

# Summary of Evidence on the Impact of Mindfulness Training on Anxiety Levels of Pregnant Women

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**Abstract:** *Background:* Mental health during pregnancy is a global health problem, the percentage of pregnant women with antenatal anxiety or mood disorders ranges from 15% and 25%, with generalized anxiety disorder as the most common factor in the illness. Most of the research findings show a relationship between mothers' psychological distress and poor prognosis for either the mother or the infant. Low well-being during pregnancy has significant adverse impacts on both mother and infant. Therefore, it is important to focus on antenatal anxiety and psychological stress in pregnant women. Mindfulness training, defined as an intentional and non-judgmental awareness of experience in the present moment, it is the most common intervention for antenatal education. Although the impact of positive thinking interventions on antenatal maternal well-being has been increasingly examined, the results still have not been systematically evaluated. *Aim:* This paper aims to systematically evaluate the effects of positive thinking interventions on evidence of antenatal anxiety in pregnant women and current research methods with a population of pregnant women by evaluating five studies of Randomized Controlled Trials (RCTs) using the CASP checklist tool. Summarize the implications of the evaluation results for future studies, and finally provide practical insights and research recommendations. *Methods:* Firstly, the research topic is identified: patient/problem: pregnancy anxiety; intervention: intervention in positive thinking; comparison: usual care. A complete internet-based search of five databases was conducted through Academic Search Complete, Medical Line, CINAHL, Health Source: Nursing/Academic Edition and Google Scholar to identify randomized controlled trials assessing positive thinking training versus postnatal depression controls. To select higher quality and relevant articles, the author rechecked titles and abstracts exclusion criteria and manually searched five peer-reviewed RCT articles from the last five years by further evaluating reference lists, while focusing on assessing interventions, measurement scale outcomes, study sample results, strengths and limitations. Secondly, randomized controlled trials were assessed using the CASP Randomized Controlled Trial Criteria Checklist. This version has now been updated to the 2020 Access Guide. *Results:* This paper provides a specific review of five RCT studies by using the CASP assessment tool, and concludes that positive thinking training shows potential benefits in terms of prenatal depression, anxiety and negative affect levels. From a comparison of the five intervention modalities of the positive thinking intervention, Mindfulness-integrated Cognitive Behavior Therapy (MICBT) had the broadest range of interventions and the most comprehensive curriculum. Most of the studies had small sample sizes of participants and an increase in sample size and longer follow-up time through comparative analysis would be beneficial to generalizability, therefore a sample size of 50 people on average between the

intervention and control groups was chosen as appropriate, with a follow-up time of at least one month and three months. Also, the presence of potential bias was mentioned in these studies, by comparing randomized classification methods it was found that the smaller the base difference present through computer allocation and single-blind allocation, the less systematic bias there was. The choice of measurement instruments did not conflict with the sample size, the cultural background of the population and the findings. However, positive effects on anxiety and stress during pregnancy were less consistent with the assessment tool for the intervention group. Self-report instruments are highly sensitive and idiosyncratic, coupled with the tendency of participants to interact with researchers to produce bias. Therefore, when selecting a measurement tool, the best approach is to combine a self-report instrument with a researcher's assessment. The literature highlights the increased interest in this area in recent years. Coupled with the prevalence of methodological issues and variation between studies, the current review is timely and necessary to determine intervention effects and best practice for future research. *Findings:* Mindfulness training is a useful intervention for improving anxiety and stress during pregnancy, but future research recommendations must follow robust methodological criteria with expanded sample sizes and longer follow-ups to examine the effects of positive thinking interventions during pregnancy.

