; Delivery of Health Care; Health Personnel.

RESUMEN El objetivo de este estudio es describir los conocimientos y actitudes de una muestra de profesionales médicos en México con relación al aborto y su asociación con la práctica y la atención a complicaciones derivadas de abortos, tomando en cuenta el marco legal vigente. Los datos provienen de una encuesta anónima y computarizada a participantes que acudieron a una reunión de gineco-obstetricia en México en 2009 (n = 418). Las actitudes de los profesionales de la salud juegan un papel determinante para favorecer el acceso a servicios de abortos tanto médicos como quirúrgicos. No se encontró asociación estadística entre vivir en una entidad federativa mayormente restrictiva y la práctica de abortos, lo cual se explica por el escaso conocimiento que los participantes de la encuesta tenían sobre las leyes de aborto vigentes en su entidad. Esta falta de conocimiento sobre la legislación del aborto puede obstaculizar que una mujer tenga este servicio aun cuando el marco legal lo permita.

PALABRAS CLAVES Legislación; Aborto; Aborto Legal; Prestación de Atención de Salud; Personal de Salud.

INTRODUCTION

Post-abortion complications remain a leading cause of maternal morbidity and mortality at a global scale (1,2). Each year, 5.3 million women undergo unsafe abortions and suffer temporary or permanent disabilities as a consequence (3). It has been estimated that in 2008, 43 million abortions were performed in the world, 49% of which were unsafe (4).

Unsafe abortions are procedures to interrupt pregnancies carried out by personnel that lack training or technical skills, or that are conducted in facilities that do not meet minimum medical standards (5). This is common in many developing countries, where legislation prohibits the access to safe abortion services. In Latin America, for example, the interruption of pregnancies resulting from rape is legal in less than half of the countries (42%) (6), although this practice is prevalent throughout the region (7). Among developing regions, Latin America has the highest rate of unsafe abortions, with 31 abortions per 1000 women 15 to 44 years old. This is equivalent to 4.2 million unsafe abortions and can be compared to some Eastern European countries, where the rate is 5 per 1000 women (5).

However, in recent years Latin America has also seen the implementation of reproductive health policies of great importance for the region. For instance, Uruguay passed Act 18987 in 2012, decriminalizing the interruption of pregnancies during the first 12 weeks of gestation, despite the rejection of previous similar initiatives. After intense negotiations, Uruguay became the second country in the region to decriminalize abortions requested by women, following only Cuba, where abortion has been decriminalized for the past few decades.

The Uruguayan legislation has added to the small number of parliamentary initiatives in the region aiming to decrease maternal mortality by providing access to safe abortions. One of these initiatives was introduced in Mexico City in 2007, when the Legislative Assembly reformed the Criminal Code and the Health Act and introduced the Legal Pregnancy Interruption Program (8). However, despite the unquestionable importance of this initiative in Mexico City, there have

been some setbacks. Conservative groups in many Mexican states responded by seeking modifications to their constitutions in order to define life as starting from the moment of conception (9), annulling women's rights to interrupt pregnancies even in cases of decriminalized causes (a).

In Mexico, abortion legislation is enforced at the state level, and Mexico City is the only jurisdiction (b) where the interruption of pregnancies requested by women is decriminalized; in the rest of the country, abortion is still legally restricted. The only cause deemed legally valid by all federal jurisdictions is pregnancy resulting from rape. Other decriminalized causes vary widely. Nonetheless, there were 874,747 cases of abortion in 2006 with a rate of 33 per 1000 women aged 15 to 44 (10).

Recent publications have shown that there is generally a favorable public opinion in Mexico regarding the executive order that permitted the legal interruption of pregnancies. For example, a recent study involving the general population of Mexico City showed an increase in positive opinions on this regulation between 2006-2009, as well as the opinion that this policy should be extended to other jurisdictions (11). This positive opinion is expressed not only by the residents of this city, but also by residents of states with more restrictive regulations. For instance, in a recent opinion survey of the general populations of eight states that had introduced initiatives to forbid abortion under all circumstances, 44% of the respondents agreed with the mentioned regulation (12).

