

## Resilience and Mental Health: A Study of Women with and without Depression

Alexandra Fonseca<sup>1,2,3\*</sup>, Margarida Gaspar de Matos<sup>3</sup>, & Carlos Gois<sup>1,3,4</sup>

<sup>1</sup>Psychiatry Service of the Department of Neuroscience and Mental Health of CHULN - Hospital de Santa Maria, Lisbon, Portugal.

<sup>2</sup>Department of Education, Social Sciences and Humanities, Faculty of Human Kinetics, Lisbon University, Lisbon, Portugal.

<sup>3</sup>ISAMB, Faculty of Medicine, Lisbon University, Lisbon, Portugal.

<sup>4</sup>Faculty of Medicine, Lisbon University, Lisbon, Portugal.

**\*Correspondence author****Alexandra Fonseca**

Hospital de Santa Maria – Serviço de Psiquiatria  
Av. Prof. Egas Moniz MB  
Lisbon  
Portugal

Submitted : 17 Apr 2023 ; Published : 4 May 2023

**Citation:** Fonseca, A., et al (2023). Resilience and Mental Health: A Study of Women with and without Depression. J Psychol Neurosci; 5(2):1-9. DOI : <https://doi.org/10.47485/2693-2490.1070>

**Abstract**

**Background:** Female depression has proved to be a substantial public health challenge, given its high prevalence and consequent personal, social, and economic implications. The relationship between depression and resilience seems evident, and studies in this area can help identify effective interventions and support for women with depressive disorders and strategies to prevent depression.

**Methods:** The present study examines the relationship between depression and resilience using the Beck Depression Inventory - Short Form (BDI-SF) and the Resilience Scale for Adults (RSA). A non-clinical Portuguese female population was considered (n=240). A one-way ANOVA and logistic regression were performed.

**Results:** There was a significant difference in resilience total score and all the sub-scales scores between the groups with and without depression, with non-depressed women manifesting significantly higher resilience than the depressed ones. The predictive analysis showed that individual Self Perception and Planned Future variables might contribute to explaining depression.

**Conclusions:** Prevention strategies for female depression should be valued in public policies and include analyses and interventions on self-esteem, self-efficacy, emotional reactivity, self-compassion, prospecting and life purpose. This is an important message for both mental health professionals and policy deciders with a strong impact on service provision.

**Keywords:** Depression; Female; Mental Health; Public Health; Resilience.

**Introduction**

There is consensus among mental health researchers about gender differences in depressive disorders, with women demonstrating a higher prevalence. With a substantial impact on quality of life, performance and interpersonal dynamics, female depression is a relevant topic of study in a society that requires adaptation and proactivity in the face of challenges and expectations related to gender roles (Hyde & Mezulis, 2020).

Recent research on depressive disorders assumes a multifactorial aetiology, resulting from various articulations between biological, psychological and social factors, with different impacts according to sex, age and culture (Breslau et al., 2017). Much of the knowledge about depression is focused on the maladaptive changes these disorders entail and the therapeutic interventions that can overcome symptomatic conditions. The evidence that a significant percentage of

patients do not entirely resolve their symptoms and the high incidence of recurrent episodes justifies the development of research on risk factors and triggers for depression (Fonseca et al., 2021), as well as on protective factors.

Protective factors decrease the adverse effects of risk factors, leading to positive adaptation (Carbonell et al., 2002). The knowledge and identification of protective factors for depression target social, family and individual interventions. Classically, three types of protective factors are indicated (Friborg et al., 2003): personal factors, such as cognitive ability and self-esteem; family factors, such as cohesion and conflict management; and environmental factors, namely social support and financial capacity.

Identifying mechanisms to protect individuals from developing mental health problems has highlighted resilience as a growing

research focus (Dudek et al., 2021) since its promotion seems to impact becoming depressed and chronic situations, reducing the likelihood of new episodes (Breton et al., 2015).

