Acta Clin Croat 2025; 64:205-215

doi: 10.20471/acc.2025.64.02.04

Original Scientific Paper

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# SELF-COMPASSION, MINDFULNESS AND COPING IN RELATION TO PSYCHOLOGICAL SYMPTOMS IN PREGNANT WOMEN IN THE FIRST TRIMESTER

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SUMMARY – The aim of the study was to examine the levels and relationships of self-compassion, mindfulness, coping with stress, anxiety, depression, and perceived stress in pregnant women. The study involved 153 pregnant women ($6^{+0}$-$7^{+6}$) who completed a questionnaire of socio-demographic data, Self-Compassion Scale, Mindful Attention Awareness Scale, Coping Orientation to Problems Experienced, Beck Anxiety Inventory, Depression Questionnaire of the Center for Epidemiological Research and Perceived Stress Scale. Subjects with higher levels of self-compassion and mindfulness had lower levels of anxiety (r=-0.44, p<0.01), (r=-0.53, p<0.01), depression (r=-0.45, p<0.01), (r=-0.51, p<0.01), and stress (r=-0.53, p<0.01), (r=-0.45, p<0.01). Significantly higher levels of anxiety (r=0.19, p<0.05), depression (r=0.23, p<0.01), and stress symptoms (r=0.26, p<0.01) were experienced by subjects who used avoidance-focused coping. Self-compassion and mindfulness were negative predictors of anxiety (β=-0.26, p<0.001), (β=-0.42, p<0.001), depression (β=-0.35, p<0.001), (β=-0.37, p<0.001) and stress (β=-0.40, p<0.001), (β=-0.25, p<0.01). Problem-focused coping had a positive contribution to depression (β=0.15, p<0.05). Avoidance showed a tendency toward a positive effect on stress (β=0.13, p=0.06). The results indicate a significant role of self-compassion and mindfulness in predicting symptoms of anxiety, depression and stress in pregnant women in early pregnancy as a focus of non-pharmacological interventions aimed at early prevention of mental disorders.

Key words: *Pregnant women; Self-compassion; Mindfulness; Coping with stress; Mental disorders*

## Introduction

Anxiety, depression and perceived stress have negative effects on short-term and long-term health of pregnant women and children[1-3]. The authors stress the importance of identifying the factors of these

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Received July 20, 2020, accepted January 24, 2021

psychological outcomes with the aim of their early detection and prevention. Since pregnant women tend to hesitate to use medications to regulate anxiety and depression for fear of side effects on the fetus[4], there is the need of non-pharmacological interventions to reduce perinatal anxiety and depression[5].

Psychological constructs that have beneficial effects on mental health are self-compassion[6] and mindfulness[7]. While self-compassion represents a person's positive and caring attitude toward themselves at times of suffering with a focus on emotion regulation[8], mindfulness refers to a state of consciousness focused on one's own experiences or environment at present time without judging them[9].

Self-compassion is a concept that has long existed in Eastern philosophy according to which it is equally important to feel compassion for oneself as for others[10]. Self-compassion includes awareness of one's own suffering, identification of the source of suffering, and intention to do something[10]. Self-compassion was operationalized by Neff in 2003 as a construct composed of three main elements that combine and interact to create a self-compassionate mind: self-kindness *versus* self-judgment, mindfulness or attention and acceptance of stimuli that are currently present as opposed to over-identification with certain feelings, and the perception of personal experience as part of broader human experiences (common humanity) as opposed to the perception of experiences as isolated events that other people do not go through (isolation)[8]. The contribution of self-compassion to health appears to be achieved primarily through the reduction of perceived stress that occurs when people with high levels of self-compassion respond to personal failures and difficult circumstances, and secondarily through increased engagement in health-promoting behaviors[11]. Some researchers argue that self-compassion may act as a valuable mechanism for coping with stress[12].

Similar to self-compassion, mindfulness can be viewed as a mode of emotional regulation[13], and is a construct that also derives from Eastern philosophy[10]. Mindfulness as a separate construct refers to all experiences (positive, negative, and neutral) and is a broader concept than mindfulness as a component of self-compassion that refers specifically to situations of negative experiences and internal states[14].