However, less restrictive legislation alone does not guarantee women the access to legal or safe abortion procedures (4). Health professionals have a fundamental role in assuring safety during the interruption of pregnancies and attending to post-abortion complications (13-15), and therefore their knowledge, opinions, and attitudes are a key aspect in facilitating or restricting access to abortion procedures.

In this sense, a lack of familiarity with the causes under which abortions should be performed may lead to a refusal on the part of health professionals to provide this service (16,17). This is prevalent in countries such as Mexico, where recent changes in the legislation of many jurisdictions may have contributed to this misinformation. Generally, negative societal opinions regarding

abortion may also influence the attitudes of health professionals (14,16).

Previous studies on samples of doctors in Mexico have shown that professionals with more knowledge of abortion laws hold more positive attitudes toward these practices and are more willing to perform abortions in the event of rape (13); most of them express that abortion should be legal in cases of rape, where the life or health of the woman is at risk, or where congenital defects of the fetus are present (18). Although they approve of abortions in a limited number of circumstances, very few professionals are willing to offer abortions to women (17). A recent qualitative study conducted with health professionals showed that half of them supported the regulation passed in Mexico City in 2007 and that they also agreed that this regulation should be extended to other states (19).

However, there are no survey results regarding the attitudes and knowledge of health professionals in the wake of the decriminalization of abortion, especially in other jurisdictions of the country. Similarly, no studies have attempted to connect restrictive legal frameworks with greater or lesser quantities of abortions performed.

In this sense, this article presents the results of research aimed at analyzing the knowledge, attitudes, and practices related to abortion in a sample of healthcare professionals from different states in Mexico. Tentative results on the attitudes and practices related to abortions have been presented in a previous publication (20); however, this article describes in depth the attitudes of healthcare professionals, the opinions and knowledge they hold of the present laws in their respective jurisdiction, and their interest in learning more about abortion. It is of particular interest to analyze how these attitudes as well as residing in jurisdictions with varying degrees of restriction can influence the practice of abortion and the care of post-abortion complications.

MATERIALS AND METHODS

A cross-sectional study was carried out with data collected through an anonymous self-administered survey using a convenience sample of health professionals (mostly obstetrician-gynecologists)

in attendance at a national conference organized by the Mexican Association of Obstetrics and Gynecology Specialists [*Colegio Mexicano de Especialistas en Ginecología y Obstetricia*] in 2009. Although no official records of the numbers of participants in attendance at this convention were available, non-official sources have informed that there were about 3000 registered participants, 428 of whom completed surveys. These survey respondents constituted the sample for this study.

During the event, recruiters invited attendants to complete the survey. Selection criteria included health professionals practicing in Mexico and providing women's health services, who were able to speak Spanish and willingly accepted to participate in the survey. Oral consent was requested from respondents, and anonymity and data confidentiality were ensured. No information regarding the identity of respondents was recorded at any time, and they were not required to complete the survey if they did not wish to do so. This study was approved by the Ethics, Biosafety, and Research Committees of Mexico's National Institute of Public Health and by the Brigham and Women's Hospital Institutional Review Board.

Measurements

Audio Computer-Assisted Self-Interviewing (ACASI) technology was used to ensure the highest level of privacy and reliability possible in responding to surveys (21).

Dependent Variables

All dependent variables were dichotomous (0 = no; 1 = yes). Respondents were asked whether they currently performed medical or surgical abortions. They were also asked whether they treated patients suffering from post-abortion complications. "I always treat them" and "I treat them only in cases of simple complications" were considered affirmative answers.

Respondents were also asked about their interest in learning to perform abortions with medical or surgical techniques. These variables were measured using two different items: a) respondents who stated not having practiced abortions were asked if they would like to be trained to

do so; b) respondents who did practice abortions were asked if they would like to receive more training on abortion techniques.