**Keywords:** Pregnant women; Mindfulness training; Anxiety levels; Impact

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## 1. Introduction

Mental health during pregnancy is a worldwide health concern, with generalized anxiety disorder as the most common factor in the illness <sup>[1]</sup>. This is because prenatal exposure to maternal psychological distress is one of the earliest life experiences that poses a risk to the developing fetus <sup>[2]</sup>. Hall HG *et al.* (2016) showed a relationship between maternal psychological distress and poor maternal or infant outcomes, associating maternal stress with preterm birth and low birth weight babies <sup>[3]</sup>. Alderdice F *et al.* (2013) suggest that the percentage of pregnant women with antenatal anxiety or mood disorders ranges from 15% and 25%, and clinical pregnancy distress is associated with antenatal anxiety <sup>[4]</sup>. Thus, low well-being during pregnancy can have significant adverse effects on both mother and baby. Therefore, it is important to focus on prenatal anxiety and psychological stress in pregnant women. Positive thinking is defined as intentional and non-judgmental awareness of the experience of the present moment, characterized by openness and receptivity to all internal and external stimuli and the ability to shift awareness between stimuli <sup>[5]</sup>. This is the most common intervention for antenatal education <sup>[6-8]</sup>. Although the impact of positive thinking interventions on antenatal maternal well-being has been increasingly examined, the results still have not been systematically evaluated <sup>[9]</sup>. This paper aims to systematically evaluate the effects of positive thinking interventions on evidence of antenatal anxiety in pregnant women and current research methods with a population of pregnant women by evaluating five studies of RCTs using the CASP checklist tool. This study will present the PICO practice-based clinical questions, explain how the author searched for a search strategy for research articles guided by the agreed PICO, assess the quality of the five studies, summarize the implications of the evaluation results for future studies, and finally provide practical insights and research recommendations.

## 2. Question formulated and literature sourced

The PICO practice question for this study was: What impact does mindfulness training have on the anxiety levels of pregnant women? Patient/problem: pregnancy anxiety; Intervention: intervention in positive thinking; Comparison: usual care. A complete internet-based search of five databases was conducted through Academic Search Complete, Medical Line, CINAHL, Health Source: Nursing/Academic Edition and Google Scholar, to identify RCTs assessing positive thinking training versus postnatal depression controls. Keywords or free text

are combined using Boolean operators (i.e. “AND” and “OR”). During the search, the keywords and terms “Antenatal anxiety,” “Depression during pregnancy,” “Antenatal psychology,” “Mindfulness thinking therapy,” and “Mindfulness training” were used in various combinations. To select higher quality and relevant articles, the author rechecked titles and abstracts exclusion criteria and manually searched five peer-reviewed RCT articles from the last eight years by further evaluating reference lists while focusing on assessing interventions, measurement scale outcomes, study sample results, strengths and limitations.

### 3. Appraisal

The author uses the CASP Randomized Controlled Trials Criteria Checklist to understand the issues of RCTs. This version has now been updated to the 2020 Access Guide <sup>[10]</sup>. The CASP tool includes four areas: Basic study design for validity of randomized controlled trials (Section A), Methodological soundness (Section B), Test results (Section C), and Results for local help evaluation (Section D) <sup>[10]</sup>. This study also reviews five pieces of RCT design literature through more specific questions in each of these four areas. All studies strictly followed the requirements of the ethical review board. However, this paper does not involve investigative or interventional research that involves the ethics of the participants, so this regulation is not applicable.

#### 3.1. The basic study design validity of randomized controlled trials

In terms of the basic study design validity of randomized controlled trials, five RCT study designs were valid, followed by audits around the research questions, method of random allocation, systematic bias, participant missing data status, and study outcomes.

Firstly, all studies addressed a clear research question <sup>[11–15]</sup>. By comparing the control group, the mindfulness training reduced symptoms of depression and anxiety and improved well-being during pregnancy.

Secondly, all studies used randomization for allocation. Zemestani M and Nikoo ZF (2020) and Yang M *et al.* (2019) both used computer-generated random number blocks and concealed the allocation sequence from investigators and participants <sup>[11,13]</sup>. Zarenejad M *et al.* (2020) used convenience sampling methods, while Yazdanimehr R *et al.* (2016) used random sampling methods, both of which were divided into four blocks using random sampling methods. In terms of systematic bias, Zemestani M and Nikoo ZF (2020) showed no significant differences in demographic variables between the intervention and control groups, with consistent bases sufficient to eliminate systematic bias <sup>[11,12,14]</sup>. Yang M *et al.* (2019), Zarenejad M *et al.* (2020), and MacKinnon AL *et al.* (2021) showed insufficient to eliminate systematic bias due to different population bases (ethnicity, age, and unequal number of controls) <sup>[13–15]</sup>. From a comparison of random assignment methods, it can be concluded that computer-generated random number blocks were more likely to eliminate systematic bias than convenience sampling random assignment modules and that consistent broad background bases for demographic variables and age prior to intervention and control group assignment were more conducive to eliminating systematic bias in random assignment.

