A Cross-Sectional Study of the Psychosocial Problems Following Abortion

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ABSTRACT

Background: Twenty percent of pregnant women undergo an abortion. Reviews of previous studies on the effects of abortion on mental health have been inconclusive. Little research has been carried out in this direction in our country. Aims: This study aims to study the psychological effects of abortions and the associated sociodemographic and other parameters.

Setting and Design: It is a cross-sectional study, conducted in five different government hospitals of Hyderabad. Materials and Methods: After identifying the participants, an interview was conducted. First, sociodemographic and other parameters were collected by an interviewer. Then, another interviewer conducted the interview using diagnostic tools (Impact of Events Scale-Revised [IES-R] and Goldberg Health Questionnaire-12 [GHQ-12]). Analysis was carried out using SPSS software.

Results: Sixty cases of spontaneous abortion, 31 therapeutic and 9 elective abortions, were collected. Overall, on GHQ-12, 57% women had no distress, 11% had typical distress, while 14% had more than typical distress, 15% had psychological distress, and 3% of them had severe distress. On IES-R, 16% women had little or no symptoms of posttraumatic stress disorder PTSD, 57% had several symptoms, while 27% of them were likely to have PTSD.

Conclusions: Women who underwent elective abortion showed less distress than the other types. Those that underwent a late abortion were more likely to suffer from psychological distress than those having an early one. The medical history was a significant factor in determining the mental health outcome of the women who underwent abortion.

Key words: Abortion, India, posttraumatic stress disorder, psychosocial problems

INTRODUCTION

One in every five pregnant women has an abortion. This is quite a significant factor. In addition, there is an increased risk of abortion in developing countries in comparison to developed countries.[1]

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How to cite this article: Kotta S, Molangur U, Bipeta R, Ganesh R. A cross-sectional study of the psychosocial problems following abortion. Indian J Psychiatry 2018;60:217-23.
In an elective abortion, a woman chooses to terminate her pregnancy by virtue of her own will. They may be stable and content but have not finished their education or already have the number of children they desire. This category also includes women who have abortions because of financial difficulties or unstable relationships. Nevertheless, the discovery of the pregnancy can be a shock, and the period prior to the abortion can be distressing. The process of deciding to have an abortion can be difficult, and the reason for electing to have an abortion can affect the psychological responses after the event.[3]

In either type of abortion, the mother may feel guilty or ashamed of herself, assuming her own actions/neglect to be the cause.[4]

Several research studies have previously been conducted on the effects of abortion on mental health, though reviews have been inconclusive.[5] Some studies lean toward the inference that women do have an increased risk of psychological problems following an abortion,[6-8] whereas some state outright that postabortion syndrome (an unofficial variant of posttraumatic stress disorder [PTSD]) and other long-term psychiatric effects do not exist significantly.[1,4]

There is little literature published on the mental health outcomes of women after second-trimester abortions. Awareness that the fetus has developed completely, increased bonding with the fetus, increased desire to continue the pregnancy, etc., may be reasons for more serious psychological issues arising after late abortions.[9]

Previous studies have called for further research into related topics to gain a stronger insight into the mental health outcomes after abortions.[10] In India, the pressure of myths and society may add to women’s distress. Contrasting between the psychological outcomes of the two types may retrieve relevant risk factors for the development of psychosocial problems in a woman postabortion. Little research has been carried out in India on the psychological health of a woman postabortion, in spite of the factors that differentiate the possible results from other countries.

Objectives
1. To assess the psychological health of women following an MTP and a spontaneous abortion
2. To study the risk of PTSD in a woman after an abortion
3. To study the associated sociodemographic and other parameters.

MATERIALS AND METHODS

Prior approval from the Institutional Ethics Committee was taken before beginning the collection of data.

Study design
This was a cross-sectional study.

Inclusion criteria
Women of 18–45 years of age who have undergone an abortion were included in the study.

Exclusion criteria
Women with psychiatric disorders, mental retardation, and those who do not consent were excluded from the study.

Study setting
The study was conducted in the obstetrics and gynecology departments of five government hospitals in Hyderabad, which are attached to medical colleges.