Studies with pregnant women have found a significant association of lower self-compassion with more pronounced symptoms of anxiety[15] and depression[15-18], and an association of lower levels of mindfulness with a higher level of depressive symptoms[16,18]. Studies, also including pregnant women, show that interventions aimed at increasing self-compassion capacity can have the effect of reducing perceived stress levels[19], and increasing mindfulness capacity can have the effect of reducing levels of anxiety, depression and stress symptoms[20].

Coping with stress has consistently been shown to be a relevant predictor of psychological difficulties and psychological well-being[21,22]. Although different coping strategies should not be considered as absolutely good or bad, research shows that the dominant use of passive coping strategies (avoidance and emotion-focused coping) is associated with adverse outcomes. Avoidance involves behavioral and cognitive efforts to avoid dealing with the stressor or its effect, while emotion-focused coping involves attempts to reduce the effect of the stressor. On the other hand, problem-focused coping involves behavioral and cognitive efforts to influence the source of stress itself and shows mostly negative relationships with psychological difficulties[23]. Research shows that the use of coping strategies focused on emotions and avoidance in the general population leads to an increase in the intensity of anxiety and depression symptoms[24], and in pregnant women there is a higher level of emotional problems after childbirth[25].

Given the specific dynamics of psychological characteristics and emotional disturbances in the general population and the small number of studies examining the relationships between these constructs in pregnant women, further examinations are needed. Research to date suggests a modifying role of self-compassion and mindfulness in experiencing psychological distress and emotional problems in pregnant women, marking them as a potential focus for non-pharmacological interventions in the antenatal period.

The hypothesis of this study was that self-compassion, mindfulness and coping strategies have a significant role in predicting symptoms of anxiety, depression and stress in pregnant women. Therefore, the aim of this study was to determine the level of self-compassion, mindfulness, anxiety, depression, perceived stress and ways of coping with stress, and to examine

the relationship of self-compassion, mindfulness and coping with the symptoms of anxiety, depression and stress in early pregnancy.

## Materials and Methods

### *Participants*

A cross-sectional study of pregnant women was performed at the first antenatal examination. Four gynecologic surgeries in primary health care in the city of Osijek were included from July to September 2019. The research was approved by the Ethics Committee of the Faculty of Medicine in Osijek, and the surgeries have given written consent for the research. Pregnant women signed an informed consent form after oral and written explanation of the study protocol. Inclusion criteria of pregnant women for the study were first antenatal examination at $6^{+0}$-$7^{+6}$ weeks of gestation and age ≥18 years. Exclusion criteria were psychiatric treatment or chronic diseases before pregnancy and high-risk and multiple pregnancies.

### *Questionnaires*

At the first antenatal examination, the respondents filled out a questionnaire designed for the purposes of this study, which collected data on socioeconomic status, gestational age, chronic diseases and psychiatric treatment before pregnancy, high risk pregnancy, single/multiple pregnancy, and pregnancy preferences. Pregnant women also completed the following questionnaires at the first antenatal examination:

The Self-Compassion Scale (SCS)[8] adapted by Klišmanić Mrak[26] was used to assess the level of self-compassion. The questionnaire consists of 26 items arranged within three positively oriented subscales on self-care, interdependence with other people, and mindfulness, and three negatively oriented subscales on self-condemnation, isolation, and over-identification. Respondents answered on a Likert-type scale how much a particular statement applied to them (1, "almost never" to 5, "almost always"). Negatively coded items were recoded before calculating the results. Total score on each subscale is calculated as the average score, with a possible range of scores from 1 to 5. Total score of the whole scale is calculated as the average of all scores, with a possible range from 1 to 5, with a higher number of points indicating a higher level of self-compassion. The Cronbach's alpha coefficients for the following subscales was 0.73, 0.61, 0.68, 0.75, 0.82, 0.70, and for the overall scale 0.86.

The Mindful Attention Awareness Scale (MASS)[13] adapted by Kalebić Jakupčević *et al.*[27] was used to assess awareness of individual experiences. The scale consists of 15 items, and the respondents assessed the extent to which the statements related to their actual experiences on a Likert scale (1, "almost always" to 6, "almost never"). Total score is calculated as the average of the responses so that ranges from 1 to 6 are possible, with a higher score on the scale indicating a higher level of mindfulness. The Cronbach's alpha coefficient in this study was 0.89.

