



Effectiveness of Psychological Counseling on Anxiety Levels among Post-Abortion Mothers in Primary Health Facilities

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Abstract. *Objectives:* This study aims to analyze the effectiveness of psychological counseling in reducing anxiety levels among post-abortion mothers in primary healthcare facilities in the Batam Kota District. *Methods:* This study used a quantitative pre-experimental design with a one-group pretest-posttest approach. A total of 30 post-abortion mothers were selected using purposive sampling. Anxiety levels were measured using the Hamilton Anxiety Rating Scale (HARS) before and after the intervention. The psychological counseling intervention was conducted through structured sessions focusing on emotional support, problem exploration, and coping strategies. Data were analyzed using a paired sample t-test after normality testing with the Shapiro–Wilk test. *Results:* The results showed a significant decrease in anxiety levels after psychological counseling. The mean anxiety score decreased from 25.47 (SD = 4.12) before the intervention to 17.63 (SD = 3.58) after the intervention. The distribution of anxiety levels also improved, with the majority of respondents shifting from moderate (50%) and severe (36.7%) anxiety categories to mild anxiety (53.3%) after counseling. Statistical analysis revealed a significant difference between pretest and posttest scores ($p = 0.000$), indicating the effectiveness of the intervention. *Conclusions:* Psychological counseling is effective in reducing anxiety levels among post-abortion mothers. Therefore, integrating counseling services into post-abortion care in primary healthcare settings is recommended to improve women's psychological well-being.

Keywords: Anxiety; HARS; Maternal mental health; Post-abortion; Psychological counseling

1. INTRODUCTION

Abortion is a reproductive health event that may have significant physical and psychological impacts on women (Musabwasoni et al., 2024). In addition to physical complications, women who experience abortion often face emotional responses such as sadness, anxiety, guilt, and psychological distress (Botha & Lyon, 2020; Fatin et al., 2026). Pregnancy loss can be a stressful life event that affects women's emotional well-being and mental health. According to the World Health Organization, women who experience abortion or miscarriage may develop psychological problems such as anxiety, depression, and emotional trauma if adequate support is not provided (Cuenca, 2023; Duri et al., 2025).

Globally, pregnancy loss remains a common reproductive health problem. Many women report emotional distress after experiencing abortion, particularly anxiety related to concerns about fertility and future pregnancies. These psychological reactions may interfere with women's daily activities and quality of life if they are not properly addressed (Gebeyehu et al., 2023).

Psychological responses following abortion vary depending on individual coping mechanisms, social support, and access to mental health services. Anxiety is one of the most common psychological responses experienced by women after pregnancy loss. Fear of repeated

miscarriage, uncertainty about reproductive health, and feelings of personal failure may contribute to increased anxiety among women who experience abortion (Mardiyah et al., 2025; Suryani, 2021).

In many healthcare settings, post-abortion care services mainly focus on physical recovery, such as preventing infection, controlling bleeding, and monitoring reproductive health conditions. However, the psychological needs of women are often overlooked. Lack of emotional support and counseling services may contribute to prolonged psychological distress among women after pregnancy loss (Adnin, 2023; Impe & Sulistiyah, 2026).

Psychological counseling is considered an important intervention to help individuals manage emotional stress and anxiety. Counseling provides opportunities for women to express their feelings, receive emotional support, and develop adaptive coping strategies to deal with stressful life events. Several studies have reported that counseling interventions can effectively reduce anxiety and improve psychological well-being among individuals experiencing emotional distress (Keynejad et al., 2020).

Despite the importance of psychological support, counseling services are still limited in many primary healthcare facilities. Therefore, this study aims to analyze the effect of psychological counseling on anxiety levels among post-abortion mothers in primary health facilities within the working area of Batam Kota District.

2. METHODS

Research Design

This study employed a quantitative design with a pre-experimental approach, employing a one-group pretest-posttest design. In this design, anxiety levels were measured before the intervention (pretest) and after the intervention (posttest), allowing for direct observation of changes in anxiety levels following psychological counseling.

Research Location and Time

This study was conducted at a primary health care facility within the Batam Kota District, Batam City. The location was selected based on the fact that the facility provides reproductive health services and post-abortion care for mothers. The study was conducted from March to May 2024.

