Original Article

Psychological Consequences of Abortion among the Post Abortion Care Seeking Women in Tehran

Abolghasem Pourreza, PhD[1]
Aziz Batebi, MD[2]

1 Department of Health Economics and Management, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran
2 Department of Health Education & Promotion ,School of Public Health ,Tehran University of Medical Sciences, Tehran, Iran

Corresponding author:
Aziz Batebi, MD
Assistant Professor, Department of Health Education & Promotion, School of Public Health , Tehran University of Medical Sciences, Tehran, Iran.
Postal Code: 39817-33854
Tel: +982188989128
Fax: +982188989129
Email: batebiaz@sina.tums.ac.ir

Objective: abortion either medical or criminal has distinctive physical, social, and psychological side effects. Detecting types and frequent psychological side effects of abortion among post abortion care seeking women in Tehran was the main objective of the present study.
Method: 278 women of reproductive age (15-49) interviewed as study population. Response rate was 93/8. Data collected through a questionnaire with 2 parts meeting broad socio-economic characteristics of the respondents and health- related abortion consequences. Tehran hospitals were the site of study.
Results: The results revealed that at least one-third of the respondents have experienced psychological side effects. Depression, worrying about not being able to conceive again and abnormal eating behaviors were reported as dominant psychological consequences of abortion among the respondents. Decreased self-esteem, nightmare, guilt, and regret with 43.7%, 39.5%, 37.5%, and 33.3% prevalence rates have been placed in the lower status, respectively.
Conclusion: Psychological consequences of abortion have considerably been neglected. Several barriers made findings limited. Different types of psychological side effects, however, experienced by the study population require more intensive attention because of chronic characteristic of psychological disorders, and women's health impact on family and population health.

Keywords: *Abortion, Pregnancy complications, Psychology, Women health*

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Abortion is the removal or expulsion of an embryo or fetus from the uterus, resulting in, or caused by its death. This can occur spontaneously as a miscarriage, or be artificially induced through chemical, surgical or other means (1, 2). Commonly, abortion refers to a procedure induced at any point during pregnancy. Medically, it is defined as a miscarriage or induced termination of pregnancy before twenty weeks of gestation, whenever the fetus is considered to be nonviable (3).

Abortion is classified as either spontaneous or induced. Spontaneous abortion which is also called miscarriage mainly occurs due to accidental trauma or natural causes, such as structural and numerical chromosome aberration, chronic diseases coincident with pregnancy, and environmental factors. Induced abortion is deliberately/intentionally performed. Induced abortions are further subcategorized into two categories of therapeutic and elective abortions. (2, 4)Induced abortion has been a controversial issue through the ages; anthropologists have found evidence of its existence in every known culture.

The earliest records of recognized abortifacients (agents which cause the premature termination of pregnancy) which are presumed to have been written more than 4500 years ago are found in ancient Chinese texts. In ancient Greece also, philosophers had accepted abortion as a permissible act to put an end to an unwanted pregnancy or to control population. Reflecting a variety of religious, social, and political forces, laws and regulations permitting or restricting abortion have been enacted over the centuries (5).

Abortion is known as a main cause of maternal mortality, life threatening complications such as hemorrhage, fever, and infection on one hand, and psychological disorders such as regret, guilt, smoking, alcoholism, self-destructive behaviors, and even suicide on the other(6 **,** 7, 8).

There are too many factors attributed to the abortion which cover socio-economic, emotional, and psychological aspects of human beings' life, particularly those women as direct beds of abortion practices. However, the conclusion of studies do not indicate a linear relation between abortion and its consequences, rather, they show great variations in terms of socio-economic and demographic variables of abortion in care seeking women, and whether their abortion was performed legally or illegally (9). However, the psychological consequences of abortion

was also affected by the quality of family life, number of children, planned or unplanned pregnancy, beliefs and genetics (10, 11).

Abortion as an aspect of reproductive behavior is defined and characterized by different bio psycho-social determinants. Despite the fact that abortion has been practiced over the world throughout the history, there are still controversies about abortion in terms of its legitimacy and consequences (12).

Since abortion is a legally and religiously prohibited phenomenon in Iran, there is no reliable data on the prevalence of abortion in this country. However, a study conducted in Teheran before the Islamic revolution, has found out that out of 16.707 pregnancies reported by 4209 women, 243 (1.5%) resulted in stillbirths and 1834 (11%) in abortions (13). Another study about abortion among households of a central neighborhood of Teheran from anthropological perspective revealed that abortion was as a prevailed behavior among women in spite of their beliefs and intentions (14). Proceedings of a Seminar held in Kermanshah (2002) on "Comprehensive Analysis of all Aspects of Abortion in Iran", present some useful information about abortion. Physiological effects of abortion are in fact rarely studied in Iran, particularly in the last three decades.