### Resilience

Resilience is a complex and multidimensional construct conceptualised as an attribute (a trait), as a dynamic process (a state) or as an outcome (Smith & Hayslip, 2012), but always implying successful adaptation to life's challenging stressors and adversities (Reich et al., 2010). Resilience has also been considered a dynamic mechanism that mitigates the impact of adverse events (Poole et al., 2017) and is consistently linked to depression, acting as a protective factor in adolescence (Lee et al., 2021) and adulthood (Laird et al., 2019).

Despite this complexity, empirical evidence indicates a consensus on three key resilience factors: personal characteristics of positive disposition, family support and cohesion, and social support systems (Hjemdal et al., 2011). Thus, when placed in stressful situations, resilient people will make use not only of their personal abilities but also of family, social and external support systems. Among the instruments for assessing adult resilience with adequate psychometric properties, the Resilience Scale for Adults (RSA) (Friborg et al., 2003, 2006; Hjemdal et al., 2006) is the only scale that includes the family and social protection factors of resilience (Morote et al., 2017).

A significant relationship between resilience and depression is well documented, with resilience functioning as a protective factor (Sharpley et al., 2016; Walker et al., 2022) in childhood and adolescence (Mesman et al., 2021), adulthood (Grob et al., 2020) and in late life (Laird et al., 2019).

Analyzing the extent to which resilience characteristics vary between depressed and non-depressed women intends to deepen knowledge about gender-specific factors that contribute to depression and how women can develop the necessary skills and resources to prevent the symptoms of the disease. The purpose of the present study was, then, to compare resilience between depressed and non-depressed women and to assess how well different resilience characteristics predict depression.

### Materials and Methods

This study is part of a more extensive study in a non-clinical Portuguese female sample, aiming to assess interpersonal problems, resilience, self-regulation and depression. We previously presented detailed methodology, sample characteristics and instruments (Alexandra et al., 2022).

### Participants

Two groups of participants were considered, drawn from the original study sample consisting of 1842 women, aged 18 to 81 years. The selection criterion was the results obtained in the Beck Depression Inventory - short form (BDI-SF). A score of 15 was used as the cut-off point for depression. G1 (n=119) is made up of women who obtained 0 points in the BDI-SF, considered a group without depression, referred to as "non-depressed"; and G2 (n=121), is made up of women with a BDI-

SF score of 15 or higher, considered a group with depression, referred to as "depressed".

### Instruments

The Resilience Scale for Adults (RSA) (Friborg et al., 2003, 2006; Hjemdal et al., 2006), adapted for the Portuguese population (Pereira et al., 2013, 2016), was used to assess the participants' resilience. The Beck Depression Inventory - Short Form (BDI-SF) (Beck & Beck, 1972) was used to measure depression.

The Resilience Scale for Adults (RSA) assesses intra- and interpersonal protective factors that can facilitate adaptation to psychological adversity. The scale was developed based on a theoretical categorization of resilience that highlights personal attributes, family support, and external support systems. RSA comprises 33 items, item response ranging from 1 to 7, with a positive and a negative attribute at the extremes of the scale.

The RSA assesses six protective dimensions of resilience, the first four are the intrapersonal factors of the scale, and the last two are the interpersonal factors: RSA1 Perception of the Self - self-esteem and self-efficacy, the ability to find positive issues to thrive in troubled times; tendency to experience life as meaningful and controllable. RSA2 Planned Future - belief in the ability to be goal-oriented and succeed; structured and unconcerned approach to life. RSA3 Social Competence - socially warm and flexible posture, good communication skills and ability to establish close relationships. RSA4 Family Cohesion - satisfaction with family dynamics, marked by a shared understanding of family matters; assessment of shared and discordant values, whether they enjoy spending time with their family or feel valued and supported. RSA5 Social Resources - availability of social support; intimacy, cohesion, help and support from relatives and friends, and the individual's ability to provide support. RSA6 Structured Style - approach to life situations in an organized way, formulating plans and establishing routines; implies the preference for clear goals before undertaking activities.

