Applied Science and Innovative Research
ISSN 2474-4972 (Print) ISSN 2474-4980 (Online)
Vol. 5, No. 3, 2021
www.scholink.org/ojs/index.php/asir

Original Paper

An Analysis of Psycho-cognitive Factors in Relation to Postpartum Depression and Anxiety in Women with and without Changes in Body Weight

Gabriel C. Pircalabu[1*], Alina Chiracu[1*] & Florinda Golu[1]

[1] University of Bucharest, Faculty of Psychology and Educational Sciences, Bucharest, Romania

[*] Alina Chiracu, E-mail: alina.chiracu@drd.unibuc.ro

Received: October 1, 2021 Accepted: October 19, 2021 Online Published: October 25, 2021

doi:10.22158/asir.v5n3p17 URL: http://doi.org/10.22158/asir.v5n3p17

Abstract

The aim of this study is firstly to analyze the differences in postpartum self-acceptance, patterns of beliefs (rationality) and perfectionism in women with and without changes in body weight and secondly to identify the relationships among self-acceptance, rationality, and perfectionism on the one hand and postpartum depression and anxiety on the other hand. The study involved 123 women, newly mothers, aged between 20 and 46 years, M = 32.29, SD = 6.56. The instruments used were Unconditional Self-Acceptance Questionnaire, Inventory of Ideas II, Frost Multidimensional Perfectionism Scale, Hamilton Depression Scale, and Inventory of State-Trait Anxiety. The results showed that the level of rationality and self-acceptance was lower in women with higher body weight, while the level of perfectionism was higher in same tier. At the same time, the results obtained by regression and mediation analyzes showed that self-acceptance is negatively associated with both depression and anxiety, rationality is also negatively associated with both depression and anxiety, and perfectionism mediates the relationship between rationality and depression, but not the relationship between rationality and anxiety. The conclusions of the study highlighted the women's need for support to regain their pre-pregnancy emotional balance and well-being.

Keywords

Postpartum depression, anxiety, self-acceptance, rationality, perfectionism, body weight

1. Introduction

This study addresses the postpartum differences and relationships among a series of psycho-cognitive factors involved in general health, defined as a continuum between well-being and mental disorder

(Oltmanns & Emery, 2015).

The proposed model involves self-acceptance, the pattern of beliefs (rationality), defined from the perspective of rational-emotional theory (Ellis, 1994) and perfectionism derived from a low level of rationality, as expressions of the general health of a person, as well as body weight, considered in relation to WHO standards (2017).

Numerous studies have revealed the importance of these factors in maintaining a high level of well-being (David, Cotet, et al., 2018; Fonseca & Canavarro, 2019; Jibeen, 2017; Liu et al., 2017; Monteiro et al., 2019; Sansinenea et al., 2020; Zhou & Xu, 2019). At the same time, we started from the premise that weight gain caused by pregnancy and often maintained in the postpartum period is the starting point of many of the irrational thoughts and decreased self-acceptance of women.

1.1 Maternity Associated Weight Gain

More than half of women experience marked increases in body weight during pregnancy (Siega-Riz et al., 2004). Observational studies in the US have shown that 30-40% of women experience normal weight gain during pregnancy, 20% have weight loss, and 40-50% have increases that exceed medically accepted standards (Viswanathan et al., 2008). Women who experience excessive weight gain have a lower chance of returning to their initial weight in the postpartum period and are at risk of entering a subsequent pregnancy with an already increased body weight (Nohr et al., 2008).

In 1990, the IOM Institute of Medicine established a set of recommendations on the body mass index during pregnancy, proposing the following categories of weight change: 12.5-18 kg for under-weight women before pregnancy, 11.5-16 kg for women with normal weight before pregnancy, 7-11.5 kg for overweight women before pregnancy and about 6.8 kg for obese women before pregnancy (IOM, 1990).

Excessive weight gain during pregnancy can lead to medical complications related to the birth and health of the baby (National Research Council and Institute of Medicine, 2007). At the same time, against the background of major emotional changes adjacent to pregnancy, weight gain can lead to a distorted perception of body image, accompanied by negative feelings, irrational thoughts and dysfunctional attitudes (Rucker & Cash, 1992).

The psychological implications of weight gain include depression, anxiety, negative self-image and low self-acceptance. Body image is a mental image and at the same time an attitude that includes emotional reactions and beliefs about one's own body, constituting the individual's way of evaluating his body. Studies suggest that pregnant women show a negative emotionality towards their own body, especially in the last trimester of pregnancy (Strang & Sullivan, 1985). In the postpartum period, the degree of dissatisfaction with the size and shape of the body decreases, but the pressure of women to return to their original form continues to be a source of dissatisfaction and suffering. Thus, given the pervasive sociocultural pressures that reinforce the ideal image of a slender female body, it becomes difficult for pregnant women to maintain a positive attitude toward their changing body.

During pregnancy and immediately after birth, women's dissatisfaction with their bodies increases regardless of the level of satisfaction they had before pregnancy. Studies show that women who are

unhappy with their appearance may refuse to breastfeed (Brown, Rance, & Warren, 2015), exhibit unhealthy eating behaviors, and adhere to dangerous weight loss diets that can endanger their lives and that of the child (Ushama & Anna, 2011). Women with a high body weight tend to compare themselves to thin women and avoid social contacts in fear of being judged for their appearance. Physiological changes, psychological stress and social pressure to look good lead to increased feelings of inactivity and depression. Also, the negative evaluation of body size in pregnant women with excessive weight leads to decreased self-esteem and the formation of a pattern of irrational thoughts.

There are a number of theories that explain the effects of a negative body image, including the socio-cultural model. This model identifies social pressure as a force underlying the individual's need to conform to standards of appearance (Cusumano & Thompson, 1997). The media, the fashion industry and the clothing industry have direct effects on body image, which can lead to significant distress among women. Studies show that fashion magazines and the media portray the ideal body as having dimensions of 13-19% lower than healthy weight. These hard-to-reach standards, especially during pregnancy, prevent women from easily accepting their own bodies (Schumann et al., 2014).

Given the fact that the present study involved women in the postpartum period, with different body mass indices, we aim to test the differences that may occur in irrational thoughts (rationality), self-acceptance and perfectionism depending on body weight, assuming that women with a higher weight will have lower scores of rationality and self-acceptance and higher scores of perfectionism.

We therefore formulate the following hypotheses:

H1. *Higher weight women have a lower level of rationality*.

H2. *Higher weight women have a lower level of self-acceptance*.

H3. *Higher weight women have a higher level of perfectionism*.

1.2 Self-acceptance and Its Relationship to Depression and Anxiety

Self-acceptance means self-satisfaction and involves both self-understanding and conscious observation of one's own strengths and weaknesses (Ryff, 1989). Self-acceptance is a central feature of mental health in Jahoda (1958), is self-actualization in Maslow (1968), is optimal functioning in Rogers (1957), is the maturity concept of Allport (1961), but also in Ellis's theory (1962).

