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Original Paper

# The Effectiveness of Adlerian Group Counseling Approach on Mother's Distress and Self-care During Pregnancy: A Randomized Controlled Trial

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## ABSTRACT

**Introduction:** Distress is the most perceived behavioral state manifested by pregnant women and can directly or indirectly increase the risk of experiencing prenatal complications.

**Objective:** The present study was conducted to determine the effectiveness of the Adlerian group counseling approach on a mother's distress and self-care during pregnancy.

**Materials and Methods:** This randomized controlled trial was conducted on 79 eligible pregnant women referred to seven community health centers in Karaj City, Iran, from March 2018 to December 2019. The eligible women were assigned to the intervention (n=40) and control (n=39) groups using the block randomization method. The intervention group (gestational age of 22-32 weeks) received the Adlerian group counseling approach, while the control group received routine individual counseling. The study data were collected using the quality of prenatal self-care questionnaire and prenatal distress questionnaire at three time points; baseline, after, and one month after the intervention or routine counseling. The study data were analyzed by the Chi-squared test, Fisher exact-test, and independent t-test, as well as repeated measures analysis of variance.

**Results:** The Mean±SD ages of the intervention and the control groups were 23.39±2.85 and 23.39±2.85 years, respectively. After the intervention, the results of repeated measures analysis of variance showed a statistically significant difference between the intervention and control groups regarding the changes in the mean scores of prenatal distresses (P=0.0001) and four domains (physical health, behavioral assessment, healthy relationships, and social health) of self-care (P=0.0001).

**Conclusion:** The Adlerian group counseling approach effectively improved prenatal distress and self-care during pregnancy.

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## Highlights

• This study was conducted using the Adlerian group counseling approach for the first time in Iran to investigate its effects on distress and self-care during pregnancy.

• Counseling based on the Adlerian group approach is a good solution for better dealing with prenatal distress.

• Counseling based on the Adlerian group approach strengthens self-care during pregnancy.

## Plain Language Summary

The pregnancy stage is one of the factors affecting distress levels. In primiparous women, adaptation to a new role as a mother fuel this condition. Concerns arising from giving birth to the first child have been classified as the most severe type of distress based on psychosocial distress tables. The consequences of such distress can manifest themselves through such conditions as stress, depression, anxiety, morbid fear, and obsessive-compulsive disorder. Group counseling creates constructive engagement among participants. In the Adlerian group counseling approach, each person helps himself or herself and others to solve problems and improve behavior. Based on this study, this counseling approach effectively improves distress about neonate care, body image, and emotions, as well as interpersonal relationships, physical health, behavioral assessment, healthy relationships, and social health.

## Introduction

Distress is one of the psychological problems that occur during pregnancy [1]. The sources of increased maternal distress include concerns about pregnancy, childbirth, fetal health, negative emotions about body weight and image, sexual dysfunction, and marital relationships induced by hormonal imbalances [2, 3]. This condition is also the most prominent symptom in terms of perceived behaviors and clinical manifestations amongst pregnant women [4]. The incidence of stress during pregnancy ranges from 5% to 36%, depending on different cultures [5, 6]. About 65% of pregnant women experience moderate levels of stress, and 26.2% experience low levels of stress [4].In Iran, the prevalence rates of mental disorders in the first, second, and third trimesters were also reported as 29.7%, 28.6% [6], and 39.6%, respectively [7]. In this context, the third trimester has been more highlighted as the identity crisis for women [8]. In one study, primiparous women obtained higher prenatal distress scores than multiparous ones [9]. Anxiety and stress during pregnancy can affect a mother's mental health, increasing the probability of ineffective pain during childbirth, emotional dystocia, abortion, preterm labor, and preeclampsia [10]. The experience of having a new member in a family can also pose numerous challenges and distresses to women [11]. Based on an investigation, high levels of distress were significantly correlated to adverse neonatal outcomes [12]. Besides, high maternal distress levels in late pregnancy were accompanied by decreased mental development in children at three years of age [13, 14].

