Depression, emotional and social aspects in the abortion context: a comparison between two Brazilian capitals

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Summary

Objective: To assess emotional and social aspects in the experience of abortion and the diagnosis of major depression, comparing women from two Brazilian cities (São Paulo – SP, Natal – RN). **Methods:** A transversal study was carried out from January 2009 to May 2010, through semi-directed interviews with women undergoing an abortion (up to 22 weeks gestation) treated at university hospitals in São Paulo – SP (n = 166) and Natal – RN (n = 150). The Portuguese version of the Primary Care Evaluation of Mental Disorders (PRIME-MD) instrument was applied for the diagnosis of depression. **Results:** There was no significant difference (p = 0.223) in the proportion of induced abortions when comparing the two capital cities: Natal (7.3%) and São Paulo (12.0%). The diagnosis of depression was high among women undergoing an abortion and was significantly higher in Natal than in São Paulo (50.7% vs. 32.5%, p < 0.01). Regarding emotional aspects, there was no difference in the occurrence of guilt feelings (Natal 27.7%; São Paulo 23.3%; p = 0.447). The partner's involvement was considered satisfactory by women in similar proportions in the two capitals (Natal 62.0%; São Paulo 59.0%, p = 0.576). No difference was found in the proportion of women who reported violence, related or not to the abortion (Natal 22.9%; São Paulo 16.6%; p = 0.378). **Conclusion:** Although there was no difference between the emotional and social aspects in the comparison between the two capitals, there was a high proportion of women with major depression, more frequent in the city of Natal than in São Paulo, which demonstrates the importance of psychosocial support in the women's healthcare system.

Keywords: Abortion, induced; abortion, spontaneous; depression mental health.

Study conducted at the Department of Obstetrics and Gynecology, Faculdade de Medicina, Universidade de São Paulo, Division of Psychology, Instituto Central, Hospital das Clínicas, Faculdade de Medicina, Universidade de São Paulo and Department of Psychology, Centro de Ciências Humanas, Letras e Artes, and Department of Morphology and Postgraduate Program in Health Sciences of Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil

Submitted on: 03/27/2011
Approved on: 08/08/2011

Financial support: Ministry of Science and Technology/Health Sectoral Fund and Department of Science and Technology of the Secretariat of Science, Technology and Strategic Inputs – DECIT/SCTIE – of Ministry of Health, through Conselho Nacional de Desenvolvimento Científico e Tecnológico – CNPq

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Conflict of interest: None.

Introduction

From the perspective of public health policies, the discussion of abortion is included in programs recommended for women's healthcare in the Brazilian Public Health System – SUS. The subject focuses on the perspectives of gender, sexuality and access to reproductive rights. It is recognized as a public health problem, as in addition to being an important cause of maternal death, it is a difficult topic to be approached, with different implications for women's health, portrayed as the third leading cause of maternal death in our country[1].

When talking about mental health associated with abortion, under any approach, there is a lot of divergence in literature[2]. Some studies indicate that after the abortion women are more likely to develop depression[3-5] or post-traumatic stress disorder[6,7], especially among those reporting physical or emotional violence, or sexual abuse victims[8]. Women whose first pregnancy ended in abortion have a 65% higher risk of depression than women whose first pregnancy resulted in birth[4]. In a study carried out in the United States, with a population in which the first pregnancy was unplanned, there was a high risk for depression in 27.3% of women who underwent abortion[5]. In women who became pregnant at least once before the age of 25, abortion was reported by 15% of them, and those who underwent abortions had higher rates of depression, anxiety, suicidal thoughts and drug addiction[9].

Other studies[10-13] conclude that legalized abortion, performed in the first trimester of pregnancy, would have no consequences for mental health. Taking into consideration that most studies on abortion are carried out in southeastern Brazil (75%), with a concentration of data in the State of São Paulo (58% of publications), followed by the states of Bahia, Ceará, Pernambuco, Rio de Janeiro and Rio Grande do Sul[10] and considering the need for data on the reality experienced by women in other states in the country, it is important to compare different regions. In addition, the study of two capital cities in different regions of Brazil (Southeast and Northeast) ultimately allows reflecting on the principle of equity, enabling the understanding of the existence or not of different situations, thus allowing specific interventions for specific needs.