The Coping Orientation to Problems Experienced questionnaire (COPE)[28] which was adapted and shortened to 15 items by Hudek-Knežević *et al.*[29] was used to examine the ways of coping, thoughts, and behaviors of stressed subjects. The questionnaire consists of three subscales, i.e., problem-focused coping, emotion-focused coping, and avoidance coping. The answers are scored on a 5-point Likert scale (1, "I never act like that" to 5, "I always act like that"). Total score on each subscale is the sum of the responses belonging to that subscale, and the possible range of results is from 1 to 5. For the subscales listed, the Cronbach's alpha coefficient was 0.76, 0.66, and 0.63, respectively.

The Beck Anxiety Inventory questionnaire (BAI)[30], already used in pregnant women in Croatia[31], was used to examine the intensity and frequency of anxiety symptoms over the past month. The questionnaire contains 21 items, and each item is a list of four statements ranked on a scale from 0 ("not at all") to 3 ("strong") with respect to the severity of a particular anxiety symptom. The possible range of results is from 0 to 63 points, with four levels of anxiety possible, i.e., minimum (0-7), mild (8-15), moderate (16-25) and severe (26-63) level. The Cronbach's alpha coefficient in this study was 0.90.

The Center for Epidemiological Studies-Depression Scale (CESD-D)[32], adapted by Miljković and Rijavec[33], was used to assess depressive symptoms in the respondents, i.e., how often they felt in each of the offered ways in the past week. The questionnaire consists of 20 items, and the answers are scored on

a four-point Likert scale (0, "rarely or not at all" to 3, "almost constantly or constantly"). The possible range of results is from 0 to 60, and the total score is obtained by adding all of the responses. The cut off score for clinical significance of symptoms is 16 points. The Cronbach's alpha coefficient in this study was 0.93.

The Perceived Stress Scale (PSS)[34] adapted by Hudek-Knežević *et al.*[35] measured the perception of stress during the previous month. The questionnaire consists of 10 items, and the answers are scored on a five-point Likert scale (0, "never" to 4, "very often"). The results on the four positively coded items are scored in reverse. The possible range of results is from 0 to 40, and the total score is obtained by adding all of the responses, where three levels of perceived stress are possible: low (0-13), moderate (14-26) and high (27-40). The Cronbach alpha coefficient for the total questionnaire was 0.80.

***Statistical analysis***

On statistical analysis, descriptive analysis (mean (M), standard deviation (SD) and range) was used to examine the levels of symptoms of anxiety, depression and stress, as well as problem-focused, emotion-focused, coping and avoidance. Frequency and percentage of pregnant women with low, moderate and high levels of symptoms of anxiety, depression and stress were also calculated. Pearson correlation coefficients were used to examine correlations among self-compassion, mindfulness, coping, anxiety, depression and stress. Finally, in order to examine whether anxiety, depression and stress could be predicted by self-compassion, mindfulness and coping, hierarchical regression analyses were used, one for each criterion. The level of significance was set at 0.05. Statistical program SPSS (16.0, SPSS Inc., Chicago, IL, USA) was used on statistical analysis.

## Results

Out of a total of 164 respondents, 11 pregnant women were excluded from the study at the first antenatal examination, i.e., those diagnosed with chronic diseases before pregnancy (5/11), receiving psychiatric treatment (2/11), diagnosed with a high-risk pregnancy (3/11) and multiple pregnancy (1/11). The study included 153 pregnant women, median age 30 (interquartile range 27-34), range 19-41 years. Gestational age at first antenatal examination was $7^{+1}$ ($6^{+4}$-$7^{+3}$).

The majority of respondents were living in the urban area (77.8%). According to the level of education, 91 (59.5%) respondents had higher or university degree. 8 of them (5.2%) had no partners. So far, 79 (51.6%) respondents had children, mostly one child. In 95 (62.1%) respondents, monthly income exceeded 6,000 Croatian kuna, while 9 (5.9%) respondents had monthly income of less than 4,000 Croatian kuna. Only two (1.3%) respondents did not want to become pregnant (Table 1).