One of the concerns of maternal and child health professionals is the support and empowerment of pregnant women by making positive changes in their behaviors to help them improve pregnancy outcomes [15, 16]. Self-care is a multi-dimensional concept and includes targeted motivational behaviors [17-19]. One way to learn self-care is counseling, which has been suggested as an appropriate strategy to control and reduce distress and to improve self-care during pregnancy [20, 21]. As pregnant women are usually facing common concerns, such conditions are redefined and rebuilt ahead in group counseling. Trained healthcare providers can also facilitate group learning through collecting such problems as stress about maternal responsibilities to care for the neonate and presenting tasks [22, 23]. There are several approaches to group counseling. Adlerian group counseling approach (AGCA) attempts to establish warm, supportive, empathetic, friendly, and equal relationships with clients. Its primary purpose is to overcome wrong lifestyles. AGCA approaches clients through good relationships and creates positive attitudes towards life among them [3]. Adlerian group experiences foster members' development of a more authentic and socially accurate perception of themselves and others within their group and their natural social environment [22, 24].

Given the importance of mother-child health, the lack of care programs in the field of prenatal distress developed by community health centers, and the cost-effectiveness of group counseling, we conducted this study to determine the effectiveness of AGCA on mothers' distress and self-care during pregnancy.

## Materials and Methods

This randomized controlled trial was conducted on 79 pregnant women (40 women in the intervention and 39 in the control groups) referred to seven community health centers in Karaj City, Iran, from March 2018 to December 2019. Considering the effect size (d=0.75) in a similar study [19], a 10% probability of dropout, α=5%, and test power (1-β)=0.90, the sample size was determined 88 samples using the G×Power software (USA).

In the first sampling phase, a list of participants was prepared based on the information in health records. Subsequently, these individuals were invited via phone calls to refer to the nominated community health centers on specified days and times to receive explanations regarding the study objectives. Next, the participants were randomly allocated to two groups of equal numbers using block randomization. Random allocation was performed with 22 blocks of size 4 using a free software package. The study's inclusion criteria for the first phase were as follows: aged 18-49 years, cutoff scores equal to or lower than 66 in the Wijma delivery expectancy/experience questionnaire (WDEQ) to measure the fear of childbirth [4]. In this study, the Farsi version of this tool was used [25]. WDEQ was completed in the first meeting. The inclusion criteria for the next phase were as follows: singleton pregnancy, primiparous, not used assisted reproductive technology, gestational age of 22-32 weeks, with cutoff scores higher than 12 based on the prenatal distress questionnaire (PDQ), no stressful events over the past six months (e.g., death of one's husband or first-degree relatives, divorce, etc.), no underlying diseases (e.g., gestational diabetes, hypertension, preeclampsia, seizures, and epilepsy), drug or alcohol addiction, and being at low-risk levels according to the first and second trimester screenings, and no suffering from mental disorders or depression confirmed by a licensed official neurologist during the study based on their medical documents and expression (Figure 1).

The intervention was designed as follows. The intervention group received AGCA in the community health centers. Four weekly sessions on a specific day were consecutively offered for four groups (11 each), each lasting for 90 minutes on average. A member of the research team did counseling. Group counseling sessions were held face-to-face in a quiet environment with a semi-circle seat arrangement. AGCA was completed in three phases: orientation or identification, exploration or working, and resolution (Table 1). At the end of each session, the participants were correspondingly given feedback and assignments. The control group received the routine individual counseling.

The study data were collected using a demographic information form, the quality of prenatal self-care questionnaire (QSCQ), and the PDQ. Demographic and reproductive characteristics on occupation, type of employment, level of education, pregnancy status, abortion, history of infertility, socioeconomic status, husband's occupation, prenatal care, and childbirth preparation course. PDQ questionnaire includes 3 dimensions of concern about birth, weight, and body image; concern about feelings; and interpersonal relationships. This questionnaire has 12 questions. Questions 3, 6, 9, 10, and 11 are related to the scope of concern about the birth of a child questions (1, 2, 7). Concerns about weight and body image questions (4, 5, 8, 12) are related to concerns about feelings and interpersonal relationships. In this questionnaire, a lower score indicates less concern [26]. In this study, the Farsi version of this tool was used [2].