Ellis (1962) launched the concept of self-acceptance starting from the assumption that people are beings subject to errors and in order to make peace with themselves it is necessary to accept their own person, to accept themselves as people as who they are. People are able, through innate creativity, to build an emotional journey, which can sometimes lead to irrational behaviors. Greater flexibility can avoid potential significant consequences on the general health and level of functionality of the individual (Ellis, 2007). True self-acceptance means embracing what you are, without judgments, conditions or exceptions (Ellis, 1994). Morgado and colleagues (2014) argue that self-acceptance is the acceptance of all the attributes of the individual, whether positive or negative. Thus, the importance of accepting all facets of one's own person is emphasized. It is not enough to embrace only the positive aspects, that is, to have a high self-esteem. In order to integrate true self-acceptance, we must also embrace our own less desired

or even negative aspects. In other words, let's fully appreciate ourselves. According to Kabat-Zinn (2005), individuals need to remember that they are worthy of appreciation, including self-esteem.

The road to a healthy self does not seem to involve only self-acceptance, but unconditional self-acceptance. It's relatively easy to accept when we've done something great, such as winning an award or meeting a public figure. But the hallmark of unconditional self-acceptance is the acceptance of our shortcomings and our own mistakes and defects. According to Dryden (2014), unconditional self-acceptance is the understanding that the person "in herself" is different from his actions and qualities. She admits that she made mistakes and that she has flaws, but she does not let these factors define her. Women at risk for postpartum anxiety and depression, but without symptoms, have higher levels of self-acceptance and self-compassion (Monteiro et al., 2019).

Self-acceptance is not self-esteem, as it does not refer to the feeling of being special, but of accepting one's own uniqueness. It involves, rather, acceptance of what is, with good and bad. Self-esteem refers to a person's subjective assessment of his or her value as a person (Donnellan et al., 2011; MacDonald, 2012). It is also known that self-esteem is not the expression of a person's talent or abilities. It is also not the way a person is evaluated by others, but the person's perception of how it is evaluated. In general, self-esteem is conceptualized as the feeling that someone is "good enough". Self-acceptance and self-respect, is opposed to excessive self-esteem and grandeur that characterize narcissistic individuals (Ackerman et al., 2010).

There is evidence that self-acceptance is not an automatic or default state. Many individuals do not accept themselves as they are in general, but only accept the positive parts, and for the rest they are evasive. Research results show that it is necessary to accept both defects and failures (Chamberlain & Haaga, 2001; David et al., 2002). And that can lead to unconditional self-esteem.

Reduced self-acceptance has been identified as the main predictor of symptoms of depression or anxiety (Boyraz & Waits, 2015; Edmondson & MacLeod, 2015; Risch et al., 2013). Moreover, the assumption of goals related to one's own interests and values has been associated with the complex process of self-acceptance, rather than the perception of progress towards these goals and values (Sansinenea et al., 2020). Thus, one can admit the possibility of a link between self-acceptance and patterns of ideas, as expressions of personal beliefs and thoughts. Therefore, it could be assumed that assuming goals related to body weight, from the perspective of one's own body attributes, can contribute to increasing one's own acceptance. The literature suggests a link between (irrational) patterns of ideas and self-acceptance. Different studies have revealed the importance of self-acceptance in maintaining or regaining mental health in clinical and non-clinical populations, in different life contexts. Thus, unconditional self-acceptance has a protective role in the case of depressive and anxious emotional reactions in situations of simulated public stress, followed by neutral, negative or positive feedback in clinically healthy people (Popov et al., 2016). It was also observed that self-acceptance positively affects the psychological well-being of students in the context of physical activities (Lapa, 2015). And in the particular situation derived from the immigrant status, evaluated as a

factor of discrimination at work, it was proved the importance of a high level of self-acceptance in maintaining well-being (Fernández et al., 2015).

On the other hand, self-acceptance is also involved in the recovery of individuals with clinical conditions, through cognitive-behavioral therapy (Kivity et al., 2016). In a randomized controlled study, positive changes were found regarding self-acceptance in the evaluation of emotion-centered therapy as a treatment for generalized anxiety disorder (Timulak et al., 2017). Xu and his team (2016) showed how self-acceptance significantly mediates the positive association between mindfulness and subjective well-being. A qualitative meta-analysis combined with a systematic literature review proved that self-acceptance is a criterion with a high effect size, relevant in recovery in eating disorders (de Vos et al., 2017). On the other hand, relevant data have been produced that attest to a low level of self-acceptance in women with breast cancer, which qualifies it as a direction of therapeutic intervention (Chen et al., 2017). Research on post-traumatic stress disorder (PTSD) and chronic childhood abuse has revealed changes in the level of self-acceptance assessed following therapeutic interventions through mindfulness (West et al., 2017).

In general, there are data showing that a high level of self-acceptance in daily life is a protective factor against distressing events (Chamberlain & Haaga, 2001; David et al., 2002). Empirical data suggest that when they can learn this "empirically validated philosophy of life", most people assimilate it. Thus, a person who thinks in rational terms will experience feelings of pleasure and satisfaction when his goals and desires are fulfilled and negative feelings of sadness (which is functional), not of depression (which is dysfunctional) when are exposed to adverse events. These latest feelings will be healthy, normal reactions to negative events, which will not prevent the person from achieving their goals (Chamberlain & Haaga, 2001). This is a pragmatic way to approximate rational attitude in real life and is as important as their content and achievement. Flexible, non-absolutist formulation of objectives promotes well-being even if it cannot be achieved.

Taking into account the above, we aim to test the associations between self-acceptance and depressive-anxiety symptoms among women who have just given birth, so we formulate the following hypotheses:

H4. *Self-acceptance is negatively associated with depression*.

H5. *Self-acceptance is negatively associated with anxiety*.

1.3 Irrational Beliefs vs. Rationality and Their Relationship to Depression and Anxiety

Beck and Haigh (2014) defines beliefs as the generic label assigned to constructions related to cognitive schemas that include hypotheses, expectations, fears, evaluations, and rules, influencing memory and cognitive associations in general. Among their characteristics are the form - for example the imperative, the object - which can be one's own person or others, and the expression - which can take the form of a word, for example "must" (Beck & Haigh, 2014).

Beliefs can be primary (difficult to change; related to survival or identity) or secondary (likely to be corrected if they are wrong, through the use of reasoning and logic). Primary beliefs are characterized

by dimensions such as accessibility, conditionality, validity, attribution or absolute character. A derivative of faith is represented in the form of automatic thought (Beck, 1963). Beliefs can also be characterized by their degree of bias. Biased beliefs range from adaptive to maladaptive, from sub-clinical to clinical and from mild to extremely severe. A functional bias can become dysfunctional as a result of a situation in which biased vulnerability beliefs are applied to a situation perceived as similar to that vulnerability (Beck & Haigh, 2014).