Thirdly, regarding the status of participants’ conclusions, all five studies were completed according to the research practice plan, and listed participants’ loss data after random allocation for follow-up with explanations. All the research study lost data had problems with participants dropping out midway because they failed to adhere to the burden of positive thinking training and missed positive thinking training sessions. There are also reasons why studies show participants discontinued interventions due to increased depressive symptoms and participants discontinued interventions due to intrauterine fetal death, preterm birth, etc. <sup>[12–14]</sup>. After participants were randomly assigned, Yang M *et al.* (2019) and MacKinnon AL *et al.* (2021) showed intention-to-treat analysis <sup>[13,15]</sup>. Yang M *et al.* (2019) discussed that the intention analysis confirmed a reduction in depression and anxiety in the intervention

group compared to the control group, and demonstrated a more meaningful outcome value<sup>[13]</sup>.

### 3.2. The methodological soundness

In terms of methodological soundness, an audit was conducted regarding population sample inclusion and exclusion criteria, the impact of interventions on outcomes, the similarity of randomized control groups, and the comparison of study protocols.

Firstly, all the studies indicated that participants are aware of the intervention arrangements. The investigators did not “turn a blind eye” to the participants’ intervention and assessed and analyzed the findings based on the internal consistency of the survey instrument. In terms of study groups in randomized controlled trials, all the studies showed inclusion and exclusion criteria for participants. All participants were pregnant females. Common exclusion criteria included non-participation in full counseling, substance abuse due to hypertension diabetes psychiatric disorders, psychiatric disorders and risk pregnancy indications such as preterm birth, although Zemestani M and Nikoo ZF (2020), Yang M *et al.* (2019) and MacKinnon AL *et al.* (2021) required participants to be at least 18 years old<sup>[11,13,15]</sup>. In terms of gestational age, Zemestani M and Nikoo ZF (2020) and Yazdanimehr R *et al.* (2016) required participants to be one–six months pregnant<sup>[11–12]</sup>, Yang M *et al.* (2019) required participants to be six–seven months pregnant<sup>[13]</sup>, Zarenejad M *et al.* (2020) required participants to be six–nine months pregnant<sup>[14]</sup>, and MacKinnon AL *et al.* (2021) required participants to be three–seven months pregnant<sup>[15]</sup>. Therefore, it can be shown that anxiety and depression can occur throughout pregnancy, with the most frequently studied pregnancy period from the third to the sixth month of pregnancy. In terms of group social, the mean age of participants in three studies ranges from 26 to 30 years old<sup>[11,12,14]</sup>, and the mean age of participants in two studies ranges from 31 to 32 years old<sup>[13,15]</sup>. Therefore, pregnant women aging 25 to 32 have higher symptoms of anxiety and depression. Zemestani M and Nikoo ZF (2020) and Yazdanimehr R *et al.* (2016) showed the average unemployment rate of participants is 62.5%<sup>[11,12]</sup>. However, Yang M *et al.* (2019) showed a low unemployment rate of 29.3%, and the other two studies did not show unemployment rates<sup>[13]</sup>. Therefore, most of the participants had a high unemployment rate. In addition, Zemestani M and Nikoo ZF (2020) indicated that 68.42% of participants have low socioeconomic in Iran, and Yang M *et al.* (2019) showed that 63.8% of participants have high income in China. Therefore, the prevalence of depression and anxiety among pregnant women is not significantly related to cultural background country geography and income<sup>[11,13]</sup>.

### 3.3. The study protocols

In terms of the study protocols, similarities and differences could be found between the intervention and control groups in the five studies. Although all studies clearly defined the study protocols, within each study protocol, the manifestation of mindfulness training within the intervention group was still different. In more detail, positive thinking training was presented as Mindfulness-Based Cognitive Therapy (MBCT)<sup>[11]</sup>. MBCT was adapted for perinatal depression (MBCTPD)<sup>[15]</sup>, Mindfulness-integrated Cognitive Behavior Therapy (MICBT)<sup>[12]</sup>, Mindfulness-based Stress Reduction (MBSR)<sup>[14]</sup> and Mindfulness-Based Childbirth and Parenting (MBCP)<sup>[13]</sup>. The former four studies applied offline group training, and the latter one applied online training. In terms of interventions for intervention groups, Yazdanimehr R *et al.* (2016) used eight group sessions<sup>[12]</sup>, Zemestani M and Nikoo ZF (2020) and MacKinnon AL *et al.* (2021) used training of 90 and 120 minutes, respectively<sup>[11,15]</sup>. Zarenejad M *et al.* (2020) applied six sessions of group counselling, each lasting 60 minutes<sup>[14]</sup>. Yang M *et al.* (2019) adopted a Chinese mobile app with a positive thinking intervention planned for four sessions of 40 minutes each for eight weeks<sup>[13]</sup>. In terms of specific interventions, Zemestani M and Nikoo ZF (2020) and MacKinnon AL *et al.* (2021) both included positive mindfulness routines, positive mindful eating, yoga, body scanning, mindful breathing, seated meditation, loving and kindness meditation<sup>[11,15]</sup>. Zarenejad M *et al.* (2020) included elements of