QSCQ has 5 dimensions and 96 questions, of which 4 dimensions and 73 questions were used in this study. Its dimensions include physical health (11 questions), behavioral assessment (18 questions), relationship health (21 questions), and social health (23 questions). Having a higher score in this questionnaire indicates the need to care. It is more about self-care [24]. The indicators used to measure the amount of prenatal care were prepared by Heaman et al. [23]. The psychometric properties of QSCQ were approved among adolescents and young people at Iran's Ministry of Health and Medical Education [24]. PDQ was developed by Alderdice et al. [26]; the Persian version [2] and its reliability was confirmed by the Cronbach alpha value of 0.74. In addition, the Cronbach alpha coefficients of 0.71, 0.67, and 0.70 were obtained for distress about birth and infant care, distress about body weight and image, and distress about emotions and interpersonal relationships, respectively [2].

The study data were collected from both groups across three time points, i.e., baseline, after the routine individual counseling or the intervention (last counseling session), and one month later. Data analysis was performed based on the two primary objectives of deter-

**Table 1.** Phases and contents of adlerian group counseling sessions

| Session | Content |
|---|---|
| Session 1<br>Orientation/ identification<br>as the first phase in Adlerian therapy<br>(Establishing friendly relationships and explaining objectives) | Introducing and exchanging greetings between clients and investigators as well as establishing positive relationships, talking about group rules (timely attendance and data confidentiality), and giving the motivation to attend sessions and to reflect on goals<br>Making clients familiar with distress, defining prenatal distress and its three domains, along with describing self-care and group counseling<br>Evaluating symptoms and consequences of prenatal distress<br>Discussing symptoms such as nausea, vomiting, leg swelling, low back pain, as well as annoying physical symptoms during pregnancy<br>Explaining pregnancy risk symptoms and treatment options<br>Describing possible causes of preterm labor and solutions to prevent them<br>Giving assignments and feedback (i.e., identifying distress-inducing factors as well as their manifestations and situations during the week and reviewing risk factors and preterm labor followed by taking appropriate actions if needed) |
| Session 2<br>Exploration/working<br>as the second phase in Adlerian therapy<br>(Establishing friendly relationships and explaining objectives) | Welcoming, reviewing previous session and assignments with a checklist, expressing feelings and sharing experiences, exchanging ideas, calling the roll, and answering questions<br>Explaining prenatal screening<br>Talking about ways to accept maternal roles<br>Clarifying basics of infant care (i.e., breastfeeding training, newborn jaundice, bathing, fever control, umbilical cord care, heat rash, and circumcision) and related recommendations<br>Giving assignments and feedback (i.e., thinking about maternal roles during the week and talking with the baby and touching the belly) |
| Session 3<br>Exploration/working<br>as the third phase in Adlerian therapy<br>(Creating insight through explanation and interpretation) | Welcoming, reviewing previous session and assignments with a checklist, calling the roll, and answering questions<br>Describing self-care as well as weight gain and proper nutrition during pregnancy<br>Explaining how to return to pre-pregnancy weight after giving birth and developing the right strategies<br>Exchanging experiences about emotions and relationships as well as body weight and image during pregnancy, discussing self-esteem and interpersonal, intrapersonal, and social relationships; and controlling emotions and managing them in a right direction<br>Discussing body weight and image and sharing ideas by pregnant women<br>Giving assignments and feedback (i.e., planning for good nutrition and seeing oneself in the mirror, and practicing self-confidence about body weight and image) |
| Session 4<br>Resolution<br>as the fourth phase in Adlerian therapy<br>(Retraining and reorienting clients) | Welcoming, reviewing previous session and assignments with a checklist, calling the roll, and answering questions<br>Explaining the process of natural childbirth or Cesarean section briefly in simple and comprehensible language as well as discussing fears and concerns of natural childbirth or Cesarean section<br>Discussion about emotional, social, and sexual behaviors as well as strategies to improve emotional, social, and sexual satisfaction during pregnancy<br>Explaining roles of supporters in the postpartum period, roles of others around mothers in terms of maternal acceptance, and how to treat others<br>Receiving assignments and feedback on different issues through the Telegram-based channel |