The objective of the present study is to assess emotional and social aspects in the experience of abortion and the diagnosis of major depression in women by comparing two Brazilian capital cities (São Paulo – SP and Natal – RN).

Methods

This study was carried out between January 2009 and May 2010 in two Brazilian cities: São Paulo (SP) and Natal (RN). The study protocol and the free and informed consent were approved by the Research Ethics Committees of both participating institutions.

The following inclusion criteria were adopted: women with a diagnosis of abortion, defined as termination of pregnancy up to 22 weeks of gestation, treated in the emergency care at Hospital das Clínicas, Faculdade de Medicina, Universidade de São Paulo (São Paulo-SP) and Gennaro Cicco Maternity School, Universidade Federal do Rio Grande do Norte (Natal – RN).

The choice of hospitals and the profile of the patients were considered through the principle of equity, using the following criteria: to be a university hospital in the capital city and provide healthcare services through the Public Health System to patients seeking emergency treatment and/or referred from other hospitals.

After the medical procedure for the treatment of abortion, women were invited to participate and to be informed about the interview procedures. Then, all volunteers signed an informed consent form.

Data were collected through previously prepared semi-structured interviews, in which the research subject was free to speak whatever she wanted in each question asked. The interviews lasted an average of one hour and were conducted by psychologists trained specifically for research purposes. The questionnaire consisted of closed questions that included demographics such as age (years), education (primary, secondary or higher), marital status (with partner or without partner), occupation (employed/unemployed or student) number of pregnancies, number of deliveries, number of abortions, history of induced abortion (yes or no), number of living children, gestational age at the current abortion (weeks), religion (Catholic, Protestant, others and non-religious) faith belief (present or absent), monthly family income (reais), number of persons per family and *per capita* income (reais).

Open or semi-structured questions were asked addressing the following aspects: feelings experienced at the time when the pregnancy was suspected and when it was confirmed, the existence of support by the family, friends or partner in the situation of abortion, previous occurrence of physical, sexual or emotional violence and possible association between the violence experienced and the abortion. Feelings of guilt or remorse related to abortion were also investigated. During the interview, the interviewer ensured the confidentiality of the interview and of information provided, and, under these circumstances, women were encouraged to clarify whether the abortion had been spontaneous or induced.

The Brazilian Portuguese validated version of the Primary Care Evaluation of Mental Disorders (PRIME-MD) instrument was applied for the diagnosis of major depression[14]. This instrument allows the investigation of mental disorders and consists of modules that can be assessed together or separately. In the present study, we used the module to assess mood disorders in the diagnosis of major depressive disorder[9].

The PRIME-MD classification system was developed to assist in the evaluation and diagnosis of mental disorders in primary care. The agreement between the PRIME-MD and the diagnosis made by independent professionals from the mental health area is excellent, with a sensitivity of 83%, specificity of 88%, positive predictive value of 80% and an overall accuracy of 88%[15]. Considering its usefulness and the fact that it is an easy-to-apply instrument, this system is considered an appropriate tool to evaluate the relevance of psychiatric disorders in obstetrics outpatients. Hence, this was the instrument chosen for the present research.

This instrument has also been indicated to evaluate mental disorders during pregnancy[16]. To analyze the feelings experienced during the abortion, reported in the semi-structured interview, the thematic or content analysis technique was used, which aims at describing, interpreting and understanding data. The technique was used to explain in an objective, systematic and quantitative way the content of the interviews. The focus was not to describe the content, but to verify what was disclosed after the data processing by coding the latter, transforming them into categories through a cross-sectional analysis. The interviews were cut around each theme-axis or interest significance unit. The units of meaning that comprise the communication of each patient were outlined and then the cuts were made to categorize the content. All results obtained with the categorization were analyzed using quantitative techniques.

The results were analyzed using the software Statistica for Windows (version 4.3, Statsoft, Inc., 1993). The variables were analyzed descriptively, by calculating means and standard deviations, absolute and relative frequencies. The quantitative and categorical data were evaluated by chi-square test or Fisher's exact test, when indicated. Continuous variables were analyzed by Student's *t* test. The significance level was set at $p < 0.05$.