*Table 1. Basic characteristics of respondents*

| **Characteristic** | | **n** | **%** |
|---|---|---|---|
| Place of residence | Urban | 119 | 77.8 |
| | Rural | 34 | 22.2 |
| Level of education | Primary or less | 1 | 0.7 |
| | Secondary | 61 | 39.9 |
| | University | 91 | 59.5 |
| Marital status | Single | 8 | 5.2 |
| | Married | 113 | 73.9 |
| | Civil union | 32 | 20.9 |
| Number of children so far | One | 56 | 36.6 |
| | Two | 18 | 11.8 |
| | Three | 5 | 3.3 |
| Monthly household income | Less than 4,000 HRK | 9 | 5.9 |
| | 4.000 kn to 6,000 HRK | 49 | 32 |
| | More than 6,000 HRK | 95 | 62.1 |
| Desired pregnancy | Yes | 151 | 98.7 |
| | No | 2 | 1.3 |

As shown in Table 2, the participant average score (M=3.46, SD=0.45), as well as the range observed suggested medium to high self-compassion, and mostly high mindfulness. However, although the mean value (M=4.27, SD 0.82) suggested high mindfulness, the lowest value observed was not far from the lowest possible value, suggesting that some participants had low mindfulness. The results also suggest that participants used more problem-focused (M=3.85, SD=0.51) and emotion-focused coping (M=3.73, SD=0.77), and less avoidance (M=2.33, SD=0.56).

*Table 2. Descriptive data on self-compassion, mindfulness and coping*

| Scale | M | SD | Observed range | Possible range |
|---|---|---|---|---|
| Self-compassion | 3.46 | 0.45 | 2.28-4.92 | 1-5 |
| Mindfulness | 4.27 | 0.82 | 1.93-6.00 | 1-6 |
| Problem focused coping | 3.85 | 0.51 | 2.00-5.00 | 1-5 |
| Emotion focused coping | 3.73 | 0.77 | 1.67-5.00 | 1-5 |
| Avoidance | 2.33 | 0.56 | 1.00-4.50 | 1-5 |

M = mean; SD = standard deviation

*Table 3. Descriptive data on anxiety, depression and stress*

| Scale | | Frequency (%) | M | SD | Observed range | Possible range |
|---|---|---|---|---|---|---|
| Anxiety: | Minimum | 98 (64) | 7.16 | 7.13 | 0-34 | 0-63 |
| | Mild | 39 (25) | | | | |
| | Moderate | 9 (6) | | | | |
| | Severe | 7 (5) | | | | |
| Depression: | Below cutoff | 112 (73) | 11.55 | 10.44 | 0-53 | 0-60 |
| | Above cutoff | 41 (27) | | | | |
| Stress: | Low | 26 (17) | 17.87 | 4.88 | 5-33 | 0-40 |
| | Mild | 120 (78) | | | | |
| | High | 7 (5) | | | | |

M = mean; SD = standard deviation

The majority of participants experienced minimum or mild symptoms of anxiety, depression and stress. However, there were a significant number of participants, 41 of them (27%), who experienced depression symptoms above the cut off for clinical significance (Table 3).

In order to examine correlations between variables, Pearson's correlation coefficients were calculated. Self-compassion and mindfulness were significantly negatively correlated with anxiety ($r=-0.44$, $p<0.01$), ($r=-0.53$, $p<0.01$), depression ($r=-0.45$, $p<0.01$), ($r=-0.51$, $p<0.01$) and stress ($r=-0.53$, $p<0.01$), ($r=-0.45$, $p<0.01$), meaning that participants with higher self-compassion and mindfulness experienced less symptoms. The correlations were medium, ranging from -0.44 to -0.53.

Problem-focused and emotion-focused coping were not significantly correlated with either criterion. On the other hand, avoidance was significantly positively correlated with anxiety ($r=0.19$, $p<0.05$), depression ($r=0.23$, $p<0.01$) and stress ($r=0.26$, $p<0.01$), although correlations were low. Participants who resorted to avoidance in coping tended to experience more symptoms. Regarding correlations between predictor variables, self-compassion was significantly positively correlated with problem-focused coping ($r=0.39$, $p<0.01$), while mindfulness was significantly negatively correlated with avoidance ($r=-0.24$, $p<0.01$). Therefore, participants who were self-compassionate also used more problem-focused coping, while participants who were not skilled at mindfulness tended to use more avoidance (Table 4).