Sampling
The study sample included all consecutive women fulfilling inclusion criteria, who have come to the hospital for MTP or after miscarriage, during July, August, and September of 2015.

Study tools
1. Intake proforma: This was a semi-structured questionnaire that gathered various details regarding the present abortion undergone, sociodemographic parameters, beliefs related to abortion in general, existing children, previous abortions, self-evaluation of discomfort undergone, particulars that made a lasting impact on the individual during the procedures undergone at the hospital, other health problems that may affect the patient’s mental health, and other anticipated risk factors. Previous psychiatric health and substance history of the patient were also taken into account
2. Goldberg General Health Questionnaire-12 (GHQ-12).[10] Introduced by Goldberg, this particular scale consists of 12 questions. It is a quick, reliable, and sensitive short form. It tests for nonspecific psychiatric morbidity. The questions are rated from 1 to 4, with 1 being “Often” and 4 being “Never.” Results obtained from assessments of psychological well-being can be useful in understanding various sources of distress, as well as any predisposing factors. The score obtained is grouped into five classes, determining the distress of the patient. It focuses on two main areas: the inability to carry out normal functions and the appearance of new and distressing phenomenon
3. Impact of Events Scale-Revised (IES-R).[21] This is a questionnaire made by Weiss and Marmar, mainly targeted at diagnosing PTSD according to the DSM-IV criteria. Items are rated from 0 (“not at all”) to 4 (“extremely”). The IES-R yields a total score (ranging from 0 to 88). The total scores may be interpreted into three groups of results. Subscale scores can also be calculated for intrusion, avoidance, and hyperarousal. The intrusion subscale includes items related to intrusive thoughts, nightmares, intrusive feelings, and imagery associated with the traumatic event.
avoidance subscale has eight items such as numbing of responsiveness and avoidance of feelings and situations. The new items of the hyperarousal scale added in the revised version of IES help measure hyperarousal symptoms, for example, anger and irritability, heightened startle response, difficulty concentrating, and hypervigilance.

Data collection
The patients were first identified from the hospital wards. Written consent was taken, and then a face-to-face interview was conducted by us in the language of the patient’s convenience. The objective details (status of abortion, number of previous abortions, medical history, etc.) were cross-checked in their case sheets. First, sociodemographic and other parameters were collected by an interviewer.

Then, the elements of the diagnostic tools were asked verbally by another interviewer. Thus, the interviewer did not influence the patient’s answers due to bias due to expectation of grief based on the type of abortion.

Statistical analysis
The information thus obtained was entered into an MS Excel sheet (MS Excel (2013) Microsoft). Analysis was carried out using SPSS IBM Corp. Released 2013. IBM SPSS Statistics for Windows, (Version 22.0. Armonk, NY, IBM Corp). software. All the sociodemographic parameters were analyzed in simple proportions and the information from the tools (GHQ-12 and IES-R) was cross-tabulated to find the association of mental health issues in relation with sociodemographic parameters.

RESULTS
In the current study, we took 100 Indian women in the age group of 18–35 years. Of the 100 women, 63 (63%) were of the younger age group, 28 (28%) were of the middle age group, and nine (9%) were of the older age group.

Sixty-two (62%) women were Hindu, six (6%) were Christian, and 32 (32%) were Muslim.

All the 100 women were married and had no previous psychiatric history.

Half of the population stayed in a nuclear family and the other half in a joint or extended type of family. For the purpose of this study, joint and extended types were classified as a single category.

Twenty-six (26%) women were illiterate, nine (9%) had completed primary school, 29 (29%) had finished secondary school, 20 (20%) had finished higher secondary school, and nine (9%) were graduates. Eighty-one (81%) women were homemakers and two were unemployed. Twelve (12%) were laborers and four (4%) were semi-skilled workers. Only one woman was a professional.

Twenty-three (23%) women were of lower middle socioeconomic status, while 77 (77%) were of the upper middle class.

Sixty (60%) cases of spontaneous abortion, 31 (31%) of therapeutic, and nine (9%) of elective abortion were collected from five different government hospitals in the city of Hyderabad.