Furthermore, respondents were asked whether or not abortion was legal under certain circumstances in their jurisdiction. To analyze this information, current legislation was verified for each jurisdiction at the time of the survey (November 2009). A variable was then created to identify respondents who correctly identified as legal all decriminalized practices and as illegal all abortion practices that had not been decriminalized in their jurisdiction.

Independent Variables

The main independent variables in this study were acceptance of abortion practices and residence in a jurisdiction with restrictive or non-restrictive legislation. In order to measure abortion acceptance, an index was created to evaluate acceptance or rejection of these practices, using a group of dichotomous variables measuring respondents' opinions on whether abortions should be legal under certain circumstances (0 = no; 1 = yes). An analysis of the main components of this index was conducted using polychoric correlation (22). This procedure was used to construct a continuous variable divided into quartiles, where the first quartile (25%) represented respondents with a low level of acceptance of abortion and the last quartile represented respondents with greater levels of acceptance toward this practice. This index was created to determine whether dependent variables were affected by differing degrees of abortion acceptance.

A dichotomous variable was also constructed to distinguish between respondents who practiced in more or less restrictive jurisdictions according to current legislation at the time that the survey was implemented (9). *Less restrictive* (value=1) jurisdictions included those with five or six decriminalized causes whereas *more restrictive* (value=0) jurisdictions included those with four or less decriminalized causes.

Socio-demographic variables taken into consideration were gender, age, religion, time passed since completing medical training, sector (public or private practice), and region of practice (north,

central, south). The professional standing of respondents was analyzed in order to classify them into the following categories: obstetrician-gynecologists with a subspecialty, those without a subspecialty, and other types of health professionals (general practitioners, resident obstetrician-gynecologists, or nurse personnel).

Aside from the previously described variables, others related to the attitudes/opinions of respondents regarding abortion were explored. However, the analysis of these variables was merely descriptive.

Data Management and Statistical Analysis

Data were processed using Stata V.10 software. Descriptive statistics were initially obtained for relevant variables, which were later adjusted to multivariate logistic models for each dependent variable. For purposes of adjustment, states were identified where constitutional amendments had been passed at the time of the survey defining life as starting from the moment of conception/fertilization. This variable was included to adjust for the changes in legislation that occurred shortly before implementing the survey.

RESULTS

This study gathered information provided by professionals originating from all Mexican states except Chihuahua. Of all the respondents, 21.8% of lived in the north of the country, 51% in the central region, and 27.3% in the south; also, 45% of the participants were at least 45 years old, and 81.6% identified themselves as Catholic. Obstetrician-gynecologists with or without a subspecialty represented 90.4% of the sample. Just over half of the participants had completed their training more than 10 years prior to the survey (53.8%) and a similar percentage (54.5%) worked in both the public and private sectors (c).

In total, 45.7% of the sample had treated patients suffering from post-abortion complications, 14.8% had performed medical abortions, and 20.6% had performed surgical abortions. Slightly more than half of the participants claimed to be

interested in learning more about medical and surgical abortions (54.8% and 35.4%, respectively) (Table 1). With reference to the legal framework for abortion, 46% of participants lived in a restrictive jurisdiction (Figure 1).

Knowledge, opinions, and attitudes toward abortion

A total of 45.7% of participants incorrectly answered that rape was a criminalized cause in their jurisdiction or responded that they did not know. Generally, 8.4% of participants had accurate notions of current laws within the state where they practice (Table 2). Given this small proportion, the variable was not included in the multivariate analysis.

Abortion under certain circumstances was supported by 71.1% of respondents. It was mostly accepted for cases where the pregnancy would threaten the life of the mother (88.8%), when resulting from rape (83.5%), and in the presence of fetal malformations (83.5%). Abortion for single mothers was only supported by 7.7%. The responses regarding the reasons that women most frequently seek abortions were: not being ready to have children (26.6%), not having a stable relationship with their partner (22.2%), and being under 18 years old (17.2%) (Table 2). In contrast, according to professionals, women rarely requested it for health reasons (4.5%) or because of rape (14.8%).