In order to examine whether symptoms of anxiety, depression and stress could be predicted by self-compassion, mindfulness and coping, three stepwise regression analyses (backward method) were used, separately for anxiety, depression and stress. As shown in Table

*Table 4. Correlation coefficients between self-compassion, mindfulness, coping, anxiety, depression and stress*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Self-compassion | - | | | | | | |
| Mindfulness | 0.43** | - | | | | | |
| Problem focused coping | 0.39** | 0.07 | - | | | | |
| Emotion focused coping | -0.10 | -0.02 | 0.16* | - | | | |
| Avoidance | -0.20* | -0.24** | 0.01 | -0.05 | - | | |
| Anxiety | -0.44** | -0.53** | -0.09 | 0.07 | 0.19* | - | |
| Depression | -0.45** | -0.51** | -0.01 | 0.14 | 0.23** | 0.74** | - |
| Stress | -0.53** | -0.45** | -0.13 | 0.13 | 0.26** | 0.50** | 0.60** |

*p<0.05; **p<0.01

*Table 5. Results of stepwise regression analyses for anxiety, depression and stress*

| Predictor | Criterion | | |
|---|---|---|---|
| | Anxiety β | Depression β | Stress β |
| Self-compassion | -0.26*** | -0.35*** | -0.40*** |
| Mindfulness | -0.42*** | -0.37*** | -0.25** |
| Problem focused | 0.05 | 0.15* | 0.03 |
| Emotion focused | 0.03 | 0.08 | 0.09 |
| Avoidance | 0.04 | 0.08 | 0.13 (p=0.06) |
| $R^2$ | 0.34 | 0.35 | 0.37 |

β = standardized regression coefficient; $R^2$ = coefficient of multiple determination; *p<0.05; **p<0.01; ***p<0.001

5, both self-compassion and mindfulness were significant negative predictors of anxiety (β=-0.26, p<0.001), (β=-0.42, p<0.001), depression (β=-0.35, p<0.001), (β=-0.37, p<0.001) and stress (β=-0.40, p<0.001), (β=-0.25, p<0.01). Mindfulness had a higher contribution to the variance of anxiety, while self-compassion had a higher contribution to stress. The contributions to depression were similar.

Coping did not contribute significantly to anxiety. Problem-focused coping had a significant positive contribution to depression (β=0.15, p<0.05). However, problem-focused coping did not show significant correlation with depression, which suggests suppression effect, most likely due to its correlation with self-compassion. Avoidance showed a tendency toward a significant positive effect on stress (β=0.13, p=0.06). Overall percentages of total variance explained by predictors were similar for all three criteria.

## Discussion

Poor psychological adjustment of pregnant women and maladaptive psychological outcomes such as anxiety, depression and high stress are reflected in the health of both women and children. Given the lack of regular screening and detection of mental disorders in pregnant women[36], and the fear and resistance of pregnant women to use psychopharmaceuticals when symptoms develop[4], it is important to examine whether there are early indicators of mental health problems in pregnant women. Timely early intervention, especially the application of effective non-pharmacological methods, could reduce the severity of mental health problem, as well as prevent their development.

In the research on pregnant women conducted in Croatia[37], the prevalence of elevated anxiety during pregnancy was 35%. In this study, 11% of pregnant

women in the first trimester reported moderate and severe anxiety symptoms, which is lower compared to the study by Dennis *et al.*[38], where the prevalence of anxiety symptoms in the first trimester was 18.2%. More than a quarter of pregnant women in this study reported a clinically significant level of depressive symptoms, which is significantly higher compared to the study by Gavin *et al.*[39], where the results showed that 18% of pregnant women had symptoms of depression during pregnancy. Despite the fact that the American College of Obstetricians and Gynecologists[40] recommends screening for anxiety and depression at least once in the perinatal period, only 9% to 12% of gynecologists routinely screen for symptoms of depression[36]. This emphasizes the importance of the recommendation on the implementation of screening, and according to the results of this study, even in early pregnancy. Stress in pregnant women does not have to be caused only by factors related to pregnancy but also by other factors that are difficult to cover[41]. Examination of general stress levels in pregnant women in this study showed that most of them (78%) reported moderate levels and 5% of them high levels of stress, which is in line with the results published by Nakić *et al.*[41].

People with a high level of self-compassion are not in resistance to their own negative emotions and thoughts nor do they suppress them, but on the contrary, by working through negative experiences, they generate positive emotions and strengthen psychological resilience[14]. In the general population, an association of higher levels of self-compassion with lower levels of perceived stress, anxiety, and depression was found[6], and in pregnant women with lower levels of anxiety[15] and depression[15-18]. In this study, pregnant women with higher levels of self-compassion reported lower levels of anxiety and depression and lower levels of perceived stress, which is consistent with the aforementioned studies. Self-compassion activates the so-called calming mechanism, which involves accepting the fact that we have unpleasant emotions, and thus diminishing attempts to avoid the same emotions, self-blame, and other dysfunctional actions. In this way, a person can use their capacities better to reduce suffering, which results in lower symptoms of anxiety, depression and stress.