As shown in Figure 1, the women were also asked to rate their discomfort on a scale of 1–4. Nine (9%) women claimed to have undergone no discomfort. Thirty-four (34%) reported mild discomfort, 36 (36%) moderate, and 21 (21%) felt that they underwent severe discomfort.

Everyone was asked to list the particulars that may have troubled them. As seen in Figure 2, eighty-seven (87%) women felt that there was nothing in particular that left a disturbing impact on them. Four (4%) were disturbed by the behavior of staff toward them, while six (6%) were troubled by overcrowding in the hospital. Another three (3%) were affected by excessively long waiting period before being attended to by the doctors.

After the procedure, 95 (95%) women were confined to bed rest. One woman felt that she had gone back to work too soon after her abortion. Four of them were put through other medical tests or procedures. This was not a statistically significant factor in the determination of risk of mental disease.

Seventy-three (73%) women reported no other medical history. Sixteen (16%) of them had hypertension, two (2%) had hypothyroidism, three (3%) had seizures, two (2%) had AIDS, and three (3%) had anemia. One (1%) woman had more than one problem.

Five (5%) women had a habit of drinking alcohol or toddy, whereas 95 (95%) claimed to have no substance history at all. This was not statistically significant.

The mean GHQ score for elective abortions was 5, for spontaneous abortion, it was 10.9, and 10.03 for therapeutic abortions.

Overall, as shown in Figure 3, on GHQ, 57 (57%) women had no distress. Eleven (11%) had typical distress, while 14 (14%) had more than typical distress. Fifteen (15%) had psychological distress, and three (3%) of them had severe distress.

As seen in Figure 4, the mean IES score for elective abortions was 12.22, for spontaneous type, it was 25.57, and for therapeutic abortions, it was 26.26.
On IES, 16 (16%) women had little or no symptoms of PTSD. Fifty-seven (57%) had several symptoms, while 27 (27%) of them were likely to have PTSD. On a scale of 0–4, the mean IES intrusion score was 1.1, avoidance score was 1.4, and hyperarousal score was 0.8.

Eighty-six (86%) women had never undergone an abortion before the present one. For nine (9%) women, it was the second time, and it was the third time for another five (5%).

The mean IES and GHQ scores were marginally increased in women who had previously undergone a single abortion than those who had never had an abortion before, as depicted in Figure 5.

For the purpose of this study, an abortion which has occurred after the 20th week of pregnancy has been considered as “late” and before that as “early.”

As seen in Figure 6, the mean GHQ and IES scores are higher in later abortions than earlier ones.

As shown in Table 1, age group was a statistically significant factor in determining the type of abortion; women of 18–24 years were more likely to undergo a spontaneous or therapeutic abortion (were compelled to terminate the pregnancy), whereas women of 25–31 years were more likely to undergo an elective abortion than others. This may be because they felt that they already had enough children or voluntarily terminated their pregnancy due to the anticipation of financial difficulties.

Table 2 indicates that the number of previous living male children played an important role in the determination of type of abortion, probably because of the Indian ideology that a male child completes the family. Number of previous female children was not a significant factor.

Fifty-four (54%) women had no children before the present abortion.

There was no statistical significance between beliefs related to abortion and GHQ scores as shown in Table 3.

As shown in Table 4, there was a statistically significant relation between medical history and GHQ group that the postabortion women came under, probably because the present illness led to abortion and added to mental strain on the woman, causing the general mental health of the woman to deteriorate.