Raw sub-scale scores are obtained by calculating the sum of all the items responses for each of the six sub-scales, and RSA total score results from the sum of the six sub-scales, with higher scores indicating higher levels of protective resilience.

The Beck Depression Inventory - short form (BDI-SF) (Beck & Beck, 1972) was used to assess depression. The BDI-SF is an abbreviated form of the 21-item BDI, composed of 13 items. This scale seems to have a level of internal consistency comparable to the long form (Beck et al., 1988), being frequently used in non-clinical settings and allowing for a quantifiable assessment of depressive symptomatology. The subject is asked to recall, based on the previous two weeks, the sentences that in each item "best describe the way you are feeling". The answers are given on a Likert scale organized in order of progressive severity, and the total score corresponds to the direct sum of the values of all the items.

The definition of the cut-off points for the BDI-SF is not consensual, varying between 16 for severe depression (Kunkel et al., 2000) assuming the cutoff point of the 21-item version of the BDI, and 13/14 in a study that uses The Clinical Interview Schedule and the ICD-10 international classification (Furlanetto et al., 2005). In the present study, we opted for the value 15, intermediate between the two references.

### Variables

The sociodemographic variables concerned the participant's age, school grade, professional status, number of children and household status. Table 1 presents measures and variables under study.

Variables	Range
Age (years)	Min=18; Max= 81 1 = 18 to 39 years; 2 = 40 years and older
School grade	1 = Up to 12 years of schooling; 2 = more than 12 years of schooling
Professional Status	1 = Professionally active; 2 = Professionally inactive
Number of Children	1 = 0 or 1 children; 2 = 2 or more children
Household Status	1 = Living alone; 2 = Living accompanied
Resilience (RSA)	<ul style="list-style-type: none"> <li>Total scale 33 items (Min=41; Max=229, <math>\alpha=0.90</math>)</li> <li>RSA1: Perception of the Self (Min=6; Max=42, <math>\alpha=0.78</math>)</li> <li>RSA2: Planned Future (Min=4; Max=28, <math>\alpha=0.74</math>)</li> <li>RSA3: Social Competence (Min=6; Max=42, <math>\alpha=0.72</math>)</li> <li>RSA4: Family Cohesion (Min=6; Max=42, <math>\alpha=0.84</math>)</li> <li>RSA5: Social Resources (Min=7; Max=49, <math>\alpha=0.80</math>)</li> <li>RSA6: Structured Style (Min=4; Max=28, <math>\alpha=0.40</math>)</li> </ul>
Depression (BDI-SF)	Total scale 13 items – 1= 0; 2 $\geq$ 15 ( $\alpha=0.73$ )

RSA, Resilience Scale for Adults; BDI-SF, Beck Depression Inventory – short form;  $\alpha$ , Cronbach's alpha

**Table 1:** Measures and variables under study

Resilience was assessed as a continuous variable, with scores on each sub-scale and a total score. Depression was evaluated as a nominal variable, with a BDI-SF score of 15 as the cutoff between the “non-depressed” (G1, n=119) and “depressed” (G2, n=121) groups.

### Procedure

An online questionnaire, published on social networks from April to September 2021, was used to collect data. The questionnaires were self-fulfilling. Participants were informed about the purpose of the study, its anonymous nature and

gave their voluntary electronic consent. Sociodemographic factors were obtained through multiple choice responses and interpersonal problems and depression were assessed using scales.

The procedures and protocols used were approved by the Ethical Committee of the Center for Electroencephalography and Clinical Neurophysiology (CENC - registration number 2/2021), complying with all ethical requirements related to human research.