Mindfulness also plays a protective role against the development of psychological difficulties. Higher levels of mindfulness are associated with lower levels of anxiety[42] and perceived stress[43] in the general population, and depression in pregnant women[16], as also confirmed by the results of our study. Mindfulness as a relaxation technique involves directing attention to one's inner experiences, without judging whether they are justified, good or bad, or trying to influence them. In this way, mindfulness helps a person properly recognize emotions and thoughts, and their relationships, and allows a person to accept unpleasant experiences and attribute them to their true cause. For example, instead of blaming themselves and describing themselves as weak because they cannot calm their anxiety, the person accepts that they are anxious because they think something bad is going to happen. In this way, a person acquires a kind of psychological distance from their emotions and thoughts, ceases to attribute them to their weaknesses and shortcomings, and accepts them more as unpleasant experiences that are transient and do not necessarily reflect reality. It is considered that people who use problem-focused coping more often have an effective long-term adaptation to stressful situations. The ability of a pregnant woman to select and implement an appropriate adaptive way of coping with stress could serve as a resilience resource that protects both the pregnant woman and the child from the potentially harmful effects of stress on their health[44]. Huizink *et al.* report that pregnant women in early pregnancy use emotion-focused coping, while in mid- and late pregnancy they prefer to use problem-focused coping[45]. In this study, pregnant women in early pregnancy equally used problem-focused and emotion-focused coping.

Regarding the association of coping strategies with symptoms of anxiety, depression and stress, in this study only avoidance showed a significant association, which is consistent with other studies confirming a positive relationship of avoidance with anxiety[46], depression[44] and stress[41]. Coping strategies, which are focused on emotions or avoidance, have the effect of temporarily reducing unpleasant emotions. The dominant use of such strategies has no long-term protective effect on mental functioning because it does not lead to the removal or reduction of stressors. Moreover, avoidance can contribute to helplessness and a low sense of self-efficacy, which further increases the risk of psychological difficulties.

Self-compassionate individuals tend to use avoidance-oriented coping less frequently, while more often they use positive cognitive restructuring that involves changing attitudes in a stressful situation to see it in a more positive light[12]. Therefore, Marques *et al.*[17] believe that self-compassion can be seen as an adaptive coping strategy that can reduce self-criticism and negative emotions, and improve self-care[17]. This is in accordance with the results of our study in which pregnant women with higher self-compassion significantly preferred to use problem-focused coping, probably because self-compassion brings some peace, which prevents them from being emotionally overwhelmed and avoiding the problem, so that the problem can be approached better.

A higher level of mindfulness is significantly associated with less frequent use of avoidance-oriented coping[47], which is consistent with the results of our study. This is a possible consequence of the fact that mindfulness allows acceptance of emotional experiences and successful emotional regulation and control, which probably removes/reduces the need of avoidance.

The results of regression analyses in our study confirmed that both self-compassion and mindfulness were significant negative predictors of anxiety, depression, and stress. Self-compassion showed a stronger predictive effect on stress, with mindfulness being more strongly associated with anxiety, whereas their contributions to depression were similar.

The results of studies that simultaneously examined the effects of self-compassion and mindfulness give different results on their relative contributions to different outcomes, which can probably be explained by differences in samples and their clinical features. Research with a clinical sample suggests a stronger self-compassion effect in the prediction of anxiety and depression[48], whereas research with a sample of the general population[49] and pregnant women[18] shows better prediction of depression. On the other hand, Neff and Dahm have shown that mindfulness is a stronger predictor of anxiety than self-compassion[14], which is consistent with the results of this study. It is possible that, in pregnant women in this study, mindfulness has a greater effect on anxiety primarily because it reduces over-identification with one's emotions and decreases dysfunctional attempts of avoidance. Namely, avoidance proves to be one of the main mechanisms of maintaining anxiety, especially if a person makes an extraordinary effort to avoid both stimuli that cause anxiety and the anxiety symptoms themselves. Skills and abilities that reduce this avoidance understandably have significant effects on reducing anxiety. On the other hand, in the perception of stress, the key is the experience of losing control and the feeling of insecurity that may be related to a specific event, but it does not have to. Self-compassion helps a person activate systems in the body and mind that stimulate calming and thus bring a sense of security, which reduces the perception of stress.