As shown in Table 5, the mean GHQ scores were least in elective type of abortion (5.00), indicating low psychological distress. They were more in therapeutic (10.03) and most in spontaneous type (10.9), which borders between low and typical psychological distress. IES intrusion and avoidance scores were also least in elective abortions and more in spontaneous and therapeutic abortions. Both intrusion and avoidance scores are slightly higher in therapeutic abortion.
Table 5: Relation between mean scores of all scales and types of abortion

|                  | Elective Mean SD | Spontaneous Mean SD | Therapeutic Mean SD | Total Mean SD |
|------------------|------------------|---------------------|--------------------|-------------|
| GHQ score        | 5.00 3.082       | 10.90 5.177         | 10.03 6.003        | 10.10 5.515 |
| IES (I)          | 0.11 0.333       | 1.15 0.755          | 1.19 0.749         | 1.07 0.782  |
| IES (A)          | 1.11 0.601       | 1.42 0.530          | 1.48 0.626         | 1.41 0.570  |
| IES (H)          | 0.259259 0.5144516 | 0.816667 0.7095661 | 0.827957 0.6673384 | 0.770000 0.6946081 |
| Total IES score  | 12.22 9.628      | 25.57 10.774        | 26.26 11.051       | 24.58 11.359 |

IES – Impact of Events Scale; GHQ – General Health Questionnaire; SD – Standard deviation

type than spontaneous type. Mean hyperarousal score is slightly higher in spontaneous type. The mean avoidance score is higher than intrusion or hyperarousal score in women who underwent elective abortion. Overall, women undergoing therapeutic abortion showed the highest total scores on IES.

**DISCUSSION**

The 100 women who participated in this study were all married, which is a differentiating factor from some other studies related to mental health effects on abortion.[3, 9]

In the present study, almost all the patients approached were ready to take part in the study. This may have been because we explained the objectives of the study before taking the interview, and most patients were interested in being evaluated and also in taking part in the greater good that would result from this study for women who undergo future abortions. Furthermore, it may be because we asked each patient for consent personally and they might have felt hesitant to deny it directly. Low participation rate (47%) was a limitation of some studies, which may have caused them to overestimate or underestimate their results.

Overall, 68 (68%) women had no or typical distress on GHQ scale, while 32 (32%) had more than usual distress. Of these 32 women, 14 (14%) had more than typical distress, while 15 (15%) had psychological distress and three (3%) had severe distress, according to the GHQ scale. This differs slightly from the review published by Coleman, wherein it is stated that there is an 81% increase in the risk of mental health problems after an abortion, and 10% of this can prove to be attributable to the abortion.[9]

It is in concordance with the inference that any type of abortion increases the risk of psychological disorders.[6]

The mean GHQ scores were least in elective type of abortion (5.00), indicating low psychological distress. This was probably because the abortion was a result of their own choice. They were more in therapeutic (10.03) and most in spontaneous type (10.9), which borders between low and typical psychological distress. This is in concordance to a study by Broen et al., which inferred that women who had experienced a miscarriage had more overall mental distress after a short period of time than an induced abortion.[3] It also stated that women who experienced induced abortion had significantly greater IES scores for avoidance than the miscarriage group, and the ones with a miscarriage had significantly higher IES intrusion scores than those with an induced abortion, the findings of which differ from the present study, in which both intrusion and avoidance scores were slightly more elevated in therapeutic type of abortion than miscarriage, although the scores for avoidance were greater than those for intrusion and hyperarousal in women with an elective abortion. This may be because in the previous study, induced and elective abortions were grouped as a single category.

Higher IES scores for therapeutic abortion might be since those with a therapeutic abortion might have had a threatened abortion before the loss of pregnancy and might have been taking extra precautions and measures to save their baby. The death of their baby in spite of taking extra care may have increased their risk for psychological disease.

Higher GHQ scores for spontaneous abortion could be because miscarriage arrives as a shock to the mother, while in therapeutic abortion, she has time to digest the fact that she will no longer be pregnant.

In the present study, 28.3% of women who had a miscarriage and 32% of those with a therapeutic abortion were likely to have PTSD, according to the IES scale. This is different from the previous finding, in which the proportion of women who were likely to have PTSD was 47.5% of those who underwent a miscarriage and 30% of those who underwent induced abortion.[3]

Both IES intrusion and avoidance scores are slightly higher in therapeutic type than spontaneous type. Overall, women undergoing therapeutic abortion showed the highest total scores on IES. Those undergoing elective abortion showed higher avoidance scores than intrusion or hyperarousal score. This agrees with the previous study by Fergusson et al. which stated that induced abortions are associated with slightly higher risk of psychological disorders.[6]

Coleman et al. inferred that higher symptoms of PTSD were reported in later abortions (of the second or third trimesters).
Nearly 52.5% and 67.4% in the early and late abortion groups, respectively, met the DSM-IV symptom criteria. This has been verified in the present study (mean GHQ and IES scores were higher in women with late abortions). This might be so because the increased time with the fetus resulted in increase in affection and bonding with it.