Results

A total of 166 women were interviewed in São Paulo (SP) and 150 women in Natal (RN). Demographic characteristics and obstetric history are shown in Table 1. When comparing the two capitals, it was observed that the mean age of women who had a diagnosis of abortion was significantly younger in Natal (RN), as well as the gestational age at which abortion had occurred. There was no difference in the profile of previous obstetric history when comparing participants in the two cities. There was a significant difference regarding the proportion of women who were employed and this proportion was higher in São Paulo (SP). As for family income, both the total and the *per capita* amount, it was observed that the mean was higher among women interviewed in the city of São Paulo (SP). The distribution of women according to religion was significantly different when comparing the two cities, and faith belief was significantly lower among women interviewed in the city of São Paulo (SP).

The content analysis of the situations experienced by the women who had undergone abortion is shown in Table 2. There was no significant difference in the proportion of induced abortions among the interviewed women when comparing the two cities. As for the reported experiences, when pregnancy was suspected, a greater proportion of women in Natal (RN) reported positive aspects, as well as the feelings experienced about the pregnancy were confirmed. There was no significant difference in the proportion of interviewed women who reported having feelings of guilt or remorse when comparing the two cities.

The account of support from family members or friends was similar when comparing the two cities, as well as the participation of the partner in the situation of abortion. There was no difference in the proportion of women who reported having experienced violence related or not to abortion, when comparing the two cities (Table 2).

Table 3 shows the results for major depression diagnosis by PRIME-MD. There was a significantly higher proportion of depression in women interviewed in Natal (RN), with differences in reports of symptoms: the women interviewed in Natal (RN) reported significantly higher proportion of sleep disorders, fatigue, appetite alterations, reduced concentration and psychomotor impairment, when compared to women interviewed in the city of São Paulo (SP).

Discussion

The present study has shown that there is a high proportion of women with major depression after undergoing an abortion and this proportion is significantly higher among women interviewed in Natal (RN), when compared to those in São Paulo (SP). There have been no previous national studies comparing these national capitals and the occurrence of depression in women who underwent abortion. In this study, in cases of abortion, the proportion of women diagnosed with major depression was 32.5% in São Paulo and 50.7% in Natal (RN), which are relevant figures that demonstrate the urgency of establishing specialized support for women who experience abortion, whether spontaneous or induced, especially in the public healthcare sector.

Abortion itself interrupts a natural and socially expected biological course, regardless of the desire for pregnancy and the child, and causes the woman to come across the possibility of motherhood, arousing different feelings and fantasies. In this study, after pregnancy

Table 1 – Characteristics of women undergoing abortion according with the city where the study was carried out

	São Paulo (SP) n = 166		Natal (RN) n = 150		p
Age, years, mean (SD)	27.9	(7.5)	26.2	(6.9)	0.033
Marital status					
With partner	141	(84.9)	131	(87.3)	0.652
Without partner	25	(15.1)	19	(12.7)	
Gestational age at abortion, weeks, mean (SD)	11.3	(3.8)	13	(4.8)	< 0.001
Parity					
0	63	(38.0)	60	(40.0)	0.797
≥ 1	103	(62.0)	90	(60.0)	
Previous spontaneous abortion					
0	121	(72.9)	110	(73.3)	0.969
≥ 1	45	(27.1)	40	(26.7)	
Previous induced abortion					
0	156	(94.0)	144	(96.0)	0.574
≥ 1	10	(6.0)	6	(4.0)	
Living children					
0	66	(39.8)	61	(40.7)	0.961
≥ 1	100	(60.2)	89	(59.3)	
Level of schooling					
Elementary School	52	(31.3)	47	(31.3)	
High School	99	(59.6)	93	(62.0)	0.729
College/University	15	(9.0)	10	(6.7)	
Occupation					
Employed	124	(74.7)	79	(52.7)	
Unemployed	28	(16.9)	55	(36.7)	< 0.001
Student	14	(8.4)	16	(10.7)	
Family income ($ Reais), mean (SD)	1487.1	(1002.4)	1182.9	(967.7)	< 0.01
Number of individuals in family, mean (SD)	3.5	(1.5)	3.9	(2.2)	0.06
Per capita income ($ Reais), mean (SD)	508.8	(434.1)	383.7	(389.2)	< 0.01
Religion					
Catholic	89	(53.6)	95	(63.3)	
Protestant	49	(29.5)	31	(20.7)	0.003
Others	18	(10.8)	24	(16.0)	
No religion	10	(6.0)	0	(0)	
Faith believer					
Yes	156	(94.0)	150	(100)	0.002
No	10	(6.0)	0	(0)	

suspicion and confirmation, negative feelings stand out in both capital cities. At the moment of pregnancy interruption, a reassessment of the choices made (either by the pregnancy or its interruption) and the perspective of future is inevitable and confronts the woman with the prospect of emptiness (even if momentarily), loss and death.