The literature also contains relevant data regarding the relationship between the patterns of beliefs and ideas and the state of mental health. Personal identity is defined by a series of psychological attributes such as the memory of one's own experiences as a result of which thoughts and beliefs are developed, as persistent psychological traits (Noonan, 2005). A meta-analysis of studies addressing clinical populations revealed significant correlation between social comparison and depression and anxiety (McCarthy & Morina, 2020). Another study identifies cognitive biases as significant predictors of depression, anxiety, and well-being (Smith et al., 2018). Ford and Gross (2019) highlight in a literature review the link between beliefs about emotions and a wide range of effects in the areas of emotional life, interpersonal and clinical connections, highlighting the promising potential of the mechanism of regulating emotions. Another literature review discusses how the malleability of emotional beliefs (as opposed to the rigidity of beliefs) could be associated with more flexible motivation and activation of the emotion regulation mechanism and, implicitly, lower levels of pathological suffering. In addition, it is argued that the application of this perspective in the clinical field can complement current conceptualizations of major depressive disorders, social and generalized anxiety (Kneeland et al., 2016). In essence, the subjective creation of meaning of the individual in relation to himself, others and social situations plays a decisive role in his life, and interventions to change the meaning can have important beneficial consequences that help individuals to prosper (Walton & Wilson, 2018).

Beliefs seem to influence the depressive-anxious experience by making it easier to deal with stressful situations (Warren & Hale, 2020) and are a way to change and create meaning and identity in psychosocial contexts that require changes or adjustments, as is the maternity period (Zhou & Xu, 2019). Taking into account all this, we aim to verify the existence of associations between irrational thoughts (measured as the level of rationality) and depressive-anxious symptoms among women who have just given birth, thus establishing the following hypotheses:

H6. *Rationality is negatively associated with depression.*

H7. *Rationality is negatively associated with anxiety*.

It should be mentioned that we used the variable rationality to the antipode with irrational ideas.

1.4 Perfectionism as a Mediator of the Relationship between the Pattern of Ideas (Rationality) and Depression-anxiety Symptoms

In the context of the irrational thinking model that can lead to psycho-behavioral disorders, Ellis (1962, 2002) identified perfectionism as a fundamental irrational belief, the expression of the importance of perfect performance - for example, "I must be perfect in everything I do in order to perform". Irrational

beliefs are considered to be self-sabotaging, due to excessive expectations about oneself, unlikely to be met (Ellis, 1962). In general, cognitive-behavioral explanations are based on the concept that perfectionism is derived from dysfunctional thinking patterns (Andrews et al., 2014; Beck, 1976; Shafran et al., 2002).

Slade and Owens (1998) developed the model of the dual process of perfectionism starting from the principles of Skinner's (1969) consolidation theory. The model proposes explanations for both the adaptive dimension and the maladaptive dimension of perfectionism. Thus, adaptive perfectionism is obtained by pursuing positive results - success, which works as a positive reinforcement, while maladaptive perfectionism is based on the function of avoiding negative consequences - failure, which works as a negative reinforcement. According to Slade and Owens (1998), adaptive perfectionists tend to set realistic standards, which they are satisfied with when they succeed, and therefore remain optimistic about their future success. In contrast, maladaptive perfectionists are more likely to set unattainable goals, which puts them in a position to almost never experience feelings of satisfaction for the goals achieved, due to the fear of failure in the future. In other words, adaptive perfectionists are driven by the pursuit of an ideal self, while maladaptive perfectionists are motivated by a desire to avoid the fearful self (Slade & Owens, 1998).

Numerous studies have shown that the different dimensions of perfectionism are significantly related to irrational cognitions (Andrews et al., 2014; Flett et al., 1991; Lo & Abbott, 2013). Thus, Flett's (1991) research shows significant positive correlations between irrational thinking and other-oriented perfectionism and socially-oriented perfectionism, two of the three dimensions of perfectionism. There are studies that have evaluated specific irrational beliefs and fears specific to perfectionism, such as fear of failure, fear of negative evaluation, high expectations of self, and low self-worth (Ellis, 2002; Flett et al., 1991; Hewitt & Flett, 1991). These results support the hypothesis that perfectionism derives from the cognitive constructs of irrational thinking.

Starting from Beck's (1976) cognitive model, which emphasizes the role of negative automatic thoughts present in situations of emotional suffering, a number of studies have demonstrated the association between perfectionist cognitions and emotional suffering (Flett et al., 1998, 2002, 2007). Thus, perfectionists seem to be driven by automatic thoughts centered on perfectionist themes, such as reaching high standards. Therefore, perfectionists with a high level of perfectionist cognition are more likely to experience a negative effect (e.g., depression in relation to the perception of failure to meet the expected standard or anxiety in relation to fear of failure to meet expected standards). Flett and colleagues (2002) found positive correlations between cognitions related to perfectionism and depression/anxiety. These results suggest that ruminating on perfection increases the likelihood of experiencing distress, confirming that the frequency of cognitions about perfectionism is associated with high levels of negative affectivity and deficits in cognitive self-regulation.

In conclusion, the research results suggest that a key variable associated with perfectionism is perfectionism-oriented cognitions, although the relationships between perfectionism and automatic

irrational thoughts still remain moderate. This leads to the assumption that the relationship between irrational thoughts and depressive-anxious symptoms can be mediated by perfectionism, in the sense that irrational thoughts lead to the development of perfectionism, which in turn is associated with depression and anxiety. Therefore, we introduced in the study model the concept of perfectionism, assuming that:

H8. *Perfectionism mediates the relationship between rationality and depression*.

H9. *Perfectionism mediates the relationship between rationality and anxiety*.

2. Method

2.1 Participants and Procedure

The study involved 123 women, newly mothers, aged between 20 and 46 years, M = 32.29, SD = 6.56. Data were collected in the first three months after birth. To obtain the sample, women were invited by e-mail to participate in the study, through a set of questions offered via the Internet. The eligibility criteria were the following: age over 18 years, Romanian citizenship, confirmation of the status of mother with one or more children, the last of which is at most three months old. Out of the total number of participants, 58 are of normal weight (47.15%), 31 are overweight (25.20%) and 34 are obese (27.65%). Out of a total of 185 mothers contacted, only 123 provided possible quantifiable responses (66.49%). Informed consent was obtained from all participants included in the study, as well as agreement on the processing of personal data, which are included in the first sections of the online questionnaire. Participation was voluntary and no rewards were offered.

2.2 Instruments

Self-acceptance was measured with the Unconditional Self-Acceptance Questionnaire (USAQ) (David, 2007). The questionnaire includes 20 items that reflect the different aspects of this multi-faceted concept, central to rational-emotional and behavioral theory. Scores are offered on a six-step Likert scale where 1 - never and 6 - most of the time. The total score reflects the level of unconditional acceptance of one's own person. High scores indicate high unconditional self-acceptance, while low scores indicate low unconditional self-acceptance. Possible scores range from 20 (minimum score) to 140 (maximum score). Item example: "The feeling of my worth depends largely on the result of the comparison with other people."

Rationality was measured (as opposed to irrational thoughts) with the Inventory of Ideas II (David, 2007). The instrument comprises 33 items and measures 11 irrational beliefs, each expressed in three items. Items are formulated as irrational ideas, so disagreeing with each is rational thinking. Scores are offered on a three-step Likert scale where 1 - disagree and 3 - agree. The total score of irrationality can vary from 33 to 99. In the present study, we will use the variable rationality (high scores) at the opposite pole of irrationality (low scores). Examples of items: "People need love and approval from almost everyone they consider important," "Being a person of value means being perfectly appropriate and competent in almost everything."