Population and Sample

The population in this study was all post-abortion mothers who received healthcare services at health facilities within the Batam Kota District working area during the study period. The sampling technique used purposive sampling, a method of selecting samples based on specific criteria established by the researcher.

Inclusion Criteria: Mothers who experienced an abortion and received healthcare services at a health facility within the study area. Willingness to participate and sign an informed consent form. Able to communicate effectively. Stable physical condition after receiving abortion care

Exclusion Criteria: Mothers with severe medical complications. Respondents who did not participate in the entire series of research intervention. The sample size was calculated using the following formula for comparing two means in paired measurements:

$$n = \frac{(Z\alpha + Z\beta)^2 \times S^2}{d^2}$$

Information:

n = minimum sample size

Z α = 1.96 (95% confidence level)

Z β = 0.84 (80% power)

S = standard deviation from previous research

d = expected mean difference

Based on these calculations, the minimum sample size required was 27 respondents. To anticipate potential dropout, the sample size was increased by 10%, resulting in a total of 30 post-abortion mothers.

Research Instrument

The instrument used to measure anxiety levels was the Hamilton Anxiety Rating Scale (HARS). The HARS is a widely used measurement tool in clinical research to assess anxiety levels. The HARS consists of 14 items describing both psychological and somatic symptoms of anxiety. Each item is rated on a scale of 0–4, where:

0 = no symptoms

1 = mild symptoms

2 = moderate symptoms

3 = severe symptoms

4 = very severe symptoms

The total score ranges from 0–56, with higher scores indicating higher levels of anxiety. The anxiety levels in this study were divided into:

Score	Anxiety categories
<17	mild anxiety
18–24	moderate anxiety
25–30	severe anxiety

Before being used in the study, the instrument was tested for validity and reliability on respondents with characteristics similar to the study population. The validity test was conducted using the Pearson product-moment correlation. The test results showed that all items had a calculated r value greater than the table r (0.361), thus all items were declared valid. The reliability test was conducted using the Cronbach Alpha method and obtained an α value of 0.88, indicating that the instrument has a very good level of reliability.

Psychological Counseling Intervention

The intervention in this study was psychological counseling aimed at helping post-abortion mothers overcome the anxiety that arises after the abortion experience. Counseling was conducted by health workers with basic competencies in therapeutic communication. The counseling process involved several stages:

Rapport building: The counselor established an empathetic relationship with the respondent and created a comfortable atmosphere so that the respondent felt safe expressing their feelings.

Problem exploration: The counselor explored the respondent's emotional experiences after the abortion, such as feelings of sadness, fear, anxiety, and guilt.

Information and emotional support: The counselor provided information about common psychological reactions after an abortion and provided emotional support to the respondent.

Coping strategy development: The respondent was guided to develop positive coping strategies, such as relaxation techniques, positive thinking, and utilizing family and social support. Each counseling session lasted 20–30 minutes, and respondents received two counseling sessions per week.

Research Procedures

The research stages were as follows:

1. The researcher identified respondents who met the research criteria.
2. The researcher explained the research objectives and procedures to potential respondents.
3. Respondents who agreed to participate in the research signed an informed consent form.
4. Respondents completed a pretest questionnaire to measure their anxiety levels before the intervention.
5. Respondents were given psychological counseling intervention according to the research protocol.
6. After the intervention was completed, respondents completed a posttest questionnaire to measure their anxiety levels after counseling.

Data Analysis

Data analysis was performed using SPSS. Univariate analysis was used to describe respondent characteristics and the distribution of anxiety levels before and after the intervention. Normality testing was performed using the Shapiro–Wilk test to determine the distribution of the research data. Bivariate analysis was conducted using a paired sample t-test to determine differences in anxiety levels before and after the psychological counseling intervention. A p-value <0.05 is considered to indicate a statistically significant difference.

Research Ethics

This research adhered to ethical research principles, including respect for persons, beneficence, and justice. All respondents were provided with information about the research objectives and procedures and signed an informed consent form before participating. Respondents' identities were maintained by not including their names on the research questionnaire.

3. RESULT RESEARCH

Respondent Characteristics

The characteristics of respondents in this study included age, education level, and occupation. The distribution of respondent characteristics can be seen in Table 1.