both of these approaches in addition to a daily home-based positive thinking approach delivered to the intervention team via telephone and social networks, with any questions answered by the researcher<sup>[14]</sup>. Yazdanimehr R *et al.* (2016) added cadaver scanning exercises, behavioral therapy techniques, interpersonal skills, assertiveness and role-playing, acceptance and management of daily life distress training to the above three approaches<sup>[12]</sup>.

Instead, MBCP uses a program that allows interactive learning between teachers and learners, with additional text, images and audio associated with the course for participants to review. The interactive WeChat group was added to share and discuss the obstacles to practicing positive thinking. Therefore, offline training is longer and more structured than online training, and MICBT training is the most appropriate of all offline training. This is because MICBT contains all the content of MBCT and MBCTPD and includes a small amount of online interaction with MBCP and MBSR during the intervention. In this way, pregnant women are able to access a wide range of interventions from positive psychology, positive living, role play, online sharing and offline training. Therefore, the MICBT approach is more effective based on the completeness and breadth of the intervention content. In terms of research findings and the local validity of the results, the audit around population sample sizes, the author assessed the impact of scale results, research commonalities and limitations.

- (1) Firstly, the average number of people in MICBT, MBSR and MBCT studies was 30<sup>[12,14,15]</sup>, the number of MBCT offline studies was 19<sup>[11]</sup>, and the number of MBCP online studies was 50<sup>[13]</sup>.
- (2) Secondly, all the studies did not indicate any missing or incomplete data, and there was no mention of differential data affecting the results. All the data were statistically analyzed by SPSS, performing independent samples *t*-tests and chi-square tests to test for differences between the two groups at baseline. All reported *p*-values, which were statistically significant. There were no findings of effects such as injuries and accidents. In five studies, the participants were assessed with the Beck Anxiety Inventory (BAI), Emotion Regulation Questionnaire (ERQ), Scales of Psychological Well-being (SPWB) after MBCT intervention<sup>[11]</sup>. The participants were assessed with the Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder Scale (GAD-7) after MBCP intervention<sup>[13]</sup>. The participants were assessed with Pregnancy-Related Anxiety Questionnaire (PRAQ), Mindfulness Questionnaire and Self-efficacy in Coping with Childbirth Questionnaire after MBSR intervention<sup>[14]</sup>. The participants were assessed with BAI, Demographic Questionnaire and Edinburgh Postnatal Depression Scale (EPDS) after MICBT intervention<sup>[12]</sup>. The participants were assessed with Distress Thermometer measures, Pregnancy Related Anxiety (PRA) scale, Edinburgh Depression Scale (EDS) and GAD-7 after MBCTPD intervention<sup>[15]</sup>.

As assessed by the above scales, the common conclusion is that the above interventions reduce symptoms of depression and anxiety in pregnant women, with a significant impact on the duration of the intervention after one month without cultural differences. However, there are limitations to the study.

- (1) Firstly, the small sample size of study participants for the MBCI intervention and the lack of data to support follow-up limits generalizability and the follow-up period. In contrast, the literature on the MBCI and MBCP interventions discusses that obtaining long-term assessment gains requires extended follow-up.
- (2) Secondly, sensitivity and specificity exist for most assessment scales to be self-reported, and some subjective self-reported results are associated with researcher interaction, thus creating some bias.
- (3) Thirdly, the study on the MBCTPD intervention limited assessment of stress<sup>[16-18]</sup>.

Therefore, it can be concluded that: 1) mindfulness interventions are highly effective in reducing maternal and anxiety symptoms, and there are no cultural differences in promotion suitable for replication in the author's local area; 2) the number of participants should be increased to over 50 in the comparison group and the follow-up period greater than one month; 3) when selecting assessment scales for audit, the potential bias of self-reporting is considered, and this could be combined with professional assessment of approach to improve internal validity.