mining the changes in the mean score of self-care and prenatal distress dimensions before, after, and one month after the intervention in both study groups. The statistical analyses were performed in SPSS v. 21 using the Chi-square test and Fisher exact-test for the qualitative variables. Data normality was reviewed using the Kolmogorov-Smirnov test. All variables have a normal distribution. Then, the data were analyzed using the t-test and repeated measures analysis of variance (ANOVA). The priori level of significance was set at 0.05. The statistical analyses were performed with a per-protocol approach. The statistical analyses were performed in SPSS v. 21.

## Results

In this study, demographic characteristics were analyzed for the 79 participants. Four participants in the intervention group and five in the control group were lost to follow-up. The intervention and control groups were matched and not significantly different in demographic and reproductive characteristics (Tables 2, and 3).

The repeated measures ANOVA showed statistically significant differences between the intervention and control groups regarding the changes in the mean scores of the three domains of prenatal distress (distress about neonate care, distress about body image, and distress about emotions and interpersonal relationships) across the three time points: baseline, after the intervention (the last counseling session), and one

**Table 2.** Quantitative demographic and reproductive characteristics of the participants in the intervention and control groups

| Variables | Mean±SD | | P* |
|---|---|---|---|
| | Intervention (n=44) | Control (n=44) | |
| Age (y) | 23.39±2.85 | 23.39±2.85 | 0.762 |
| BMI (kg/m$^2$) | 22.32±4.58 | 24.34±6.39 | 0.167 |
| Age at marriage (y) | 20.75±3.28 | 20.91±3.93 | 0.837 |
| Length of marriage (y) | 2.61±1.51 | 2.77±1.16 | 0.632 |
| Gestational age (wks) | 24.1±82.25 | 24.52±2.17 | 0.472 |
| Prenatal distress score | 18.64±6.21 | 19.27±5.70 | 0.618 |
| Self-care score | 178.66± 61.12 | 186.77±19.57 | 0.061 |

* The Independent t-test.

month later (P=0.0001). The results of Mauchly's test for the two domains of distress about neonate care and distress about body image were less than 0.05. Therefore, the Greenhouse-Geisser assumption was used to correct the degrees of freedom of the repeated measures test (Table 4). The repeated measures ANOVA also showed a significant difference between the two groups regarding changes in the mean scores of prenatal distresses (Figure 2).

The repeated measures ANOVA revealed statistically significant (P=0.0001) differences between the intervention and control groups with respect to the trend of changes in the mean scores of physical health, behavioral assessment, healthy relationships, and social health dimensions of self-care across the three time points; baseline, after the intervention, and one month later (Table 5). The repeated measures ANOVA also showed a significant difference between the two groups regarding changes in the mean self-care scores during pregnancy (Figure 3).

## Discussion

The present study aimed to determine the effects of AGCA on prenatal distress and self-care. After the intervention, significant differences were observed between the two groups regarding the trend of changes in the mean scores of prenatal distresses and its dimentions as well as the mean scores of self-care during pregnancy and its dimensions.