Table 1. Respondent Characteristics (n = 30)

Characteristics	f (n)	(%)
Age		
20–25	9	30.0
26–30	12	40.0
31–35	6	20.0
>35	3	10.0
Education		
Junior High School	6	20.0
High School	17	56.7
bachelor	7	23.3
Occupation		
Housewife	18	60.0
Self-employed	7	23.3
Employee	5	16.7

Based on Table 1, the majority of respondents were in the 26–30 age group, namely 12 people (40%). In terms of education level, the majority of respondents had a high school education (17 people) (56.7%). Based on occupation, the majority of respondents were housewives (18 people) (60%).

Distribution of Anxiety Level Categories Before and After Psychological Counseling

Table 2. Distribution of Respondents' Anxiety Level Categories Before and After the Intervention (n = 30)

Anxiety Level Categories	Pre	Post
Light	4 (13,3%)	16 (53,3%)
Medium	15 (50,0%)	11 (36,7%)
Heavy	11 (36,7%)	3 (10,0%)
Total	30 (100%)	30 (100%)

Based on Table 2, before receiving psychological counseling, the majority of respondents experienced moderate anxiety (15 people) (50%). After receiving psychological counseling intervention, there was a change in the distribution of anxiety levels. The majority of respondents were in the mild anxiety category (16 people) (53.3%), while respondents with moderate anxiety were 11 people (36.7%), and severe anxiety decreased to 3 people (10%).

Average Anxiety Levels Before and After Psychological Counseling

Table 3. Average Anxiety Levels Before and After the Intervention

Variable	Mean	SD	Min	Max
Anxiety before counseling	25.47	4.12	18	32
Anxiety after counseling	17.63	3.58	12	24

Based on Table 3, the average anxiety level of respondents before receiving psychological counseling was 25.47 (SD = 4.12), which is categorized as moderate to severe anxiety. After receiving psychological counseling intervention, the average anxiety level of respondents decreased to 17.63 (SD = 3.58). This indicates a decrease in anxiety levels after receiving psychological counseling.

Data Normality Test

A normality test is conducted to determine whether the research data is normally distributed before conducting further statistical tests.

Table 4. Data Normality Test

Variable	Shapiro-Wilk	p-value
Anxiety before counseling	0.964	0.324
Anxiety after counseling	0.971	0.468

The results of the Shapiro–Wilk normality test showed that the p-values for the anxiety data before and after counseling were 0.324 and 0.468, respectively, both of which were > 0.05 . This indicates that the research data is normally distributed, so statistical analysis can be continued using the paired sample t-test.

The Effect of Psychological Counseling on Anxiety Levels

Table 5. Paired Sample t-test Results

Variable	Mean	SD	p-value
Anxiety before counseling	25.47	4.12	0.000
Anxiety after counseling	17.63	3.58	

The analysis using a paired sample t-test showed a p-value of 0.000 ($p < 0.05$). This indicates a significant difference between anxiety levels before and after psychological counseling. Therefore, it can be concluded that psychological counseling is effective in reducing anxiety levels in post-abortion mothers at health facilities in the Batam Kota District work area.

Discussion

The results of this study indicate that psychological counseling is effective in reducing anxiety levels in post-abortion mothers. This is evident from the decrease in the average anxiety score of respondents after receiving psychological counseling intervention. Before the intervention, most respondents were in the moderate to severe anxiety category. However, after counseling, there was a change in the distribution of anxiety levels, with most respondents experiencing a decrease in anxiety to a milder category. The results of statistical analysis using a paired sample t-test showed a significant difference between anxiety scores before and after the intervention ($p < 0.05$). This indicates that psychological counseling has a significant effect on reducing anxiety in post-abortion mothers.

Theoretically, post-miscarriage or abortion can have various psychological effects on women, including feelings of sadness, loss, guilt, and prolonged anxiety (Grauerholz et al., 2021). This anxiety can arise from hormonal changes, the experience of losing a fetus, and concerns about future health and reproductive abilities (Kukulskien & Žemaitienė, 2022). According to health psychology theory, the experience of loss related to pregnancy can trigger a strong emotional response so that individuals need psychological support to help the emotional adaptation process (Isaacs & Andipatin, 2020). Therefore, intervention in the form of psychological counseling is an effective approach in helping individuals manage emotions and reduce anxiety levels.