The belief that the woman who does not bear healthy children escapes the imposed cultural standard, as society expects all women to have children, considering that biologically, women have a maternal 'function', which includes protecting, nourishing and sheltering the child. Deviations from these internal requirements trigger the guilt, as demonstrated in part by the women interviewed in this study.

Table 2 – Experiences of the women undergoing abortion according to the city where the study was carried out

	São Paulo (SP) n = 166		Natal (RN) n = 150		p
Type of abortion					
Spontaneous	146	(88.0)	139	(92.7)	0.223
Induced	20	(12.0)	11	(7.3)	
Feelings when pregnancy was suspected					
Positive	60	(36.2)	70	(46.7)	
Negative	47	(28.3)	42	(28.0)	
Ambivalent	17	(10.2)	10	(6.7)	0.003
Not specified	31	(18.7)	9	(6.0)	
Learned about the pregnancy at the diagnosis of abortion	11	(6.6)	19	(12.7)	
Feelings when pregnancy was confirmed					
Positive	68	(41.0)	70	(46.7)	
Negative	39	(23.5)	31	(20.7)	
Ambivalent	21	(12.7)	22	(14.7)	0.013
Not specified	27	(16.3)	8	(5.3)	
Learned about the pregnancy at the diagnosis of abortion	11	(6.6)	19	(12.7)	
Guilt					
No	120	(72.3)	115	(76.7)	0.447
Yes	46	(27.7)	35	(23.3)	
What would you do in case of a new pregnancy?					
The same	74	(44.6)	54	(36.0)	
Different	87	(52.4)	85	(56.7)	0.100
Do not know	5	(3.0)	11	(7.3)	
Did you have any support when you underwent the abortion?					
Yes	142	(85.5)	124	(82.7)	0.586
No	24	(14.5)	26	(17.3)	
What was the partner's behavior in the situation of abortion?					
Satisfactory	98	(59.0)	93	(62.0)	
Unsatisfactory	15	(9.0)	9	(6.0)	0.576
Did not learn about the abortion	27	(16.3)	29	(19.3)	
Not specified	26	(15.7)	19	(12.7)	
Reported being submitted to violence					
No	128	(77.1)	125	(83.3)	
Yes, unrelated to the abortion	25	(15.1)	17	(11.3)	0.378
Yes, related to the abortion	13	(7.8)	8	(5.3)	

The sociodemographic differences found in the two groups confirm the care complexity of the SUS patient as the National Health Program and reinforce the influence of the geographical dimension of Brazil. Although this study has found significant differences in age, gestational age at the abortion, work activity, family income, *per capita* income, religion and faith belief between the two groups of women, the data cover the ranges specified in other studies[17].

In public services, the lack of beds in public hospitals and high demand for obstetric care often affect the quality of care provided to women undergoing abortion, which may contribute to the occurrence of depression. One expects that many of these women overcome, in time, their

Table 3 – Depression symptoms assessed by PRIME-MD in women undergoing abortion according to the city where the study was carried out

Symptoms	São Paulo (SP) n = 166		Natal (RN) n = 150		p
	n	(%)	n	(%)	
Insomnia or hypersomnia	100	(60.2)	113	(75.3)	0.006
Fatigue or energy loss	87	(52.4)	108	(72.0)	< 0.001
Appetite decrease or increase	89	(53.6)	122	(81.3)	< 0.001
Loss of interest in daily routine activity	72	(43.4)	79	(52.7)	0.124
Depressed mood	62	(37.4)	69	(46.0)	0.149
Feelings of worthlessness or guilt	53	(31.9)	43	(28.7)	0.612
Decreased concentration	41	(24.7)	69	(46.0)	< 0.001
Agitation or psychomotor retardation	51	(30.7)	80	(53.3)	< 0.001
Recurrent suicidal thoughts	15	(9.0)	22	(14.7)	0.168
Diagnosis of major depression	54	(32.5)	76	(50.7)	0.002

emotional adversites; and that the managers of the public health system guarantee conditions that allow full attention to women's health, both physically and mentally.