Pros and Cons of abortion attribute positive and negative emotional and psychological consequences to abortion.

Pros of abortion rely on studies which indicate that emotional responses to legally induced abortion are largely positive. They also point out that emotional problems resulting from abortion are rare and less frequent than those following childbirth (15*)*. They emphasize that the most studies in the last two decades have found abortion to be a relatively benign procedure in terms of emotional effect, except when pre-abortion emotional problems exist or when a wanted pregnancy is terminated (16 , 17).

In fact in many occasions, abortion is seen as a positive coping mechanism which provides relief as emotional reaction for most women particularly when it is practiced during first-trimester of pregnancy.

On the other hand, opponents of abortion, emphasize on negative emotional-psychological consequences of the abortion. From their point of view, abortion may cause psychological problems such as smoking, drug abuse, eating disorder, depression, attempted suicide, guilt, regret, nightmare and decreased self-esteem (18).

In many cases, the request for termination of an unplanned pregnancy is an evidence of a lack of knowledge of contraception, failure to use an effective method or failure of the methods. A good family planning seeks to reduce the number of unplanned pregnancies and evidence suggests that abortion rates are lowest in those countries with a comprehensive system of sex education and contraceptive services (9). However, abortion either as a miscarriage or as a criminal termination of a fetus life produces physical, social, and psychological consequences which may last for a long period of time, and affect personal, family, and social life of individuals. The aim of this study was to identify psychological consequences of abortion among women who were seeking for abortion or post abortion care in Tehran's hospitals.

Materials and Method

The present study is a descriptive and cross-sectional one, and aims to clarify the psychological consequences of abortion in the study population. Socio-economic and demographic characteristics of women who experienced abortion had been explored and studied. The socio-economic and demographic characteristics of the husbands of the sample were also taken into account in order to have a broader view of men's roles in family structure, decision making, and performance .

Study Sites

General and Maternity hospitals, from different sectors (public and private), in Tehran were determined as sites of data collection. Shariati and Valie-asr as university hospitals, Mirza Koochak khan, Rooeentan Arash, and Hedayat as Maternity complexes, Baharloo, Milad and Pasteurno as general hospitals were selected for this purpose. Coordination with administrators and managers as well as nursing departments of these hospitals was made ,and interviewers started to complete the questionnaire with eligible respondents. On the whole, 261 questionnaires have been completed. Because of several, mainly administrative, barriers to access the abortionees, an attempt has been made to select cooperating hospitals. As a bias prevention strategy, different hospitals with different affiliations located in different parts of Tehran were selected for the study .

Study Population and Sampling

Women of age 15-49 who referred to Tehran's hospitals, (public and private), and had experienced abortion at least once in their reproductive life have been considered as the study population. There were 261 women with above mentioned characteristics that constituted the study population. Out of the whole respondents (278), there were 17 who did not appropriately respond to the questionnaires. Therefore, their questionnaires were excluded from the study (Response rate=%93/8). Table 1 demonstrates the distribution of the respondents in different hospitals.

Data collection instrument

Data collection was carried out through a questionnaire which consisted of two parts. The first part included 32 questions about socio-economic and demographic characteristics of the respondents and their spouses as well. This part also includes a number of questions which meet some characteristics of original family and

Table 1. Number of respondents in different hospitals

Name of hospital	Number of respondents
Mirza Khochek Khan	50
Rooeentan Arash	46
Hedayat	23
Shariatee	104
Pastorno	21
Milad	17
Baharloo	10
Vali-e-asr	7
Total	278

abortion related behavior of the respondents.

The characteristics of abortion service providers, existing and ideal family size, sex of the aborted fetus, the place of first abortion performed, group or individuals consulted either for abortion or for "post abortion" care, and temporary marriage (whether or not resulted in pregnancy and child delivery), were other questions which were asked from the respondents.

The second part of the questionnaire included 21 questions prepared in Lickert scale format on physical, psychological, and social consequences of abortion; of which, 10 belonged to psychological consequences attributed to abortion. The questionnaire was developed based on a vast global literature review, and consulting experts on women's health, and also on sociology and psychology disciplines. The questionnaire was piloted and then validated in terms of its content.

The respondents were asked to mark the most relevant option (too much, sizeable, few, much less, nothing) as determined for consequences. The independent variables included in the study were education, occupation, and the age of spouses, fields of study, age at first marriage, age at first abortion, marital status, temporary marriage, family size, and ideal family size, frequency of abortions experienced, reasons for abortion, and psychological consequences of abortion experienced by the respondents.