Although the literature predominantly confirms the positive relationship between problem-focused coping and mental health, Lazarus and Folkman state that a particular coping strategy requires an appropriate context for its use, that is, if there is a mismatch between the situation and the coping strategy, it will not give useful results[23]. In this study, only avoidance-oriented coping showed, albeit borderline, a significant predictive effect on stress, which is consistent with the results reported by Peter *et al.*[50]. Given that self-compassion and mindfulness have coping characteristics because they reduce unpleasant experiences and dysfunctional behaviors such as avoidance and self-blame, it is possible that because of this avoidance they did not show an additional independent effect on the criteria.

As for the limitations of this study, self-report measures were used to assess anxiety and depression symptoms, which may result in potentially overestimated estimates. However, self-report measures have a high clinical utility in primary care, where most perinatal mental health problems can be identified and thus individuals at risk of developing clinical disorders, i.e., having subclinical levels of symptoms, can be identified. Also, given that a cross-sectional study with a correlation design was conducted, it is not possible to draw conclusions on causal relationship.

## Conclusion

In pregnant women with higher levels of self-compassion and mindfulness, there is a significant association with less pronounced symptoms of anxiety, depression, and lower levels of perceived stress. In

more than a quarter of pregnant women, clinically significant levels of depressive symptoms are present already in early pregnancy. Pregnant women in early pregnancy use problem- and emotion-focused coping alike. Avoidance-focused coping in pregnant women is associated with anxiety, depression, and stress. Pregnant women with higher self-compassion are significantly more likely to use problem-focused coping, and pregnant women with higher mindfulness are significantly less likely to use avoidance-focused coping. Higher levels of self-compassion and mindfulness in pregnant women are significant predictors of lower levels of anxiety, depression, and stress, with self-compassion more strongly predicting stress and mindfulness more strongly predicting anxiety. As for coping, no significant predictive effects on anxiety, depression, or stress were shown.

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Sažetak

## ODNOS SAMOSUOSJEĆANJA, USREDOTOČENE SVJESNOSTI I SUOČAVANJA SA STRESOM S PSIHIČKIM SMETNJAMA KOD TRUDNICA U PRVOM TROMJESEČJU TRUDNOĆE

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Cilj istraživanja je bio utvrditi razinu i odnos samosuosjećanja, usredotočene svjesnosti, anksioznosti, depresivnosti, percipiranog stresa i načina suočavanja sa stresom u trudnica. U istraživanju su sudjelovale 153 trudnice ($6^{+0}$-$7^{+6}$) koje su ispunjavale upitnik sociodemografskih podataka, Ljestvicu samosuosjećanja, Ljestvicu usredotočene svjesnosti, Ljestvicu suočavanja sa stresom, Ljestvicu anksioznosti, Ljestvicu depresivnosti i Ljestvicu percipiranog stresa. Ispitanice s višom razinom samosuosjećanja i usredotočene svjesnosti su imale značajno manju razinu anksioznosti (r=-0,44, p<0,01), (r=-0,53, p<0,01), depresivnosti (r=-0,45, p<0,01), (r=-0,51, p<0,01) i stresa (r=-0,53, p<0,01), (r=-0,45, p<0,01). Ispitanice koje su koristile suočavanje usmjereno na izbjegavanje su imale značajno višu razinu simptoma anksioznosti (r=0,19, p<0,05), depresivnosti (r=0,23, p<0,01) i stresa (r=0,26, p<0,01). Samosuosjećanje i usredotočena svjesnost su bili značajni negativni prediktori anksioznosti (β=-0,26, p<0,001), (β=-0,42, p<0,001), depresivnosti (β=-0,35, p<0,001), (β=-0,37, p<0,001) i stresa (β=-0,40, p<0,001), (β=-0,25, p<0,01). Rezultati ukazuju na značajnu ulogu samosuosjećanja i usredotočene svjesnosti u predviđanju simptoma anksioznosti, depresije i stresa u trudnica u ranoj trudnoći kao središta nefarmakoloških intervencija s ciljem rane prevencije psihičkih smetnja.

Ključne riječi: *Trudnice; Samosuosjećanje; Usredotočena svjesnost; Suočavanje sa stresom; Psihičke smetnje*