## **4. Conclusions, recommendations and application to practice**

This paper specifically reviews five RCT studies using the CASP assessment tool and concludes that Positive Mindfulness Training shows potential benefits in terms of prenatal levels of depression, anxiety and negative mood. However, the positive effects of the intervention group on anxiety and stress during pregnancy were less consistent with the assessment tool. In a comparison of the five positive thinking intervention modalities, MICBT had the broadest intervention scope and the most comprehensive curriculum. Most of the studies had small sample sizes of participants, and replication would be facilitated by increasing the sample size and extending the follow-up period through comparative analysis. Therefore, an average sample size of 50 participants in the intervention and control groups was selected as appropriate, with follow-up periods of at least one month and three months.

In addition, these studies addressed the presence of potential bias by comparing randomized classification methods and found that the smaller the base difference between computerized and single-blind allocation, the less systematic the bias. The choice of measurement tools did not conflict with the sample size, the cultural background of the population, or the results of the study. However, self-report instruments are highly sensitive and idiosyncratic, which, coupled with the tendency of participants to interact with the researcher, can create bias. Therefore, when choosing a measurement tool, it is best to combine a self-report instrument with a researcher's assessment. The literature emphasizes the growing interest in this area in recent years. Coupled with prevalent methodological issues and differences between studies, the current review is timely and necessary to identify intervention effects and best practices for future research.

Future studies must utilize a reliable RCT design with a larger group of pregnant women. Objective indicators of well-being and specific measures of prenatal well-being must be included. Careful consideration must also be given to the woman's stage of pregnancy and the timing of the measurements to ensure adequate outcome assessment. Similarly, the impact of adherence and individual interventions need to be assessed to examine the effects of interventions fully. Since prenatal maternal well-being has an impact on both the mother and the fetus, it is quite important to develop and evaluate well-being enhancement strategies and interventions. Although this study suggests that positive thinking is an effective intervention to improve anxiety and stress during pregnancy, future studies must still follow rigorous methodological standards, expand sample sizes, and extend follow-up periods to examine the effects of positive thinking interventions during pregnancy.

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## **Disclosure statement**

The author declares no conflict of interest.

## Author contributions

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## Appendix A Search strategies

Date	01/03/2021–01/04/2023	
Research topic	Summary of evidence on the impact of mindfulness training on anxiety levels of pregnant women	
Search strategy	Anxiety levels of pregnant women	“Anxiety levels of pregnant women” or “Pregnancy anxiety” or “Antenatal anxiety” or “Depression during pregnancy” or “Antenatal psychology”
	The impact of mindfulness training	“The impact of a mindfulness training” or “Mindfulness thinking” or “Mindfulness thinking therapy” or “Mindfulness training” or “Intervention in positive thinking”
Limits	01/01/2017–01/01/2023	
	English	
	Full text	
	Peer reviewed	
	RCT articles	
Databases	Academic Search Complete	
	MEDLINE	
	CINAHL Complete	
	Health Source: Nursing/Academic Edition	
	Google	