Results

Socio-economic and demographic characteristics:

According to the respondents, a large proportion of them (68.3%) were aged 20- 35 years. In other words, they were in their healthy reproductive years of life. Approximately, one- third of the respondents had experienced abortion out of well-known healthy years of pregnancy (20-35 years), (6.5% under 20 and 25.3% above 35 years). Respondents in the age group of 26-30 were the largest group of the study population (28.4%), while the group under 20 remained the smallest (6.5%).

A gap of age was observed between the respondents and their husbands. Unlike the respondents, none of their husbands were placed in the age group of under 20, while most of them (44.1%) were included in the upper limit age group (36 and more). Table2 demonstrates age distribution of the respondents and their male counterparts.

As expected, the majority of the respondents were married and living with their husbands (98.1%), and only 1.9% were widow or single. The respondents and their husbands were mainly Tehran born citizens (55.2% and 49.8% respectively); and close to 70% of the participants had high school and tertiary level education. There was not a large gap between spouses in terms of their tertiary educational attainments.

More than 70% of the respondents were housewives, and about 25% civil servants. Early marriage seems to be a dominant position among the respondents. Slightly more than 50% of the participants (50.6%) married when they were under 20 years of age. The findings revealed that 36.4% and 11.5% of the respondents married in the age 21-25 and 26-30 respectively; and only 5% had experienced multiple marriages (twice), and 5.7% temporary marriage. Among the latter, only 1.9% had delivered a child.

More than 80% of the respondents belonged to a small family (2 or less children). Respondents with no children constitute the largest proportion of the study population (36.8%). About 75% of the respondents experienced abortion just once. 18.4% and 6.9% of the respondents practiced abortion for 2 and 3 times respectively. 79% of the respondents have experienced their first abortion when they were 20 to 35 year old, and only 21% went through with abortion during inappropriate ages for pregnancy (<20 and >35). The respondents considered two children with opposite sex as an ideal sex composition for a family. On average, 63% of the respondents supported one child of each sex as a preferred family structure.

Age and abortion

The findings revealed that 50% of the abortions belonged to those respondents who married at their 20s' or those under 20 years of age (early marriages). The number of abortions has been increased parallel to the decrease of age at first marriage among the respondents (Table 3).

Hospitals were the main sites for abortion related services, and 64.8% of the respondents practiced abortion in hospitals. However, close to one-forth of the study population (24.5%) aborted their children at home ,and 9.2% at physicians' offices. Only 1.5% of the respondents reported "other options" as the place they employed to conduct the abortion.

Table 2. Age distribution of the respondents and their husbands

Age group (year)	Respondents		Their husbands	
	No	%	No	%
20 or less	17	6.5	-	-
21-25	67	25.7	24	9.2
26-30	74	28.4	58	22.2
31-35	37	14.2	64	24.5
36 and more	66	25.3	115	44.1
Total	261	100	261	100

Although "Hospitals" and "Clinics" have been indicated as the most referred institutions for abortion , and abortion related service providers (64.7% and 9.1%) respectively by all age groups of the respondents ((74%), still nearly one-quarter of the respondents conducted abortion at home. This could be an alarming indication of unsafe abortion with frequent undesirable consequences (Table 4).

Respondents in all age groups indicated "spontaneous" abortion as the main reason for abortion they practiced (45.2%). Fetus and mother's health with 22.2% and 16.4% (respectively) were known as the second and third most important reasons for abortion. Sex preference stayed on the forth step as a reason for abortion (7.3%). Poverty, family size, and incompatibility of the spouses, were not considered as important as sex preference alone.

Table 3. Age at first marriage and abortion.

Age at first marriage	Age at first abortion											
	20 or less		21-25		26-30		31-35		36 and more		Total	
	N0	%	N0	%	N0	%	N0	%	N0	%	N0	%
20 or less	39	100	58	55.2	20	27	10	37	5	31.2	132	50.6
21-25	0.00	0.00	43	40.9	43	58.1	3	11.2	6	37.5	95	36.5
26-30	0.00	0.00	4	03.9	11	14.9	12	44.4	3	18.8	30	11.5
31-35	0.00	0.00	0.00	0.00	0.00	0.00	2	7.4	0.00	0.00	2	0.7
36 and more	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2	12.5	2	0.7
Total	39	100	105	100	74	100	27	100	16	100	261	100

Table 4. Age at first marriage and Place of abortion practiced

Age at first marriage	Place of abortion practiced									
	Home		Hospital		Clinic		Other		Total	
	No	%	No	%	No	%	No	%	No	%
20 or less	39	60.9	73	43.2	17	70.8	3	75	132	50.6
21-25	16	25	72	42.6	7	29.2	0	0.0	95	36.4
26-30	7	10.9	22	13.0	0	0.0	1	25	30	11.4
31-35	1	1.6	1	0.6	0	0.0	0	0.0	2	0.8
36 and more	1	1.6	1	0.6	0	0.0	0	0.0	2	0.8
Total	64	100	169	100	24	100	4	100	261	100

Table 5. Distribution of Psychological consequences of abortion among the respondents.