Rezaeian et al. analyzed their study data using linear regression and reported that education level and distress were significantly correlated to self-care [27]. In another study, the level of education was among the essential factors affecting deeper learning in mental health education and counseling provided to pregnant women [28]. Employment was also significantly associated with mental health status during pregnancy. Moreover, a study indicates that increased maternal age, number of abortions, gestational age, and level of education could lead to a rising trend in anxiety and distress levels [29]. The results of our study and Soleiman Ekhtiari et al. [30] showed that the two groups were homogeneous in terms of these variables. Another research established that unplanned pregnancy could increase the incidence of a Major Depressive Episode (MDE). Poorly timed pregnancy could also cause a growth in the incidence of MDE and general anxiety disorder [31]. Hence, the two groups in the present study were examined based on planned or unplanned pregnancy before the intervention, and they were found to be homogeneous in this regard.

Some women who benefitted from support from their husbands and people around them had experienced lower levels of distress compared to the others [32]. In our study, group counseling based on AGCA considered the role of others in maternal acceptance and how to deal with others. A prior descriptive study investigated the relationship between the maternal knowledge of infant care and prenatal distress and anxiety among pregnant women. The results revealed that the mother's knowledge of providing care could affect anxiety and distress levels during pregnancy [33]. Clients are taught to change their lifestyles to lessen distress and anxiety [22]. Training on the basics of infant care was also provided, and group discussions were held. Ultimately, the positive effect of AGCA on prenatal distress, particularly in relation to infant care, was highlighted.

**Table 3.** Qualitative demographic and reproductive characteristics of the participants in the intervention and control groups

| Variables | | No. (%) | | P |
|---|---|---|---|---|
| | | Intervention | Control | |
| Occupation | Housewife | 44(84.1) | 39(90.9) | 0.782* |
| | Employee | 4(9.1) | 2(4.5) | |
| | Worker | 2(4.5) | 2(4.5) | |
| | Others | 1(2.3) | 0(0) | |
| Type of employment | Unemployed | 37(84.1) | 40(90.9) | 0.739** |
| | Part-time | 1(2.3) | 1(2.3) | |
| | Full time | 6(13.6) | 3(6.8) | |
| Level of Education | Elementary | 2(4.5) | 4(9. 1) | 0.563* |
| | Middle school | 6(13.6) | 10(22.7) | |
| | High school Diploma | 28(63.6) | 23(52.3) | |
| | Academic | 8(18.2) | 7(15.9) | |
| Pregnancy status | Planned | 40(90.9) | 38(86.4) | 0.502 * |
| | Unplanned | 4(9.1) | 6(13.6) | |
| Abortion | 0 | 37(84.1) | 37(84.1) | 0.1** |
| | 1 | 7(15.9) | 6(13.6) | |
| | ≥2 | 0(0) | 1(2.3) | |
| History of infertility | Yes | 3(6.8) | 1(2.3) | 0.616** |
| | No | 41(93.2) | 43(97.7) | |
| Socioeconomic status | Good | 3(6.8) | 10(22.7) | 0.084** |
| | Moderate | 39(88.6) | 33(75) | |
| | Poor | 2(4.5) | 1(2.3) | |
| Husband's occupation | Unemployed | 3(6.8) | 1(2.3) | 0.834** |
| | Employed | 6(13.6) | 6(13.6) | |
| | Worker | 26(59.1) | 26(59.1) | |
| | Freelance job | 9(20.5) | 11(25) | |
| Prenatal care | Yes | 12(27.3) | 11(25) | 0.808 * |
| | No | 32(72.7) | 33(75) | |
| Childbirth preparation course | Yes | 8(18.2) | 7(15.9) | 0.1* |
| | No | 36(81.8) | 37(84.1) | |

* The Chi-square test; ** The Fisher exact-test.