## Appendix B: Table of article

#	Reference as per guidelines	Aim/Purpose	Methodology	Sample	Intervention/ Tool	Findings	Limitations
1	Zemestani M, Nikoo ZF, 2020, Effectiveness of Mindfulness-Based Cognitive Therapy for Comorbid Depression and Anxiety in Pregnancy: A Randomized Controlled Trial. Archives of Women's Mental Health, 2020(23): 207–214.	This study aimed to examine the effects of an 8-week MBCT intervention on pregnant women with comorbid depression and anxiety.	Quantitative research. The method was based on a randomized controlled trial design	38 accepted to take part in the study. Participants who agreed to participate were randomly assigned to either an MBCT group ( $n = 19$ ) or control group ( $n = 19$ ).	The MBCT group received 8 MBCT sessions, while the control group did not receive any intervention. To be ethical, the control group was given two sessions of psychoeducation on depression and anxiety and their impact on maternal and fetal development after a 1-month follow-up.	MMRM results showed that the levels of depression and anxiety in the MBCT group were more improved than those in the control group.	<ol style="list-style-type: none"> <li>1. The number of participants was small, resulting in limited ability to demonstrate consistently important findings.</li> <li>2. The sample included women of different gestational ages, which limits generalizability.</li> <li>3. Outcome measures were limited to self-reported levels of depression, anxiety, emotion regulation and mental health, emphasizing the need for more comprehensive assessments.</li> <li>4. The relatively short follow-up period was insufficient to detect gains in long-term treatment.</li> </ol>
2	Yang M, Jia G, Sun S, et al., 2019, Effects of an Online Mindfulness Intervention Focusing on Attention Monitoring and Acceptance in Pregnant Women: A Randomized Controlled Trial. Journal of Midwifery & Women's Health, 2019(64): 68–77.	The study tested the feasibility and acceptability of online mindfulness intervention for pregnant women as a way to reduce symptoms of depression and anxiety.	Quantitative research. This randomized clinical trial used a parallel design.	There were 52 women in the intervention group and 50 women in the control group. There was no significant difference in demographic or maternal health variables between these groups.	The intervention is carried out on the WeChat platform, allowing interactive learning between teachers and learners. The mindfulness intervention program consists of 4 times, about 40 minutes each for 8 weeks.	This study investigated the effectiveness of a prenatal positive thinking training programme in reducing symptoms of depression and anxiety and in improving attention monitoring and receptive positive thinking skills. These findings help to demonstrate the feasibility and acceptability of online positive thinking interventions during pregnancy.	This study was conducted to assess depression and anxiety symptoms using self-report questionnaires rather than diagnostic interviews.
3	Zarenejad M, Yazdkhasti M, Rahimzadeh M, et al., 2020, The Effect of Mindfulness-Based Stress Reduction on Maternal Anxiety and Self-Efficacy: A Randomized Controlled Trial. Brain Behavior, 10(4): e01561.	Explore the effects of mindfulness decompression (MBSR) on anxiety and self-efficacy in pregnant women.	Quantitative research. This study is a randomized controlled trial.	Continued study of 30 control and 30 intervention groups.	During the intervention group, pregnant women received six group consultations twice a week (7-person group), each lasting 60 minutes of lectures, questions and answers, and role-playing based on MBSR.	Mindfulness reduces anxiety in pregnant women and recommends education in mindfulness programs for health care providers and pregnant women to reduce maternal anxiety and improve pregnancy outcomes and delivery.	The limitation of the study was the inability to control information from other sources of information, such as the Internet and attendance at medical centers, which may reduce the stress score of the intervention group.

## Appendix B (Continued)

#	Reference as per guidelines	Aim/Purpose	Methodology	Sample	Intervention/ Tool	Findings	Limitations
4	MacKinnon AL, Madsen JW, Giesbrecht GF, et al., 2021, Effects of Mindfulness-Based Cognitive Therapy in Pregnancy on Psychological Distress and Gestational Age: Outcomes of a Randomized Controlled Trial. <i>Mindfulness</i> , 12(5): 1173–1184.	A randomized controlled trial evaluated the effectiveness of an 8-week modified MBCTPD intervention for psychological distress.	Quantitative research. Design of a randomized controlled trial.	At least 28 participants per group (total $n = 60$ ).	The intervention program was adapted from MBCTPD. The goals of the program included helping women change their relationship to thoughts, feelings, and bodily sensations that can lead to psychological distress.	MBCTPD was associated with improved overall distress but not other specific symptoms such as anxiety and depression beyond treatment as usual. MBCTPD has the potential to reduce the risk of preterm birth by targeting and reducing high levels of pregnancy anxiety during early gestation.	The use of multiple self-report scales may lead to shared method variance.
5	Yazdanimehr R, Omidi A, Sadat Z, et al., 2016, The Effect of Mindfulness-Integrated Cognitive Behavior Therapy on Depression and Anxiety Among Pregnant Women: A Randomized Clinical Trial. <i>Journal of Caring Science</i> , 5(3): 195–204.	This study aimed to investigate the effects of mindfulness comprehensive cognitive behavioral therapy on depression and anxiety in pregnant women.	This was a single blind randomized controlled trial.	Forty participants were recruited for each group. Participants were randomly assigned to the experimental and control groups using block randomization.	Experimental group participants received MiCBT, while control group participants received only routine antenatal care services, such as weight control, blood pressure monitoring, and related education.	After the intervention, the average scores of anxiety and depression in the experimental group were significantly lower than those in the control group. Mindfulness combined cognitive behavior therapy can significantly reduce depression and anxiety in pregnant women.	1. One of the limitations of the study is due to the lack of background knowledge on the subject of the study because of its novelty.