The reasons offered as to why women preferred surgical over medical abortions were: it is a faster method (83%), women believe that surgical abortions are more successful than medical abortions (54.3%), and women who choose surgical abortion have more money (47.9%). In contrast, the reasons the respondents believed that women preferred medical abortions were: the drugs are easily obtained (87.3%), it is less expensive than surgical abortions (72.5%), it is a more private method (67.9%), and due to the difficulty in finding someone to perform a surgical abortion (65.3%). According to respondents, women who induce abortions using Misoprostol obtain the drug at pharmacies without a medical prescription (86.1%). However, 45.7% of respondents believed that few women from less advantaged

Table 1. Socio-demographic and medical practice characteristics of study participants (n=418). Mexico, 2009.

Characteristic	n	%
Gender		
Female	196	46.9
Male	222	53.1
Religion		
Catholic	341	81.6
Other	41	9.8
No religion	36	8.6
Age		
22-34	86	20.6
35-44	144	34.4
45 and over	188	45.0
Region		
North	91	21.8
Central	213	51.0
South	114	27.3
Professional standing		
Obstetrician-gynecologist with subspecialty	122	29.2
Obstetrician-gynecologist without subspecialty	256	61.2
Other healthcare providers	40	9.6
Time passed since completing training		
Not completed/ less than 5 years	130	31.1
Between 5 and 10 years	63	15.1
More than 10 years	225	53.8
Healthcare Sector		
Only public practice	78	18.7
Only private practice	112	26.8
Public and private practices	228	54.5
Works with residents	307	73.4
Practices medical abortion	62	14.8
Practices surgical abortion	86	20.6
Treats patients suffering from post-abortion complications	191	45.7
Is interested in learning about medical abortion	229	54.8
Is interested in learning about surgical abortion	148	35.4

Source: Own elaboration based on primary data.

socioeconomic groups would be able to follow the indications to successfully attain the abortion in comparison with 13.6% who believed that all women would be able to attain it successfully.

Figure 2 shows the distribution of the abortion acceptance index. It should be noted that the first quartile represents respondents with low levels of acceptance of abortion, as it accounts for those who approve of its legalization in fewer circumstances or only in circumstances that are beyond the woman's

control (clinical causes). With higher scores, more causes were accepted, and thus the fourth quartile is composed of those who accepted such practices in a greater number and variety of circumstances.

Multivariate analysis

Multivariate analysis is shown in Table 3. With greater acceptance of abortion there was a tendency towards a greater probability of practicing it. In the case of surgical abortion, respondents in the third quartile were 2.4 times more likely to perform this type of procedure with respect to those in the first quartile, while those in the fourth quartile were 4.3 times more likely to do so. With regards to medical abortions, participants in the third quartile were 1.5 times more likely to perform them, although the likelihood increased to 6.6 times greater in the fourth quartile (Table 3).

Greater levels of acceptance were also associated with higher levels of provision of care to women with post-abortion complications and higher levels of motivation to learn more about



Figure 1. Distribution of survey participants (n=418) according to categorization of jurisdictions by abortion legislation.

Source: Own elaboration.

Note: There were no participants from the state of Chihuahua.

Table 2. Attitudes, opinions, and knowledge of participants (n=418) regarding abortion. Mexico, 2009.