**Table 4.** Comparing the trend of changes of prenatal distress at baseline, after the intervention, and one month after the intervention

| Variables | Prenatal Distress | Mean±SD | | P* | |
|---|---|---|---|---|---|
| | | Intervention | Control | Within-group | Between-group |
| Distress neonate care | Before | 10.05± 4.04 | 10.69±3.07 | 0.0001 | 0.0001 |
| | After | 5.53±2.85 | 11.31±2.53 | | |
| | One month after | 5.73±4.48 | 11.67±1.63 | | |
| Distress about body image | Before | 4.50±2.50 | 4.33±2.09 | 0.0001 | 0.0001 |
| | After | 3.40±2.02 | 6.08±1.51 | | |
| | One month after | 3.30±3.07 | 6.72±1.54 | | |
| Distress about emotions and inter-personal relationships | Before | 4.30±2.21 | 4.00±2.21 | 0.0001 | 0.0001 |
| | After | 2.08±1.56 | 4.38±3.19 | | |
| | One month after | 1.60±1.58 | 3.97±1.75 | | |

*Repeated measures ANOVA.

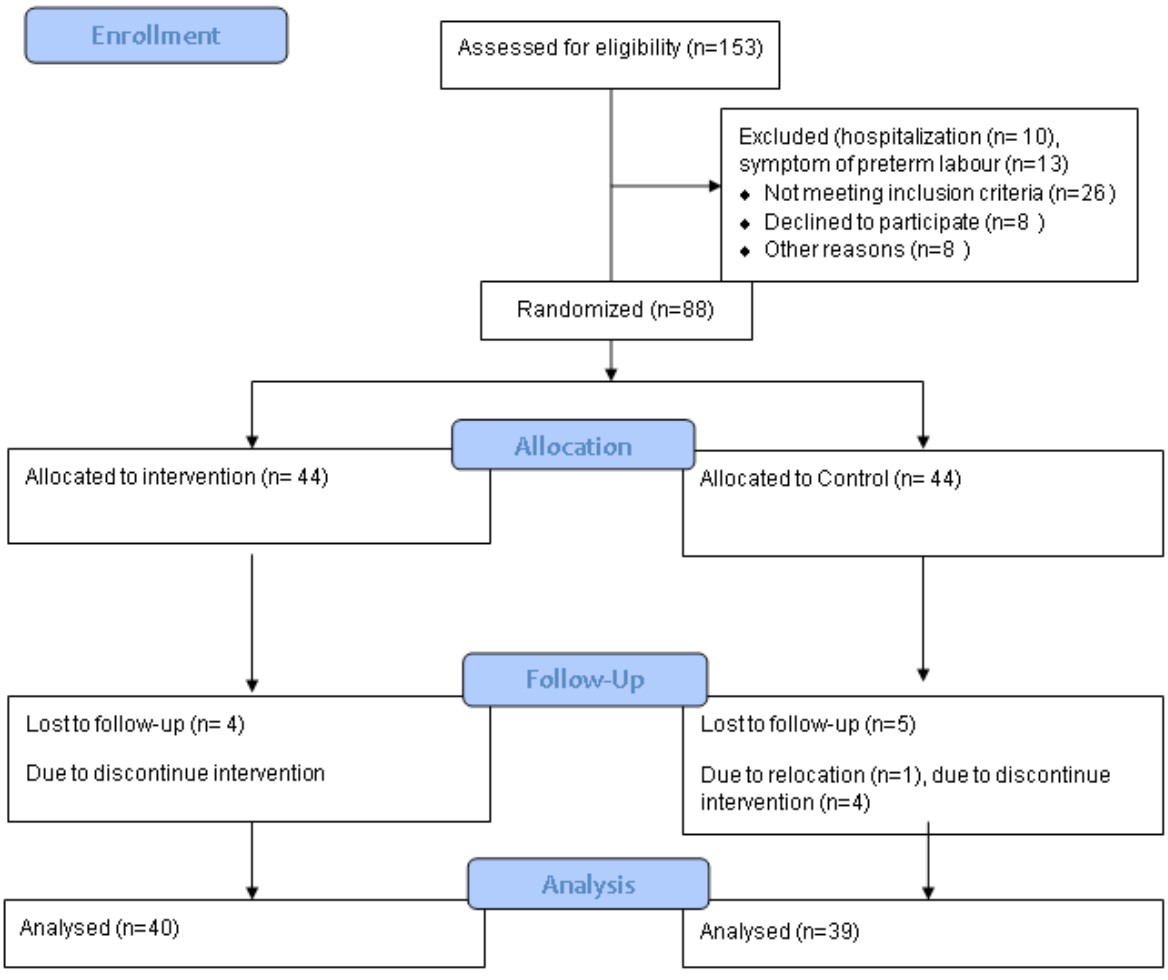


**Figure 1.** CONSORT diagram

**Table 5.** Comparing the changes between the two groups' mean scores of the dimensions of self-care at baseline, immediately after, and one month after the intervention