### Data analysis

17 RSA item scores were reversed: 3, 6, 7, 8, 10, 11, 14, 15, 18, 19, 22, 23, 26, 28, 29, 31, 33. The internal consistency of the BDI-SF and RSA total scale and sub-scales was examined using Cronbach's alpha. Descriptive statistics (i.e., percentages), the relation between depressed and non-depressed women and the sociodemographic variables, have been described elsewhere (Alexandra et al., 2022; Fonseca et al., 2023., accepted), so they will not be presented in this article. A one way analysis of variance was performed to examine whether there were significant differences in resilience in depressed and non-depressed women. A logistic regression to ascertain the effects of resilience sub-scales on depression was conducted. The analyses were conducted using the Statistical Package for Social Sciences, version 25(SPSS).

### Results

The total scale of the Resilience Scale for Adults (RSA) had excellent internal consistency reliability. All RSA sub-scales showed good internal consistency, except for the RSA6 Structured Style sub-scale, which showed poor reliability. Good internal consistency reliability was found in the Beck Depression Inventory - short form.

Sociodemographic characteristics of the total sample (n=240) have been described elsewhere (Alexandra et al., 2022), indicating that most of the sample was working, living accompanied and had education levels higher than compulsory schooling in Portugal. Depressed women (G2) were less likely than non-depressed women (G1) to be professionally active.

A one-way between-subjects ANOVA was run with resilience as independent variable, considering the sub-scales and the total scores, and depression as the dependent variable. Results of the ANOVA showed a significant effect of resilience total score on depression at the  $p < .05$  level for the two conditions [ $F(1, 238) = 248.768, p < .001$ ]. In addition, Post hoc analyses using the Scheffé criterion for significance indicated that non-depressed women (n = 119, M = 189.01, SD = 22.27) have significantly more resilience than depressed women (n = 121, M = 137.67, SD = 27.80). These results suggest that high levels of resilience do have an effect on depression. Specifically, our results suggest that when women present high levels of resilience, they present less depression.

Table 2 shows the results of the ANOVA considering all sub-scales of the Resilience Scale for Adults (RSA), showing significant differences in all variables, with non-depressed

women showing better scores on all resilience subscales.

Measure	Non-depressed (G1)		Depressed (G2)		F(1, 294)	$\eta^2$
	M	SD	M	SD		
RSA1: Perception of the Self	34.83	5.09	21.41	6.56	312.64***	.57
RSA2: Planned Future	22.33	4.06	13.56	5.96	176.74***	.43
RSA3: Social Competence	33.42	5.83	25.87	7.51	75.55***	.24
RSA4: Family Cohesion	34.29	7.06	25.63	8.65	72.01***	.23
RSA5: Social Resources	43.60	5.70	34.57	8.98	86.06***	.27
RSA6: Structured Style	20.55	3.77	16.63	5.03	46.54***	.16

\*\*\*p < .001

**Table 2:** Means, Standard Deviations, and One-Way Analyses of Variance in Resilience

In addition to the statistically significant difference in resilience between non-depressed (G1) and depressed (G2) women, the actual mean difference among the characteristics determined by the various sub-scales of resilience was strong ( $\eta^2 \geq .16$ ). Furthermore, the proportion of the variance in depression that can be explained by the variance in resilience sub-scales identified, in order of importance, Perception of the Self (RSA1), Planned Future (RSA2), Social Resources (RSA5), Social Competence (RSA3), Family Cohesion (RSA4) and, with the lower effect size, Structured Style (RSA6).

A logistic regression was performed to ascertain the effects the characteristics assessed for the six sub-scales of resilience on the likelihood that participants have depression (Table 2). The logistic regression model was statistically significant,  $\chi^2(6) = 207.96$ ,  $p < .001$ . All the six predictors explained 77.3% (Nagelkerke  $R^2$ ) of the variance in depression and correctly classified 88% of cases.