Perfectionism was measured with the Frost Multidimensional Perfectionism Scale (FMPS) (Frost et al.,

1990). The instrument consists of 35 items and is designed to measure several components of perfectionism. Its emergence was a response to the need to address the major dimensions of perfectionism. The instrument is used in both research and therapeutic practice, helping to highlight and evaluate change in different areas of perfectionism. A number of 35 items cover six factors: concern for mistake, personal standard, parental expectations, critical opinion of parents, insecurity (doubt) in action, organization. In the present study, perfectionism was analyzed as a global variable. The answers are given on a five-step Likert scale, where 1 - to a small extent and 5 - to a large extent. Possible values are between 35 and 175 points, where the high score means high levels of perfectionism. Examples of items: "If I make a mistake at work/school I am a loser", "If I do not set very high standards, I will probably end up like being nobody".

Depression was measured with the Hamilton Depression Scale (HRSD) from the Clinical Evaluation System, Romanian version (David, 2007). It was developed in 1960 and revised in 1967 by Max Hamilton and is one of the first instruments created to assess the severity of depressive symptoms (Hamilton, 1967). HRSD contains 17 items that measure the intensity of symptoms characteristic of depressive disorders, being a good indicator of the overall intensity of depressive syndrome. Scores are offered on a five-step Likert scale where 0 - never and 4 - most of the time. It is generally accepted that scores below 7 indicate the absence of depression, between 7-17 mild depression, between 18-24 moderate depression and over 25 severe depression. The scale includes items for evaluating the cognitive components (example of item: "Feelings of guilt"), behavioral but especially somatic components (example of item: "Anxiety at the somatic level"), evaluation based on observations on the patient's current condition, supplemented with specific questions (some standard questions are offered for each item).

Anxiety was measured with the Inventory of State-Trait Anxiety (STAI) from the Clinical Assessment System, the Romanian version (Spielberger, 2010), which aims to measure by self-administration the presence and severity of current anxiety symptoms and a generalized tendency to be anxious. Both the adult and children's versions are available. The adult version was used in this study. The instrument comprises two subscales. The state anxiety scale (A-state) assesses the current state of anxiety, assessing how respondents feel "right now", using items that measure subjective feelings of restraint, tension, nervousness, anxiety and activation/excitation of the autonomic nervous system. Example of a representative item "I'm tense." The Trait Anxiety Scale (A-Trait) assesses relatively stable aspects of "predisposition to anxiety", including general states of calm, confidence and security. Example of a representative item "I would like to be happy as others seem to be." In the present study we used A-state with 20 items. Scores are offered on a five-step Likert scale where 0 - never and 4 - most of the time.

3. Results

3.1 Descriptive Statistics

Mean scores, standard deviations, internal consistency coefficients and correlations between variables are presented in Table 1.

Table 1. Mean Scores, Standard Deviations, Internal Consistency Coefficients and Correlations between Variables

	M	AS	α	Dep.	Rat.	Accept.	Anx.	Perf.
Dep.	23.10	10.05	.91	1				
Rat.	62.90	14.87	.96	-.78**	1			
Acc.	80.33	16.62	.95	-.70**	.64**	1		
Anx.	43.41	12.46	.95	.67**	-.54**	-.47**	1	
Perf.	106.60	35.19	.98	.43**	-.29**	-.28**	.17	1

**. p < .01

Dep. - Depression, Rat. - Rationality, Acc. - Self-acceptance, Anx. - Anxiety, Perf. - Perfectionism

It is observed that the participants obtained sub-average and yet relatively high scores on depression, M = 23.10, SD = 10.05, high scores on anxiety, M = 43.41, SD = 12.46, relatively low scores on rationality, M = 62.90, SD = 14.87, above-average scores on self-acceptance and relatively high scores on perfectionism, M = 106.6, SD = 35.19.

3.2 Inferential Statistics

H1. *Higher weight women have a lower level of rationality*.

H2. *Higher weight women have a lower level of self-acceptance*.

H3. *Higher weight women have a higher level of perfectionism*.

For testing the first three hypotheses, three one-way ANOVA analyzes of variance were performed, the criterion being the weight index quantified by 1 - normal weight, 2 - overweight and 3 - obesity.

Table 2. Mean Scores for Rationality, Self-acceptance and Perfectionism According to Body Weight

		N	M	SD	SE	LLCI	ULCI
Rationality	Normal weight	58	68.43	11.90	1.56	65.30	71.56
	Overweight	31	61.94	14.99	2.69	56.44	67.43
	Obesity	34	54.35	15.46	2.65	48.96	59.75
	Total	123	62.90	14.87	1.34	60.25	65.56
Self-acceptance	Normal weight	58	87.26	10.31	1.35	84.55	89.97
	Overweight	31	77.90	17.01	3.06	71.66	84.14
	Obesity	34	70.74	19.74	3.39	63.85	77.62
	Total	123	80.33	16.62	1.50	77.37	83.30
Perfectionism	Normal weight	58	90.57	32.84	4.31	81.93	99.20
	Overweight	31	106.94	30.15	5.41	95.88	117.99
	Obesity	34	133.65	26.12	4.48	124.53	142.76
	Total	123	106.60	35.19	3.17	100.32	112.88

Table 3. One-way ANOVA for Differences in Rationality, Self-acceptance and Perfectionism Depending on Body Weight

		Sum of squares	df	Mean square	F	Sig.
Rationality	Between groups	4286.97	2	2143.49	11.33	.00
	Within groups	22695.86	120	189.13		
	Total	26982.83	122			
Self-acceptance	Between groups	6096.89	2	3048.44	13.25	.00
	Within groups	27602.45	120	230.02		
	Total	33699.33	122			
Perfectionism	Between groups	39781.62	2	19890.81	21.45	.00
	Within groups	111261.86	120	927.18		
	Total	151043.48	122			

It is observed that there are differences for all three variables analyzed, so that for rationality, women with normal weight record the highest scores, M = 68.43, SD = 11.90, followed by overweight women, M = 61.94, SD = 14.99 and then by obese women, M = 54.35, SD = 15.46, the differences being statistically significant, $F(2,120) = 11.33$, $p < .01$. For self-acceptance, women with normal weight have the highest scores, M = 87.26, SD = 10.31, followed by overweight women, M = 77.90, SD = 17.01 and then by obese women, M = 70.74, SD = 19.74, the differences being statistically significant, $F(2,120) = 13.25$, $p < .01$. For perfectionism, women with normal weight have the lowest scores, M = 90.57, SD = 32.84, followed by overweight women, M = 106.94, SD = 30.15 and then by obese women, M = 133.65, SD = 26.12, the differences being statistically significant, $F(2,120) = 21.45$, $p < .01$.

To accurately identify the differences between the three weight groups, the Bonferroni post-hoc test for multiple comparisons was performed.