| Variables | | Mean±SD | | P* | |
|---|---|---|---|---|---|
| | | Intervention | Control | Between | Within |
| Physical health | Before | 27.28±4.08 | 29.00±3.38 | 0.359 | 0.0001 |
| | After | 29.08±5.39 | 29.15±3.57 | | |
| | One month after | 30.48±5.88 | 30.82±2.79 | | |
| Behavioral assessment | Before | 43.55±5.85 | 46.23±6.29 | 0.243 | 0.0001 |
| | After | 45.80±6.14 | 45.85±6.08 | | |
| | One month after | 46.60±5.73 | 47.08±5.22 | | |
| healthy relationships | Before | 52.13±6.91 | 55.92±7.99 | 0.016 | 0.0001 |
| | After | 55.75±6.33 | 54.38±8.70 | | |
| | One month after | 55.40±6.64 | 58.51±3.55 | | |
| Social health | Before | 53.78±6.04 | 52.08±8.67 | 0.007 | 0.0001 |
| | After | 56.23±4.67 | 50.56±8.87 | | |
| | One month after | 54.33±3.63 | 54.87±8.4 | | |

* Repeated measures ANOVA.

Stress management training can reduce prenatal anxiety and distress in primiparous women. In a quasi-experimental study on 30 primiparous women, three domains of distress about birth and infant care, distress about body weight and image, and distress about emotions and interpersonal relationships were evaluated using the PDQ. In that study, the participants were required to participate in eight training sessions of 90 minutes. The results revealed a statistically significant difference between the intervention and control groups with regard to distress about birth and infant care and distress; the participants in the present study also took part in four sessions of the Adlerian group counseling approach (each session for 90 minutes on average). The results indicated a statistically significant difference between the intervention and control groups concerning distress about birth and infant care, distress about body weight and image, and distress about emotions and interpersonal relationships. These findings were consistent with those of the cited investigations. According to