Psychological counseling is a therapeutic communication process aimed at helping individuals understand their condition, express their emotions, and find adaptive coping strategies to deal with problems (Valencia et al., 2021). Through counseling, post-abortion

mothers are given the opportunity to express feelings of sadness, fear, and guilt they may experience after losing a pregnancy (Bagheri et al., 2023). In addition, counselors also provide emotional support, health information, and stress management strategies so that respondents can develop more positive coping mechanisms (Anderson et al., 2022). This intervention can help individuals reduce psychological stress and improve their ability to cope with the situations they experience.

The results of this study are in line with several previous studies which show that psychological support and counseling can reduce anxiety levels in women who experience pregnancy loss. Previous research has reported that women who receive counseling after experiencing a miscarriage have lower levels of anxiety and depression compared to those who do not receive psychological support (Elsharkawy et al., 2021). Counseling helps individuals understand that the emotional reactions they experience are a normal response to loss, thereby reducing feelings of isolation and increasing self-acceptance of the situation.

Furthermore, other research has shown that psychological interventions focused on emotional support and strengthening coping mechanisms are effective in improving women's psychological well-being after pregnancy loss. Through counseling, women can obtain accurate information about their reproductive health and future pregnancy opportunities, thereby reducing excessive worry and fear (Alcocer et al., 2022). The information support provided during the counseling process also plays an important role in increasing self-confidence and helping individuals build positive expectations for the future.

The decrease in anxiety levels experienced by respondents in this study may also be influenced by the therapeutic communication process that occurs during counseling sessions. Empathetic communication, non-judgmental acceptance, and the opportunity to express emotions openly can help respondents feel more valued and understood. This can create a sense of psychological safety, allowing individuals to better manage the negative emotions that arise after an abortion. Emotional support provided by healthcare professionals also plays a crucial role in accelerating the psychological recovery process.

The findings of this study indicate that post-abortion health care should not only focus on physical aspects but also address women's psychological well-being. In reproductive health care practices, psychological counseling interventions can be integrated as part of comprehensive services for post-abortion mothers (Raphi et al., 2021). With adequate psychological support, it is hoped that women who experience pregnancy loss can undergo a more optimal recovery process, both physically and emotionally.

Based on the results of this study, it can be concluded that psychological counseling is an effective intervention for reducing anxiety levels in post-abortion mothers. Therefore, health workers in primary health care facilities are advised to pay greater attention to the psychological aspects of patients by providing counseling services as part of comprehensive reproductive health care. The routine implementation of psychological counseling in health care facilities is expected to improve the quality of care and support the mental well-being of women after experiencing pregnancy loss.

Research Limitations

This study has several limitations that should be considered. First, the sample size was relatively small, with only 30 respondents, so the results may not be widely generalizable to post-abortion mothers in other regions. Second, the study used a one-group pretest-posttest design without a control group, so changes in anxiety levels cannot be fully compared with those in the uninterrupted group. Third, the anxiety measurement used a self-report questionnaire, which may have influenced the subjective bias of respondents in their responses. Therefore, further research is recommended to use a larger sample size and a research design involving a control group in order to provide stronger scientific evidence regarding the effectiveness of psychological counseling in reducing anxiety in post-abortion mothers.

Research Implications

The results of this study provide important implications for healthcare practice, particularly reproductive health services in primary healthcare facilities. Psychological counseling can be an effective intervention to help reduce anxiety levels in post-abortion mothers. Therefore, healthcare professionals are expected to integrate psychological counseling services as part of comprehensive care for post-abortion mothers. Furthermore, the results of this study can also form the basis for developing psychological support programs for women experiencing pregnancy loss, ensuring that recovery focuses not only on physical aspects but also on the patient's psychological well-being.

4. CONCLUSIONS AND RECOMMENDATIONS

This study demonstrates that psychological counseling is effective in reducing anxiety levels in post-abortion mothers at health facilities in the Batam Kota District area. Anxiety scores decreased after the psychological counseling intervention, indicating an improvement in the respondents' psychological condition. Therefore, health workers in health care facilities

are advised to integrate psychological counseling as part of comprehensive services for post-abortion mothers. Future research should utilize a larger sample size and a control group design to obtain stronger results that can be more broadly generalized.

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