Table 4. The Bonferroni Post-hoc Test for Multiple Comparisons

Variable	(I) Weight	(J) Weight	MD (I-J)	SE	Sig.	LLCI	ULCI
Rationality	Normal weight	Obesity	14.08*	2.97	.00	6.87	21.29
Self-acceptance	Normal weight	Overweight	9.36*	3.37	.02	1.16	17.55
		Obesity	16.52*	3.28	.00	8.57	24.48
Perfectionism	Normal weight	Obesity	-43.08*	6.58	.00	-59.05	-27.11
	Overweight	Obesity	-26.71*	7.56	.00	-45.07	-8.35

*. $p < .05$

It is observed that in terms of rationality, there is a significant difference between women with normal weight and those with obesity, MD = 14.08, CI95% (6.87, 21.29), $p < .05$. Regarding self-acceptance, the significant differences are between women with normal weight and those with obesity, MD = 16.52, CI95% (8.57,24.48), $p < .05$ and lower between those with normal weight and overweight, MD = 9.36 , CI95% (1.16,17.55), $p < .05$, and in terms of perfectionism, significant differences are observed between women with normal weight and those with obesity, MD = -43.08, CI95% (- 59.05, -27.11), $p < .05$ and between overweight and obese, MD = -26.71, CI95% (- 45.07, -8.35), $p < .05$.

Taking into account these results, we can say that hypotheses H1, H2 and H3 are supported by the analyzed data. By testing these hypotheses, the following analyzes become all the more justified because they explain to some extent the low levels of rationality and self-acceptance among women with high body weight, as well as the high levels of perfectionism.

Relationships between self-acceptance and depression/anxiety

H4. *Self-acceptance is negatively associated with depression.*

H5. *Self-acceptance is negatively associated with anxiety*.

To test these hypotheses, two simple linear regression analyzes were performed having self-acceptance as predictor and alternatively, depression and anxiety as dependent variables.

Table 5. Simple Linear Regression Analysis for Self-acceptance as a Predictor of Depression

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	SE	β	t	p
1	(Constant)	57.10	3.22		17.72	.00
	Self-acceptance	-.42	.04	-.70	-10.77	.00

a. Dependent Variable: Depression

b. $R^2 = .49$

Table 6. Simple Linear Regression Analysis for Self-acceptance as a Predictor of Anxiety

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	SE	β	t	p
1	(Constant)	71.56	4.94		14.48	.00
	Self-acceptance	-.35	.06	-.47	-5.81	.00

a. Dependent Variable: Anxiety

b. $R^2 = .22$

It is observed that self-acceptance is responsible for 49% of the variation of depression, the regression equation being statistically significant, $F(1, 121) = 116.05$, $p < .01$. Self-acceptance is significantly and negatively associated with depression, $\beta = -.70$, $p < .01$.

At the same time, self-acceptance is responsible for 22% of the anxiety variation, the regression equation being statistically significant, $F(1, 121) = 33.79$, $p < .01$. Self-acceptance is significantly and negatively associated with anxiety, $\beta = -.47$, $p < .01$.

Relationships between rationality and depression/anxiety

H6. *Rationality is negatively associated with depression*.

H7. *Rationality is negatively associated with anxiety*.

To test these hypotheses, two simple linear regression analyzes were performed having rationality as predictor and alternatively, depression and anxiety as dependent variables.

Table 7. Simple Linear Regression Analysis for Rationality as a Predictor of Depression

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	SE	β	t	p
1	(Constant)	56.33	2.48		22.73	.00
	Rationality	-.53	.04	-.78	-13.78	.00

a. Dependent Variable: Depression

b. $R^2 = .61$

Table 8. Simple Linear Regression Analysis for Rationality as a Predictor of Anxiety

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	SE	β	t	p
1	(Constant)	71.70	4.15		17.26	.00
	Rationality	-.45	.06	-.54	-6.99	.00

a. Dependent Variable: Anxiety

b. $R^2 = .29$

It is observed that rationality is responsible for 61% of the variation of depression, the regression equation being statistically significant, $F(1, 121) = 189.82$, $p < .01$. Rationality is significantly and negatively associated with depression, $\beta = -.78$, $p < .01$.

At the same time, rationality is responsible for 29% of the anxiety variation, the regression equation being statistically significant, $F(1, 121) = 48.91$, $p < .01$. Rationality is significantly and negatively associated with anxiety, $\beta = -.54$, $p < .01$.

H8. *Perfectionism mediates the relationship between rationality and depression*.

H9. *Perfectionism mediates the relationship between rationality and anxiety*.

To test these hypotheses, two mediation analyzes were performed having rationality as predictor, perfectionism as a mediating variable and alternatively, depression and anxiety as dependent variables.

Table 9. Mediation Estimates for Perfectionism in the Relationship between Rationality and Depression

Effect	Label	Estimate	SE	LLCI	ULCI	Z	p	% Mediation
Indirect	a × b	-.04	.02	-.08	-.01	-2.55	.01	8.05
Direct	c	-.49	.04	-.56	-.41	-12.92	.00	91.95
Total	c + a × b	-.53	.04	-.60	-.45	-13.89	.00	100.00

Table 10. Path Estimates for Perfectionism in the Relationship between Rationality and Depression

			Label	Estimate	SE	LLCI	ULCI	Z	p
RAT	→	PERF	a	-.70	.20	-1.09	-.30	-3.41	< .001
PERF	→	DEP	b	.06	.02	.03	.09	3.85	< .001
RAT	→	DEP	c	-.49	.04	-.56	-.41	-12.92	< .001

It is observed that perfectionism mediates the relationship between rationality and depression, although the mediation percent is low (8.05%), mediation estimates being b = -.04, CI 95% (-.08, -.01), Z = -2.55, $p < .05$. Rationality is negatively associated with perfectionism, $\beta = -.70$, CI 95% (-1.09, -.30), Z = -3.41, $p < .01$, and perfectionism, in turn, is positively associated with depression, $\beta =. 06$, CI 95% (.03, .09), Z = 3.85, $p < .01$.

Table 11. Mediation Estimates for Perfectionism in the Relationship between Rationality and Anxiety

Effect	Label	Estimate	SE	LLCI	ULCI	Z	p	% Mediation
Indirect	a × b	-.00	.02	-.04	.04	-.12	.90	0.54
Direct	c	-.45	.07	-.58	-.32	-6.70	.00	99.46
Total	c + a × b	-.45	.06	-.57	-.32	-7.05	.00	100.00

It is observed that perfectionism does not mediate the relationship between rationality and anxiety.

4. Discussion

The present study aimed to analyze the differences between a number of cognitive variables depending on the level of body weight in postpartum women, as well as the set of relationships that are established between these variables and mental health. Self-acceptance, patterns of ideas (rationality), perfectionism, depression and anxiety were taken into account.

First of all, the differences in terms of rationality, self-acceptance and perfectionism were analyzed according to the body weight of the participants, noting that there are marked differences among them. Thus, the level of rationality and self-acceptance was lower in women with higher body weight, while the level of perfectionism was higher in same tier. These results show the extent to which body perception affects women's thinking and feelings in the postpartum period, when social pressure and multiple roles intervene on their well-being.

The results obtained through regression and mediation analyzes showed that self-acceptance is negatively associated with both depression and anxiety, rationality is also negatively associated with both depression and anxiety, and perfectionism mediates the relationship between rationality and depression, but not the relationship between rationality and anxiety.