Women who had never been through an abortion experienced less distress than those with a single previous abortion, but those with two previous abortions showed less risk of mental disease than the rest of the population. This could be because having an abortion for the third time familiarizes the patient with the procedure, therefore decreasing the stress and fear associated with it. It has been previously stated that repeated abortion increases the risk for mental health problems than that of only a single abortion. Significantly higher distress was noticed in women with multiple abortions. This did not coincide with the present study.

All women were asked about their previous psychiatric history, to confirm that they did not have any diagnosed psychiatric disorder already, which would tamper with the results of the study.

Existing medical history was a statistically significant factor in determining GHQ scores of the patient, probably since the existing health problems added to the mental distress of the patient.

There was no statistical significance of beliefs of the woman. However, lower GHQ scores were observed in women who believed that the abortion was a part of God’s plan. Religion played no significant role in differentiating mental health between different women. This might be because the experience of an abortion is too distressing for beliefs or religion to provide much solace to a person. This does not coincide with the report of the American Psychological Association task force on mental health and abortion, which states that a woman’s experience of abortion may also vary as a function of her religious,
spiritual, and moral beliefs and those of others in her immediate social context.[5]

The number of existing male children was a significant factor in determining the type of abortion, i.e., women with enough male children opted voluntarily for elective abortion, though no such statistically significant factor was found for the number of existing female children. This may be a reflection of the fact that the preference for a male child still exists in India, and that many feel that a family is complete only after the birth of a male child.

In the present study, no significant difference was noticed in the IES or GHQ scores of the women who complained about prolonged waiting period, overcrowding, or misbehavior of staff toward them. This does not agree with a prior research on the administration of abortion services which suggests that counseling is often of value that distress is frequently caused by delays in deciding upon and in carrying out abortions and by unsympathetic attitudes of service providers.[13]

Some women with existing children, undergoing abortion, were concerned that they were hospitalized and could not take care of their kids for the next few days.

Behavior of staff toward the patient, activities after the surgery, beliefs related to abortion, and substance history were all factors which were expected to be significant but were not statistically so. This may be because the event of an abortion itself is distressing and the additional factors play only a small role in causing the deterioration of mental health.

Limitations
Due to the cross-sectional nature of the study, we could not establish the cause–effect relationship. Since the study involved women from a single city, generalizability may be difficult.

CONCLUSIONS
Women who underwent elective abortion seemed to far better on all scales than the other two types. This type was more likely to be opted by women who had existing male children. Therapeutic abortion candidates had higher mean IES scores, whereas spontaneous abortions were associated with marginally higher GHQ scores. Women undergoing a late abortion were more likely to suffer from psychological distress than those having an early one. Medical history was a significant factor determining the mental outcome of the patient.

Suggestions
1. Further studies could be conducted to evaluate specific risk factors for mental disease postabortion
2. Women undergoing elective abortion could be counseled
3. Families can be more strongly advised to undergo vasectomy rather than tubectomy
4. Women who have lost their fetus/baby could be kept in separate wards.

Acknowledgment
We thank Prof. Lakshman Rao, Head, department of Community Medicine, Osmania Medical College, Hyderabad, India and Prof. N. Nageswara Rao, Head, department of Psychiatry, SVR Ruia Hospital, Tirupati, India for their guidance. We sincerely thank Dr. Sameer Valsangkar, Senior Resident, department of Community Medicine, Gandhi Medical College, Hyderabad, India for the help with statistical analysis. We also thank the faculty of the various hospitals that granted permission to conduct this study.

Financial support and sponsorship
This study was funded by ICMR, New Delhi as a part of STS scholarship (Reference ID: 2015-01298).

Conflicts of interest
There are no conflicts of interest.

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