The importance of the study focusing on the comparison between two different capitals is due to the possibility of observing the phenomenon of abortion as a useful source of information to understand the quality of abortion care throughout the country, especially its variability by region.

The state of Rio Grande do Norte has 3,136 SUS admissions due to abortion and the state of São Paulo, 47,942[18]. Variations in the number of hospital admissions caused by abortion between states and regions, follow, in a certain way, the situation of income and access to health services[19].

The psychological experience of women, in the situation of abortion, is not a uniform one, as it varies depending on personal characteristics, events that are associated with the pregnancy, the life circumstances and relationships at the time of abortion[2]. In the present study, the sociodemographic characteristics of the studied populations differ regarding maternal age, occupation, personal and family income and the distribution profiles of religion and faith belief, showing differences in life circumstances. These characteristics in the studied parameters might be related to differences in the abortion experience of women studied in the capitals, as well as the diagnosis of major depression.

In Natal, women who underwent abortion are younger, with lower family and *per capita* income, with a higher proportion of unemployed women. That shows a situation of greater social vulnerability, which culminates with a higher frequency of depressive symptoms. The context also shows lower religiosity among the women interviewed in São Paulo, which can be associated with a more pragmatic view of the aspects of life. In the city of Natal, women are more religious, which corroborates other studies that show a higher concentration of Catholic women in northeast Brazil[1]. Although not significantly different, the magnitude of the proportion of induced abortions is higher in São Paulo.

Additionally, in the city of São Paulo (SP), there was greater difficulty for women to express their wishes regarding the suspicion or confirmation of pregnancy, with unspecified feelings when confronted with the possibility of motherhood. These attitudes may be related to the lifestyle of society in large cities, where the woman's role has been redefined in contemporary times.

Abortion is associated with high rates of both positive and negative emotional reactions. However, in a study by Menezes et al.[20], the negative reactions to abortion were associated with subsequent mental health disorders and mental disorder rates that were 1.4 to 1.8 times higher than among those who had not reported abortion. In the analysis of symptoms associated with major depression, this study revealed that symptoms of fatigue or loss of energy, and appetite alterations were less frequent in women from São Paulo (SP). This aspect can be related to the dynamics of life in this city, where body awareness is relatively less intense in the face of activities of individuals living in this big city. The same occurred in relation to the decreased concentration, agitation or psychomotor retardation, symptoms present in proportionately more women interviewed in Natal (RN).

In Brazil, the Law only permits abortion in a few exceptional cases: when there is no other way of saving the life of the mother and in pregnancies resulting from sexual violence. However, other reasons may lead the woman to intentionally interrupt the pregnancy. Usually, this option

involves private and individual arguments, generally based on social, economic and emotional questions, but sometimes it is permeated by domestic or sexual violence[21-23]. This study found a significant proportion of women that reported having experienced a situation of violence, related or not to the abortion. There was no difference between the studied cities, which indicates the importance of active investigation of these aspects in our society, as violence permeates human relationships. Often health professionals can play an important role in identifying factors associated with mental health problems, so that full healthcare can be guaranteed to the women.

It is noteworthy that many studies of psychological disorders related to abortion have methodological difficulties in preparing the comparison groups, in the control of confounding variables, and evaluation of previous reproductive history. The comparison between studies has also shown to be difficult, due to sampling differences, the diversity of measures related to mental health assessment and the moments in which interviews are carried out in relation to the occurrence of abortion[24].

Studies on abortion allows proposals for new public health policies, as they portray the recurring character of this phenomenon and allow the understanding of the problem as a matter of women's health, which requires special care and specific attention to minimize the physical, emotional and social complications arising from it. Although there was no difference between the emotional and social aspects in the comparison between the two capitals, there was a high proportion of women with major depression, more frequent in the city of Natal than in São Paulo. This demonstrates the importance of psychosocial support in the women's healthcare system.

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