Our measurements took place three months after birth, when women begin to re-find their "functions" inside family. Beyond the priority role of mother of the baby, the role of mother of the other children returns to the center of attention, where it exists, and also the role of wife and the role of attractive woman. This "return" to pre-pregnancy life is accompanied by emotional feelings as strong as those related to pregnancy. Women usually want to return to their previous physical shape, to have a slim and harmonious body, to be liked by those around them. Against a background of weight gain, sometimes extremely high, self-acceptance may decrease markedly, and patterns of irrational ideas can reach alarming levels, thus leading to low rationality. All these constitute the fertile ground for the development of depressive-anxious symptoms, with the deterioration of the woman's well-being and of the entire family context.

The strong association between rationality and depression/anxiety, as well as between self-acceptance and depression/anxiety can be alarm signals that must be addressed as soon as possible so that the mental health of women after birth will not deteriorate irreversibly.

Perfectionism, strongly fueled by the pattern of irrational thoughts, is significantly associated with depression, but not with anxiety. The woman can consider that the right solution to solve the unhappy situation in which she finds herself is to give up the fight, to any means to become again what she was before. The multitude of dysfunctional thoughts she faces turns into a maladaptive perfectionism that leads to toxic comparisons, the woman often positioning herself on the lower places of an "unattainable" ranking of "beauty".

Although studies that looked at postpartum depression and anxiety looked less at the psycho-cognitive factors associated with them, there are a limited number of studies that have yielded similar results to ours. Thus, Wittkowski et al. (2016) showed that postpartum depression is not associated with antenatal socio-demographic and contextual factors, but rather with women's irrational beliefs and the perfectionism fueled by these beliefs. Sweeney and Fingerhut (2013), in a study involving 46 pregnant women, showed that low levels of self-acceptance, but not perfectionism, are associated with depressive symptoms.

In the context of the present study, the low level of rationality and self-acceptance, as well as the high level of perfectionism have as a starting point the weight level, so we can argue that body perception is very important in tracing women's beliefs, attitudes and behaviors and also in the manifestation of depressive-anxious symptoms not only during pregnancy, but also postpartum.

Limitations and future research directions

The present study was attended by women, mostly from Bucharest and Ilfov with a great probability of adherence to urban culture, in which the physical appearance and social customs regarding their own image are possibly different from those in other geographical areas of the country, in smaller cities or in rural localities. It is an aspect that could be a direction for future research, by including a more diverse sample from a geographical and cultural point of view.

Also, the number of participants was relatively small, leading to the assumption that increasing the sample size could reduce the sampling error. For reasons related to the internal regulations of the medical facilities, self-reporting questionnaires distributed online this time were used for data collection, which makes possible the existence of a self-reporting bias. In our future studies we will take into account another set of variables that can more accurately explain the variation of depressive-anxious symptoms, but we will also ensure that a more rigorous data collection will be done, possibly at different times.

Practical implications

The postpartum period represents for the woman who has just become a mother a period marked by multiple changes and reconfigurations of her whole life. The appearance of the newly born child in the family, the change in the rhythm of activities, the new responsibilities related to motherhood in general, all these predispose to significant pressures. To these are often added pressures of a psycho-cognitive nature such as thoughts and concerns about the child's health, parental effectiveness or the resumption of pre-pregnancy social roles. During this period, the woman wants to become attractive again, to regain her original shape, to erase any traces left by pregnancy on her body. As long as the shape and size of the body remain "dissatisfying" for the woman, she will be prone to manifest minor or major mental disorders, culminating in depression and anxiety.

In the postpartum period, we recommend that women create an existential equilibrium, an optimal balance between mother's life and wife's life, by trying to cover as much of the responsibilities of these roles as possible. This is not an easy task because she often takes care of the baby, breastfeeds her and

generally organizes the time according to the baby's rhythm. Thus, the woman needs sustained support from the family, and if this support is difficult to obtain, we recommend looking for it in specialized support groups. These groups, moderated by psychologists, can come to support the new mothers to help them resume their pre-pregnancy lifestyle. The purpose of these groups is to normalize the seemingly dramatic situation that women believe they are going through, to diminish dysfunctional patterns of ideas, to increase rationality and self-acceptance, and to diminish maladaptive perfectionism.

Women must be supported to return to a normal, complete and meaningful life in order to maintain their emotional balance and to minimize the impairment of their well-being. Motherhood must be perceived as a goal of a woman's existence in itself, with good and bad, with costs and benefits. Women can be helped to learn what are the best ways to regain their pre-pregnancy forms, which is the most appropriate diet for their lifestyle, how to combine daily responsibilities with moments strictly for themselves (walks, mindfulness, relaxation).

At the same time, when depressive-anxious symptoms are strong, intervention programs based on cognitive-behavioral techniques can be developed to reduce irrational patterns of ideas, to increase self-acceptance and self-compassion and to reduce perfectionism.

References

Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2010). What Does the Narcissistic Personality Inventory Really Measure? *Assessment, 18*(1), 67-87. https://doi.org/10.1177/1073191110382845

Allport, G. W. (1961). *Pattern and growth in personality*. Holt, Rinehart, & Winston.

Andrews, L. M., Bullock-Yowell, E., Dahlen, E. R., & Nicholson, B. C. (2014). Can Perfectionism Affect Career Development? Exploring Career Thoughts and Self-Efficacy. *Journal of Counseling & Development*, *92*(3), 270-279. https://doi.org/10.1002/j.1556-6676.2014.00155.x

Beck, Aaron T. (1963). Thinking and depression: I. Idiosyncratic content and cognitive distortions. *Archives of General Psychiatry*, *9*(4), 324-333. https://doi.org/10.1001/archpsyc.1963.01720160014002

Beck, Aaron T. (1976). *Cognitive therapy and the emotional disorders*. International Universities Press.

Beck, Aaron T., & Haigh, E. A. P. (2014). Advances in Cognitive Theory and Therapy: The Generic Cognitive Model. *Annual Review of Clinical Psychology*, *10*(1), 1-24. https://doi.org/10.1146/annurev-clinpsy-032813-153734

Boyraz, G., & Waits, B. (2015). Reciprocal Associations among Self-Focused Attention, Self-Acceptance, and Empathy: A Two-Wave Panel Study. *Personality and Individual Differences*, *74*, 84-89. https://doi.org/10.1016/j.paid.2014.09.042

Brown, A., Rance, J., Warren, L. (2015). Body Image concerns during pregnancy are associated with a shorter breastfeeding duration. *Midwifery*, *31*(1), 80-89.

Chamberlain, J. M., & Haaga, D. A. F. (2001). Unconditional Self-Acceptance and Psychological Health. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *19*(3), 163-176. https://doi.org/10.1023/A:1011189416600

Chen, S.-Q., Liu, J.-E., Zhang, Z.-X., & Li, Z. (2017). Self-acceptance and associated factors among Chinese women with breast cancer. *Journal of Clinical Nursing*, *26*(11-12), 1516-1523. https://doi.org/10.1111/jocn.13437

Cusumano, D. L., Thompson, J. K. (1997). Body image and body shape ideals in magazines: exposure, awareness and internalization. *Sex Roles*, *37*(9).