Psychological consequences of abortion experienced by the respondent	Frequency													
	Too much		Considerable		Little		Too little		Symptomatic		Asymptomatic		Total	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Depression Depression	16.	6.1	43	16.5	63	24.1	36	13.8	158	60.5	103	39.5	261	100
Worry to About being pregnant	46	17.6	39	14.9	42	16.1	13	5	140	53.6	121	46.4	261	100
Eating disorder disorder	5	1.9	19	7.3	48	18.4	55	21.1	127	48.7	134	51.3	261	100
Decreased self esteem Self-esteem	11	4.2	34	13	29	11.1	40	15.3	114	43.7	147	56.3	261	100
Nightmare	7	2.7	22	8.4	40	15.3	34	13	103	39.5	158	60.5	261	100
Guilt	8	3.1	18	6.9	31	11.9	41	15.7	98	37.5	163	62.5	261	100
Regret	10	3.8	17	6.5	24	9.2	36	13.8	89	33.3	174	66.7	261	100
Attempted suicide suicide	0	0	3	1.1	5	1.9	3	1.1	11	4.7	250	95.8	261	100
Smoking disorder	0	0	1	0.4	2	0.8	4	1.5	7	2.7	254	97.3	261	100
Drug abuse	0	0	0	0	0	0	4	1.5	4	1.5	257	98.5	261	100

Psychological consequences of abortion

Smoking, drug abuse, eating disorder, depression, attempted suicide, guilt, regret, nightmare, decreased self-esteem, and worry about not being able to conceive again were the questions asked from the respondents as the psychological consequences of abortion. At least one-third of the respondents have experienced one of the above mentioned psychological side effects (except suicide, drug abuse and smoking). “Depression” and “worry about not being able to conceive” and “eating disorder” were reported as dominant psychological consequences of abortion among the respondents with 60.5% and 53.6% and 48.7%, respectively. “Decreased self-esteem” (43.7%), “nightmare” (39.5%), “guilt” (37.5%), and “regret” (33.3%) have been placed in the lower steps respectively (Table 5).

Discussion

Age at marriage is known as a strong demographic variable with significant implications on health of mothers and their children. Abortion, as a birth preventive strategy may develop correlation with age at marriage. Findings of the present study demonstrated that abortions were mostly practiced among the youngest age groups.

Although there is a legal permission for abortion for specific reasons, the distribution of consultants for abortion and post abortion care indicate that abortion seems to be still a hidden phenomenon practiced out of family and the family of origin supervision. Nearly one-quarter of the respondents conducted abortion at home (Table 3). This could be an alarming indication of unsafe abortion. The main reason for abortion among the respondents belongs to “spontaneous abortion”. Spontaneous abortion has been practiced by (45.2%) of the respondents.

Fetus and mother health with 22.2% and 16.4% frequency rates (respectively) were known as the second and third most important reasons for abortion.

The sex preference stayed on the forth step as a reason for abortion (7.3%).Whatever the reason and frequency of abortion, the findings have indicated that there was no sizeable knowledge about the consequences of abortion among all age groups of respondents.

Findings revealed that at least one-third of the respondents have experienced one of the psychological consequences of abortion (except suicide, drug abuse and smoking), and they are demonstrated in Table 4.

The commonest psychological consequences of “Depression, 60.5%” and “Worry about not being able to conceive, 53.6%”, which were experienced by the respondents indicate two more points. The first is that the respondents were unhappy and unsatisfied with abortion, though they did not seek intended and somehow criminal abortion. The second point is that loosing the capability to conceive a child seems to be a major concern for women, perhaps because of stigmas attached to infertility, and infecund women as reproduction of children in a hierarchical male dominated community may help to stabilize newly formed families, and to promote the social status of new mothers.

On the whole, the respondents suffered more psychological side effects than physical or social. It seems plausible that due to advances in medical technology and education, physical consequences of abortion decrease. Nevertheless, psychological consequences of abortion which refer mainly to very personal understanding and feelings of abortion practiced by individuals may be rooted in depths of the individuals' mind and conscience.

The major barriers for abortion studies in general and for the present study in particular, were lack of national data and literature as well as illegal and sinful characteristics of abortion itself, which force abortionist to avoid collaboration and project their very deep fillings about their own behavior in this respect.

Conclusion

intensive attention because of chronic characteristic of psychological disorders, and women's Psychological consequences of abortion have considerably been neglected in a community which has sinful and illegal look to abortion. lack of data and relevant literature together with other several barriers such as limited access to available sources of information, or cultural barriers which attach stigmas on psychological disorders and abortion, made findings limited. Different types of psychological side effects, however, experienced by the study population require more health impact on family and population health

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