Categories	n	%
ATTITUDES		
Abortion is...		
Acceptable in most circumstances	50	12.0
Acceptable in some circumstances	297	71.1
Unacceptable in most circumstances	57	13.6
Other	14	3.3
Abortion should be legal in the following cases^a		
Rape	349	83.5
Risk to the woman's life	371	88.8
Risk to the woman's health	263	62.9
Fetal anomalies	349	83.5
Artificial insemination without consent	175	41.9
Economic restrictions	67	16.0
Woman is single	32	7.7
Woman is under age	64	15.3
It is the woman's choice	127	30.4
Failed birth control method	80	19.1
OPINIONS		
Unsafe abortions are a health issue in your community	356	85.2
Generally women seek an abortion because^a		
They are not ready to have children	111	26.6
They are satisfied with the amount of children they have	33	7.9
Economic restrictions	56	13.4
Health reasons	19	4.5
Rape resulting in pregnancy	62	14.8
They are under age	72	17.2
They do not have a stable relationship	93	22.2
Their birth control method failed	61	14.6
Low-income women are likely to follow indications for a medical abortion		
No	34	8.1
Some women	191	45.7
Most women	125	29.9
All women	57	13.6
Unsure	11	2.6
KNOWLEDGE		
Which of the following drugs is an abortion method?^a		
Misoprostol	399	95.5
Methotrexate	119	28.5
Mifepristone	126	30.1
Incorrect indication that abortion resulting from rape is not legal (or unsure)	191	45.7
Correct knowledge of the decriminalized causes in their jurisdiction^b	35	8.4

Source: Own elaboration based on primary data.

^aEach option is measured as an independent variable (yes/no). Total may be higher than 100%.

^bVariable composed of individual variables regarding knowledge created for each jurisdiction.

Table 3. Multivariate analysis to explore factors associated with abortions. Mexico, 2009.

Abortion acceptance	Dependent variables									
	Performs medical abortions		Performs surgical abortions		Treats abortion complications		Is interested in learning about medical abortion		Is interested in learning about surgical abortion	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Quartile										
Quartile 1 ¹	-	-	-	-	-	-	-	-	-	-
Quartile 2	1.0	(0.35; 3.00)	0.9	(0.37; 2.41)	1.1	(0.59; 2.15)	1.0	(0.57; 1.84)	0.8	(0.42; 1.60)
Quartile 3	1.5	(0.61; 3.77)	2.4**	(1.15; 4.90)	1.8*	(0.10; 3.35)	3.0**	(1.74; 5.18)	2.0*	(1.81; 3.64)
Quartile 4	6.6**	(2.79; 15.76)	4.3**	(1.99; 9.38)	1.8*	(0.93; 3.50)	3.8**	(2.00; 7.22)	2.0*	(1.05; 3.74)
Less restrictive jurisdiction	1.1	(0.45; 2.47)	1.9*	(0.98; 3.60)	1.9*	(0.10; 3.60)	1.2	(0.69; 2.27)	1.4	(0.75; 2.49)
Sex										
Male ¹	-	-	-	-	-	-	-	-	-	-
Female	0.7	(0.35; 1.26)	1.5	(0.85; 2.59)	2.2**	(1.39; 3.54)	1.0	(0.62; 1.48)	1.4	(0.87; 2.14)
Age										
45 years or more ¹	-	-	-	-	-	-	-	-	-	-
35 to 44	0.8	(0.36; 1.64)	0.6	(0.31; 1.15)	1.6*	(0.94; 2.70)	0.9	(0.50; 1.40)	0.8	(0.49; 1.36)
22 to 34	3.5**	(1.41; 8.67)	1.6	(0.74; 3.55)	1.7	(0.83; 3.52)	1.2	(0.64; 2.36)	1.7	(0.88; 3.16)
Specialty										
Other type of professional ¹	-	-	-	-	-	-	-	-	-	-
Obstetrician-gynecologist with subspecialty	1.8	(0.54; 6.30)	2.5	(0.80; 8.12)	2.5**	(1.02; 6.34)	0.9	(0.43; 1.90)	1.0	(0.46; 2.00)
Obstetrician-gynecologist without subspecialty	3.7*	(0.99; 13.76)	3.4*	(0.99; 11.56)	2.5*	(0.91; 6.63)	0.5	(0.24; 1.20)	5.2	(0.21; 1.14)
Type of practice										
Public and private practice ¹	-	-	-	-	-	-	-	-	-	-
Only public practice	0.5	(0.18; 1.25)	0.7	(0.32; 1.61)	0.3*	(0.16; 0.69)	1.2	(0.63; 2.33)	1.9	(0.99; 3.55)
Only private practice	0.8	(0.39; 1.84)	0.5*	(0.26; 1.07)	2.3*	(1.30; 4.03)	0.6**	(0.36; 0.96)	0.6	(0.37; 1.11)
Religion										
Catholic ¹	-	-	-	-	-	-	-	-	-	-
Other religions	0.7	(0.21; 2.35)	1.8	(0.77; 4.17)	1.0	(0.45; 2.15)	0.4**	(0.21; 0.89)	0.8	(0.37; 1.65)
No religion	1.9	(0.78; 4.93)	1.3	(0.54; 3.14)	0.7	(0.32; 1.68)	0.8	(0.39; 1.83)	1.0	(0.44; 2.10)
Considers unsafe abortions a health problem in the community	1.0	(0.40; 2.50)	1.2	(0.59; 2.63)	1.2	(0.60; 2.34)	0.9	(0.48; 1.56)	1.2	(0.63; 2.16)
Lives in Distrito Federal	2.0	(0.71; 5.85)	1.2	(0.50; 3.14)	0.8	(0.33; 2.16)	0.7	(0.30; 1.70)	1.1	(0.49; 2.71)