David, D. (Ed.). (2007). *Sistem de evaluare clinică*. RTS Romanian Psychological Testing Services.

David, D., Cotet, C., Matu, S., Mogoase, C., & Stefan, S. (2018). 50 years of rational-emotive and cognitive-behavioral therapy: A systematic review and meta-analysis. *Journal of Clinical Psychology*, *74*(3), 304-318. https://doi.org/10.1002/jclp.22514

David, D., Schnur, J., & Belloiu, A. (2002). Another Search for the "Hot" Cognitions: Appraisal, Irrational Beliefs, Attributions, and Their Relation to Emotion. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *20*(2), 93-131. https://doi.org/10.1023/A:1019876601693

de Vos, J. A., LaMarre, A., Radstaak, M., Bijkerk, C. A., Bohlmeijer, E. T., & Westerhof, G. J. (2017). Identifying fundamental criteria for eating disorder recovery: A systematic review and qualitative metaanalysis. *Journal of Eating Disorders*, *5*(1), 34. https://doi.org/10.1186/s40337-017-0164-0

Donnellan, M. B., Trzesniewski, K. H., & Robins, R. W. (2011). Self-esteem: Enduring issues and controversies. In T. Chamorro-Premuzic, S. von Stumm, & A. Furnham (Eds.), *The Wiley-Blackwell handbook of individual differences* (pp. 718-746). Wiley-Blackwell.

Dryden, W. (2014). *Rational-Emotive Therapy (Psychology Revivals): Fundamentals and Innovations*. Routledge.

Edmondson, Olivia. J. H., & MacLeod, A. K. (2015). Psychological Well-Being and Anticipated Positive Personal Events: Their Relationship to Depression. *Clinical Psychology & Psychotherapy*, *22*(5), 418-425. https://doi.org/10.1002/cpp.1911

Ellis, A. (1962). *Reason and emotion in psychotherapy*. Lyle Stuart.

Ellis, A. (1994). *Reason and emotion in psychotherapy revised*. Birch Lane.

Ellis, A. (2002). The role of irrational beliefs in perfectionism. In G. L. Flett, & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 217-229). American Psychological Association.

Ellis, A. (2007). *Overcoming Resistance A Rational Emotive Behavior Therapy Integrated Approach* (2nd ed.). Springer Publishing Company.

Fernández, I., Silván-Ferrero, P., Molero, F., Gaviria, E., & García-Ael, C. (2015). Perceived Discrimination and Well-Being in Romanian Immigrants: The Role of Social Support. *Journal of Happiness Studies*, *16*(4), 857-870. https://doi.org/10.1007/s10902-014-9537-0

Flett, G L, Hewitt, P. L., Blankstein, K. R., & Koledin, S. (1991). Dimensions of perfectionism and irrational thinking. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, *9*(3), 185-201. https://doi.org/10.1007/BF01061229

Flett, Gordon L., Hewitt, P. L., Blankstein, K. R., & Gray, L. (1998). Psychological distress and the frequency of perfectionistic thinking. *Journal of Personality and Social Psychology*, *75*(5), 1363-1381. https://doi.org/10.1037/0022-3514.75.5.1363

Flett, G. L., & Hewitt, P. L. (2002). Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues. In G. L. Flett, & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 5-31). American Psychological Association. https://doi.org/10.1037/10458-001

Flett, G. L., Hewitt, P. L., Whelan, T. et al. (2007). The Perfectionism Cognitions Inventory: Psychometric Properties and Associations with Distress and Deficits in Cognitive Self-management. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *25*, 255-277. https://doi.org/10.1007/s10942-007-0055-4

Fonseca, A., & Canavarro, M. C. (2019). Cognitive correlates of women's postpartum depression risk and symptoms: The contribution of dysfunctional beliefs and negative thoughts. *Journal of Mental Health*, 1-9. https://doi.org/10.1080/09638237.2019.1581331

Ford, B. Q., & Gross, J. J. (2019). Why Beliefs About Emotion Matter: An Emotion-Regulation Perspective. *Current Directions in Psychological Science*, *28*(1), 74-81. https://doi.org/10.1177/0963721418806697

Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research*, *14*(5), 449-468. https://doi.org/10.1007/BF01172967

Hamilton, M. (1967). Development of a Rating Scale for Primary Depressive Illness. *British Journal of Social and Clinical Psychology*, *6*(4), 278-296. https://doi.org/10.1111/j.2044-8260.1967.tb00530.x

Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, *60*(3), 456-470. https://doi.org/10.1037/0022-3514.60.3.456

Institute of Medicine. (1990). *Nutrition during pregnancy; Part I, weight gain*. Washington, DC: National Academy Press.

Jahoda, M. (1958). *Current concepts of positive mental health*. Basic Books. https://doi.org/10.1037/11258-000

Jibeen, T. (2017). Unconditional Self-Acceptance and Self Esteem in Relation to Frustration Intolerance Beliefs and Psychological Distress. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, *35*(2), 207-221. https://doi.org/10.1007/s10942-016-0251-1

Kabat-Zinn, J. (2005). *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life*. Hachette Books.

Kivity, Y., Tamir, M., & Huppert, J. D. (2016). Self-Acceptance of Negative Emotions: The Positive Relationship with Effective Cognitive Reappraisal. *International Journal of Cognitive Therapy*, *9*(4), 279-294. https://doi.org/10.1521/ijct_2016_09_10

Kneeland, E. T., Dovidio, J. F., Joormann, J., & Clark, M. S. (2016). Emotion malleability beliefs, emotion regulation, and psychopathology: Integrating affective and clinical science. *Clinical Psychology Review*, *45*, 81-88. https://doi.org/10.1016/j.cpr.2016.03.008

Lapa, T. Y. (2015). Physical Activity Levels and Psychological Well-Being: A Case Study of University Students. *Procedia - Social and Behavioral Sciences*, *186*, 739-743. https://doi.org/10.1016/j.sbspro.2015.04.122

Liu, J., Peh, C. X., & Mahendran, R. (2017). Body image and emotional distress in newly diagnosed cancer patients: The mediating role of dysfunctional attitudes and rumination. *Body Image*, *20*, 58-64. https://doi.org/10.1016/j.bodyim.2016.11.001

Lo, A., & Abbott, M. J. (2013). Review of the Theoretical, Empirical, and Clinical Status of Adaptive and Maladaptive Perfectionism. *Behaviour Change*, *30*(2), 96-116. Cambridge Core. https://doi.org/10.1017/bec.2013.9

MacDonald, G. (2012). Individual differences in self-esteem. In M. R. Leary (Ed.), *Handbook of self and identity* (2nd ed., pp. 354-377). Guilford Press.

Maslow, A. H. (1968). *Toward a psychology of being*. Van Nostrand.