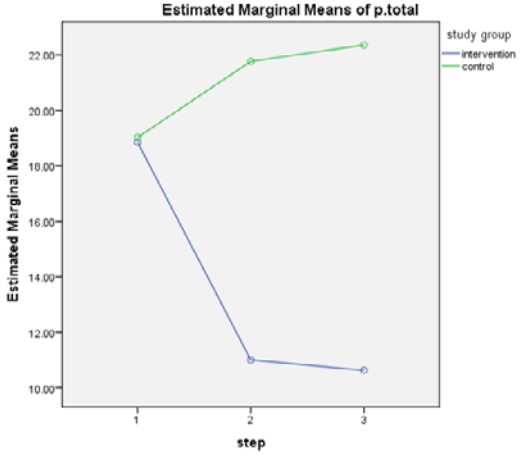


**Figure 2.** Trend of changes in prenatal distress mean scores in intervention and control groups

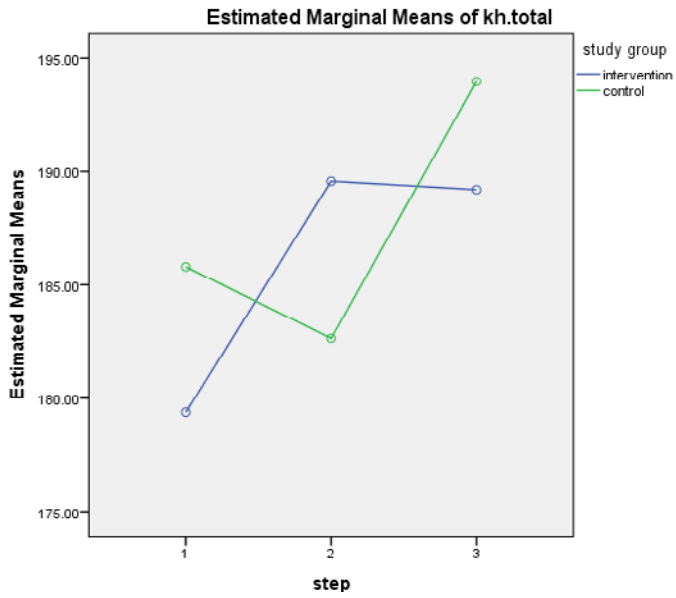


**Figure 3.** The trend of changes in the two groups' mean scores of self-care

the results, performing group counseling based on the Adlerian counseling approach, including individualized stress management training for pregnant women, could reduce distress about birth and infant care and emotions and interpersonal relationships. In addition, AGCA could mitigate distress about body weight and image [34].

As gestational age increases, concerns about body weight and image increase, as well. Similarly, a study on 245 primiparous women in Iran indicates that increased gestational age could raise distress about body weight and image. Consequently, these distresses were more evident in the third trimester compared to the first one [35].

Increasing levels of distress reduced stress management [36] and self-care during pregnancy. Thus, several factors could affect prenatal self-care. A descriptive-analytical study aimed to evaluate self-care predictors based on the health belief model and social support among 215 pregnant women. The results demonstrated that perceived self-efficacy, severity, and sensitivity could directly influence self-care. Social support could also indirectly affect self-care by affecting perceived self-efficacy, sensitivity, and severity. Therefore, social support was introduced as the strongest predictor of self-care during pregnancy.

It should be noted that in that study, self-care was inversely associated with sensitivity, severity, benefits, self-efficacy, and social support. However, there was an inverse relationship between the perceived inhibitors and self-care. One way to strengthen social support is to reinforce education and counseling, which can enhance perceived sensitivity in individuals. It can also increase their responsibilities for self-care, causing them to make efforts to change their lifestyles [37, 38].

In the present study, AGCA was performed by midwives. First, there were attempts to establish good relationships during the counseling sessions. Then, discussions among the groups of peers established communication between the midwives and clients. Therefore, pregnant women could be engaged actively in communications and collaborate more. Ultimately, the results revealed that the given intervention could reduce distress and improve self-care.

One of the limitations of the present study was that the findings could not be generalized to multiparous women and those with multiple pregnancies. Hence, the participants were asked at the beginning of the sessions and according to the counseling rules not to share any information about the sessions and their contents with other people.

The results of this study highlighted the positive effects of the Adlerian group counseling approach on prenatal distress (i.e., distress about birth and infant care, distress about body weight and image, and distress about emotions and interpersonal relationships) and self-care (i.e., physical health, behavioral assessment, healthy relationships, and social health) amongst pregnant women. Therefore, pregnant women should be provided with AGCA in community health centers to deal with prenatal distress and boost self-care during pregnancy.

## Ethical Considerations

### Compliance with ethical guidelines

This study was approved by the Ethics Committee of Alborz University of Medical Sciences (Code: IR.ABZUMS.REC.1397.146). This study was registered in IRCT (Code: 20180110038502N3).

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### Authors' contributions

Conception and data collection: Anoosheh Gholami; Study design, analysis, and interpretation and critically revision of the manuscript: Zahra Mehdizadeh Tourzani; Data analyses and verification of the analytical methods: Kourosh Kabir; Literature research, writing the literature review, and finalizing the manuscript: Parvaneh Mirabi; Study design, supervision over the whole study process, conducting the data interpretation, and manuscript revision: Mansoureh Yazdkhasti; Read and approved the final manuscript: All authors.

### Conflict of interest

The authors declared no conflict of interest.

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