Source: Own elaboration based on primary data.

OR = Odds Ratio. 95% CI = 95% Confidence Interval

¹Value of reference.

*p-value ≤ 0.09; **p-value ≤ 0.05

abortion procedures. However, differences by levels of acceptance were less evident, as the likelihood of providing care for post-abortion complications or having interest in learning more about abortion procedures showed little difference between respondents in the third and fourth quartiles (Table 3).

Residing in a jurisdiction with a greater or lesser level of restriction did not demonstrate a clear and statistically acceptable association. Respondents

who lived in a less restrictive jurisdiction were more likely to perform surgical abortions (odds ratio = 1.9) and treat patients suffering from post-abortion complications (odds ratio = 1.9), and were also more likely to show an interest in learning more about surgical abortions (odds ratio = 1.4) or medical abortions (odds ratio = 1.2). However, no significant association was observed with the latter two responses ($p > 0.1$), and the first two only showed an association with a value of $p < 0.09$ (Table 3).

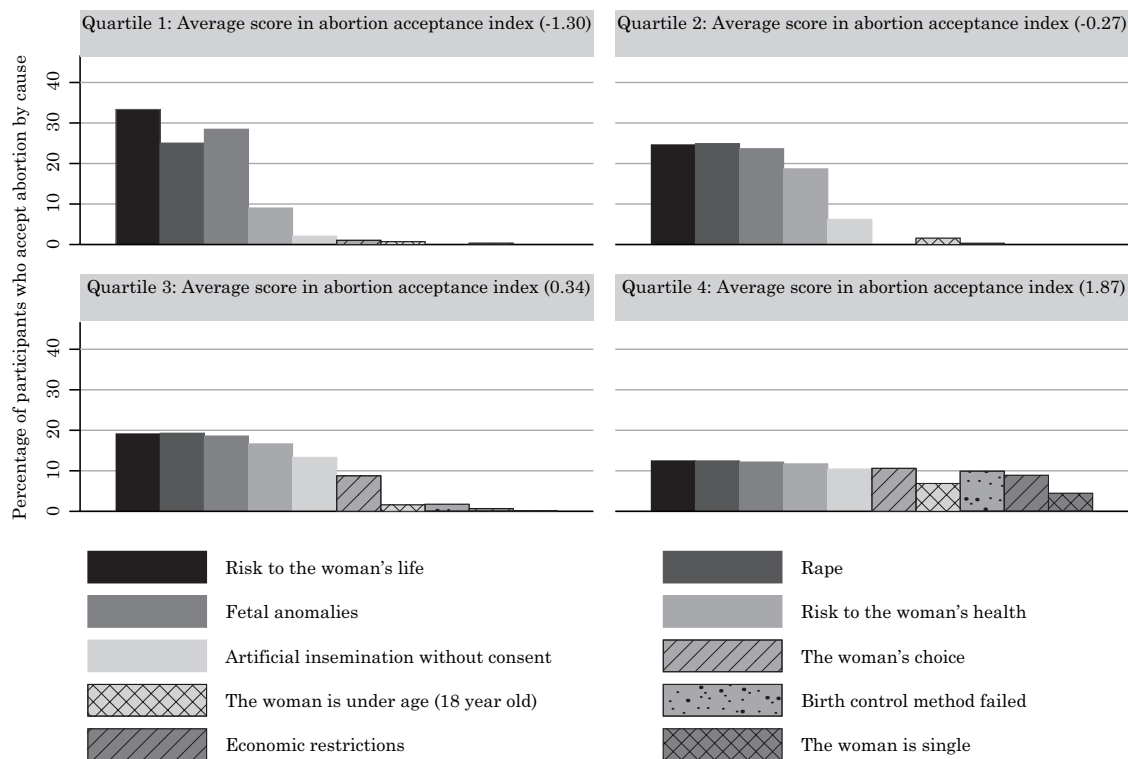


Figure 2. Abortion acceptance under different circumstances by attitude index quartiles.

Source: Own elaboration

Note: Index composed of main components. Lower scores indicate lower abortion acceptance and higher scores indicate a higher abortion acceptance.

No statistical association was observed between the respondents' gender and abortion practices, except in the case of care for post-abortion complications, where men were twice as likely to provide it as women (odds ratio=2.2). For gynecologists, having a subspecialty constituted an important factor in determining a greater number of medical or surgical abortions, but not in the case of care for post-abortion complications. Private practices were related to a lower probability of practicing medical abortions and lower levels of interest in learning about medical abortions, but greater probabilities of treating post-abortion complications (Table 3).

DISCUSSION

The purpose of this study was to explore the attitudes toward and knowledge of legislation on

abortion practices in a convenience sample of health professionals in Mexico. In particular, it aimed to determine if personal attitudes or more or less restrictive legal frameworks were associated with performing medical or surgical abortions, as well as the interest held by health professionals in learning more about these techniques for performing abortions.