McCarthy, P. A., & Morina, N. (2020). Exploring the association of social comparison with depression and anxiety: A systematic review and metaanalysis. *Clinical Psychology & Psychotherapy*, 1-32. https://doi.org/10.1002/cpp.2452

Monteiro, F., Fonseca, A., Pereira, M., Alves, S., & Canavarro, M. C. (2019). What protects at-risk postpartum women from developing depressive and anxiety symptoms? The role of acceptance-focused processes and self-compassion. *Journal of Affective Disorders*, *246*, 522-529. https://doi.org/10.1016/j.jad.2018.12.124

Morgado, F. F. da R., Campana, A. N. N. B., & Tavares, M. da C. G. C. F. (2014). Development and Validation of the Self-Acceptance Scale for Persons with Early Blindness: The SAS-EB. *PLOS ONE*, *9*(9), e106848. https://doi.org/10.1371/journal.pone.0106848

National Research Council and Institute of Medicine. (2007). *Workshop report*. Washington, DC: The National Academies Press. Influence of pregnancy weight on maternal and child health.

Nohr, E. A., Vaeth, M., Baker, J. L., Sorensen, T., Olsen, J., Rasmussen, K. M. (2008). Combined associations of pre-pregnancy body mass index and gestational weight gain with the outcome of pregnancy. *American Journal of Clinical Nutrition*, *87*(6), 1750-1759.

Noonan, H. W. (2005). *Personal Identity* (2nd ed.). Routledge.

Oltmanns, T. F., & Emery, R. E. (2015). *Abnormal Psychology* (8th ed.). Pearson Inc.

Popov, S., Radanović, J., & Biro, M. (2016). Unconditional self-acceptance and mental health in ego-provoking experimental context. *Suvremena Psihologija/Contemporary Psychology*, *19*(1),

71-81. https://doi.org/10.21465/2016-SP-191-06

Risch, A., Risch, A. K., Taeger, S., Brüdern, J., & Stangier, U. (2013). Psychological Well-Being in Remitted Patients with Recurrent Depression. *Psychotherapy and Psychosomatics*, *82*(6), 404-405. https://doi.org/10.1159/000351808

Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting and Clinical Psychology*, *21*(2), 95-103. https://doi.org/10.1037/0022-006X.60.6.827

Rucker III, C. E., & Cash, T. F. (1992). Body images, body-size perceptions, and eating behaviors among African-American and white college women. *International Journal of Eating Disorders*, *12*(3), 291-299. https://doi.org/10.1002/1098-108X(199211)12:3<291::AID-EAT2260120309>3.0.CO;2-A

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, *57*(6), 1069-1081. https://doi.org/10.1037/0022-3514.57.6.1069

Sansinenea, E., Asla, N., Agirrezabal, A., Fuster-Ruiz-de-Apodaca, M. J., Muela, A., & Garaigordobil, M. (2020). Being Yourself and Mental Health: Goal Motives, Positive Affect and Self-Acceptance Protect People with HIV from Depressive Symptoms. *Journal of Happiness Studies*, *21*(2), 593-612. https://doi.org/10.1007/s10902-019-00098-7

Schumann, N. L., Brinsden, H., Lobstein, T. (2014). A review of national health policies and professional guidelines on maternal obesity and weight gain in pregnancy. *Clinical Obesity*, *4*, 197-208.

Shafran, R., Cooper, Z., & Fairburn, C. G. (2002). Clinical perfectionism: A cognitive-behavioural analysis. *Behaviour Research and Therapy*, *40*(7), 773-791. https://doi.org/10.1016/S0005-7967(01)00059-6

Skinner, B. F. (1969). *Contingencies of Reinforcement: A Theoretical Analysis*. Prentice Hall.

Slade, P. D., & Owens, R. G. (1998). A Dual Process Model of Perfectionism Based on Reinforcement Theory. *Behavior Modification*, *22*(3), 372-390. https://doi.org/10.1177/01454455980223010

Smith, E. M., Reynolds, S., Orchard, F., Whalley, H. C., & Chan, S. W. (2018). Cognitive biases predict symptoms of depression, anxiety and wellbeing above and beyond neuroticism in adolescence. *Journal of Affective Disorders*, *241*, 446-453. https://doi.org/10.1016/j.jad.2018.08.051

Spielberger, C. D. (2010). State-Trait Anxiety Inventory. In *The Corsini Encyclopedia of Psychology* (p. 1). American Cancer Society. https://doi.org/10.1002/9780470479216.corpsy0943

Strang, V. R., Sullivan, P. L. (1985). Body Image attitudes during pregnancy and the postpartum period. *Journal of Obstetrics and Gynecology of Neonatal Nursery*, *14*, 332-337.

Sweeney, A. C., Fingerhut, R. (2013). Examining Relationships between Body Dissatisfaction, Maladaptive Perfectionism, and Postpartum Depression Symptoms. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *42*(5), 551-561. http://doi.org/10.1111/1552-6909.12236

Timulak, L., McElvaney, J., Keogh, D., Martin, E., Clare, P., Chepukova, E., & Greenberg, L. S. (2017). Emotion-focused therapy for generalized anxiety disorder: An exploratory study. *Psychotherapy*, *54*(4), 361-366. https://doi.org/10.1037/pst0000128

Ushma, J. M., Anna, S-R. (2011). Effect of Body Image on pregnancy Weight Gain. *Maternal and Child Health Journal*, *15*(3), 324-332.

Viswanathan, M., Siega-Riz, A. M., Moos, M., Deierlein, A., Mumford, S., Knaack, J., et al. (2008). *Evidence report/technology assessment*. Agency for Healthcare Research and Quality. Outcomes of maternal weight gain. Report No.: 168.

Walton, G. M., & Wilson, T. D. (2018). Wise interventions: Psychological remedies for social and personal problems. *Psychological Review*, *125*(5), 617-655. https://doi.org/10.1037/rev0000115

Warren, J. M., & Hale, R. W. (2020). Predicting Grit and Resilience: Exploring College Students' Academic Rational Beliefs. *Journal of College Counseling*, *23*(2), 154-167. https://doi.org/10.1002/jocc.12156

West, J., Liang, B., & Spinazzola, J. (2017). Trauma sensitive yoga as a complementary treatment for posttraumatic stress disorder: A qualitative descriptive analysis. *International Journal of Stress Management*, *24*(2), 173-195. https://doi.org/10.1037/str0000040

Wittkowski, A., Garrett, C., Cooper, A., & Wieck, A. (2016). The Relationship between Postpartum Depression and Beliefs about Motherhood and Perfectionism during Pregnancy. *Journal of Woman's Reproductive Health*, *1*(4), 10. http://doi.org/10.14302/issn.2381-862X.jwrh-15-848

World Health Organization. (2017, October 18). *Facts about overweight and obesity* [Database]. http://www.euro.who.int/en/health-topics/disease-prevention/nutrition/a-healthy-lifestyle/body-mass-index-bmi

Xu, W., Oei, T. P., Liu, X., Wang, X., & Ding, C. (2016). The moderating and mediating roles of self-acceptance and tolerance to others in the relationship between mindfulness and subjective well-being. *Journal of Health Psychology*, *21*(7), 1446-1456. https://doi.org/10.1177/1359105314555170

Zhou, Y., & Xu, W. (2019). Short report: The mediator effect of meaning in life in the relationship between self-acceptance and psychological wellbeing among gastrointestinal cancer patients. *Psychology, Health & Medicine*, *24*(6), 725-731. https://doi.org/10.1080/13548506.2018.1554252