The results suggested that a greater acceptance of abortion was positively associated with the practice of medical abortions in particular. However, it is interesting to point out that the practice of abortion could not be exclusively attributed to health professionals who fully accept abortion, as they were also performed by health professionals with a lesser degree of acceptance of this practice.

Conversely, treating patients suffering from post-abortion complications and having an interest in learning more about abortion practices were positively related to favorable attitudes

toward abortion, although there were no differences among different degrees of abortion acceptance. In other words, an interest in learning about abortion and treating post-abortion complications were reported by health professionals who accepted abortions in one way or another, no matter the quantity or circumstances of which they approved. Thus, it is possible that other variables had more influence than their personal attitudes.

In this sample, health professionals generally supported abortion in circumstances that were beyond women's control, as opposed to circumstances entailing a woman's autonomous choice to terminate a pregnancy. Nonetheless, different levels of support for abortion may suggest that there was a certain degree of sensitivity toward abortion on the part of health professionals, and although some respondents did not accept abortion in all circumstances, they may have decided to perform them regardless.

Although there was an important proportion of health professionals who performed medical abortions, half of the respondents considered that not all women from less advantaged socio-economic groups would be able to follow the instructions to successfully carry out an abortion using this technique. This is interesting in light of a recent report on legal pregnancy interruption practices in Mexico City, which showed that from April 2007 through 2010, Misoprostol was used in 72% (12,263) of abortions performed at clinics in the Federal District (23). It seems that health professionals are willing to perform medical abortions; nonetheless, they do not believe that low-income women are able to perform them on their own.

The contrasts between what health professionals consider to be the circumstances that lead women to seek abortions and their opinions regarding when abortion should be legal must also be noted. They believe that women generally seek to interrupt a pregnancy due to their autonomous decision, even though respondents considered that abortion should only be legal under circumstances beyond women's control. This is consistent with results previously obtained in Mexico (17).

Despite what would be expected, the association between abortion practices and current legal frameworks is less clear. However, this is not unusual considering that only a small

proportion of the sample was fully aware of the legislation governing abortion in their jurisdiction. It seems that the decision of health professionals to perform an abortion or not did not entirely depend on current regulations, but also on other elements – particularly, their personal attitudes. Consistent with evidence from other countries where it has been documented that restrictive legislation has a negative influence on abortion practices (16,24), it can be assumed that a greater knowledge of the legal framework governing abortion might also make a difference in the practices in Mexico. Further research is needed to explore this relation in more detail.

The lack of familiarity with legislation on abortion among the healthcare professionals in this sample constituted a serious problem that should be taken into account for all professional training on women's health care, as misinformed healthcare personnel may refuse to perform abortions or even to provide care to women with post-abortion complications, regardless of their personal attitudes and opinions.

Although it has not been shown statistically, the results suggest that among female healthcare professionals there is a greater likelihood of performing medical abortions and reporting interest in learning more about this practice, whereas male healthcare professionals have more experience in surgical abortions and interest in learning more about this technique. Future research should include a gender-stratified analysis to compare possible differences in the motivations for performing abortions.

The primary limitations of this study should be addressed. First, the use of a convenience sample constitutes the most relevant limitation, in that it makes it impossible to generalize the results of this study. Second, it would have been more beneficial to choose other criteria to define more or less legally restrictive jurisdictions, such as a classification by causes. This criterion was not used because the small sample size made it impossible to obtain variation in the proportions of respondents in the different categories of causes. Third, the small sample size affected the possibility of identifying a greater quantity of statistically significant associations among the relevant variables. Finally, there were certain aspects of attitudes that were not explored, such as how respondents

would handle certain situations and their opinion regarding women who seek abortions.

Although previous studies have looked at attitudes regarding abortion in Mexico, they have been carried out among the general population (25), among medical students (17,26), or with samples composed of general practitioners and different specialists (13,18,27). By using a sample composed mainly of obstetrician-gynecologists living in different Mexican states, this study contributes valuable knowledge on a highly neglected population in studies on abortion.

The findings of this study are particularly relevant for Latin America, given that abortion practices can be analyzed in light of recent developments in the region, such as Mexico City's controversial Legal Pregnancy Interruption program and Uruguay's 2012 decriminalization of abortion. Therefore, and beyond any statistical reference, it is interesting to note that the results shown in this study reflect the current sociopolitical transformation underway in Mexico, which can be attributed on one hand to the large amount of information regarding abortion in circulation, and the presence of the topic of abortion in political and legislative debates on the other. Groups for and against safe abortion have introduced this subject into the mass media using diverse communication strategies.

Spreading awareness of abortion in this way has its implications, as has been shown in multiple opinion surveys after the decriminalization of abortion in Mexico City, which have shown a growth in support for this legislation (11,12).

However, it is equally important to acknowledge that there have not been consistent strategies implemented in the health sector for the training of health professionals on the legislation governing this practice. This may create an information gap, which translates into a vague familiarity with recent changes in abortion legislation on the part of health professionals. The changes that have taken place over the past decade have made necessary the inclusion of broader approaches to abortion in medical schools (28,29) such that a clinical, social, and legal vision may be integrated with a rights perspective (26).

In conclusion, health professionals have a central role in facilitating access to abortions and in treating patients with post-abortion complications. It is urgent that in addition to seeking the approval of less restrictive legislation, health professionals become familiar with these laws and receive training in order to provide these services (4).

ENDNOTES

a. Some jurisdictions allow for certain exceptions, which, in theory, would permit abortion.

b. Mexico is composed of 32 federal jurisdictions: 31 states and a Federal District located in Mexico

City. The terms "state" and "jurisdiction" are used interchangeably in this article.

c. For more details on the sample, see the previously published article entitled "Abortion practice in Mexico: a survey of health care providers" (20).

CONFLICT OF INTERESTS STATEMENT

There is no conflict of interest on the part of the authors of this study. The funding agency is not responsible for the contents of this article.

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