	OR (95% CI)	p
RSA1 Self Perception	.734 (.663-.814)	< .001
RSA2 Planned Future	.877 (.792-.971)	.011
RSA3: Social Competence	.980 (.898-1.069)	.647
RSA4: Family Cohesion	.978 (.916-1.044)	.497
RSA5: Social Resources	1.005 (.925-1.093)	.900
RSA6: Structured Style	.909 (.809-1.021)	.108

OR, odds ratio;

**Table 3:** Binary logistic regression analysis using G1 (non-depressed) and G2 (depressed) as dependent variable

We found a statistically significant main effect of Self Perception on depression, followed by Planned Future, with increasing values in these variables corresponding with decreased likelihood of exhibiting depression. The other resilience sub-scales were not significant on the model.

## Discussion

There was a significant effect of resilience total score on depression, and women with high levels of resilience were less likely to present depressive symptoms. Our results corroborate the findings in the literature, which refer to a very significant relationship between resilience and depression, with resilience functioning as a protective factor (Grob, 2020; Mesman et

al., 2021; Sharpley et al., 2016). The importance of resilience has been highlighted in clinical and non-clinical samples with different depressive disorders, reinforcing the need for a more detailed understanding of the various characteristics included in the concept of resilience and its impact on depression.

Among the six factors assessed by the RSA scale, the highest percentage of variance in depression was accounted for by the "Perception of the Self" (RSA1) sub-scale, which measures self-esteem and self-efficacy. Considered a motivational-affective process of someone's subjective evaluation of their thoughts and feelings, self-esteem acts as a filter that conditions the interpretation of all external information and circumstances. It, therefore, influences mood and behaviour negatively or positively (van Tuijl et al., 2018). Women with depressive disorders may have negative self-evaluation reflected in negative self-beliefs, feelings of inadequacy and low self-confidence, making it difficult to handle stressors and setbacks. This interpretation not only may explain why negative self-evaluation is a significant predictor of depression (Orth et al., 2016), but it also underlies future intervention proposals aimed at increasing self-esteem and assessing whether improving self-esteem reduces the risk of depression (Bhattacharya et al., 2023).

Another implicit concept in RSA1 is self-efficacy, which concerns the self-perception of control in the sense of personal ability to regulate behaviour and the course of action in each situation, dictating effectiveness in addressing life challenges (Tus, 2020). Self-efficacy advocates a relationship between self-devaluation cognitions and the inability to initiate and maintain adaptive behaviours in the face of obstacles and concerns (Bandura, 1999). At least three types of self-efficacy beliefs associated with disability influence depression: inability to achieve standards of performer capable of provoking personal satisfaction, inability to initiate and maintain rewarding and supportive interpersonal relationships, and inability to control depressive ruminations (Maddux & Meier, 1995). Consequently, self-efficacy influences the setting of goals, the effort and time spent on each activity, impacting personal performance (Chen et al., 2020).

It has been suggested that there is a relationship between individual self-perception and emotional reactivity, whereby



people with a negative self-perception are more reactive to negative emotional stimuli (Garofalo et al., 2016; Leary & Baumeister, 2000). Having an overestimation of real or imagined signs of possible rejection or failure, reactive emotional expression increases. As a result, a conditioning cycle may be installed, contributing to developing or maintaining a negative self-perception. In this sense, lower scores on the RSA sub-scale “Perception of the Self” (RSA1) may be associated with greater emotional reactivity to damaging stimuli, potentially impacting the emergence or maintenance of depressive symptoms.

Furthermore, high self-criticism and low self-compassion have been identified as self-perceived characteristics related to depressive symptoms and vulnerability to depression (Sharpley et al., 2016). self-compassion are and low self-compassion are, in fact, negatively correlated constructs. High self-criticism refers to a tendency to evaluate oneself harshly, valuing one’s faults and mistakes and engaging in negative internal considerations, often accompanied by emotions such as anger and self-contempt. High self-criticism is associated with low self-compassion, reflecting an inability to be kind, understanding and supportive of oneself, particularly in times of difficulty and failure (Wakelin et al., 2022).

The authors consider that some data associated with these concepts are essential. Firstly, high self-criticism does not, by itself, increase vulnerability to depression. But when an individual with high self-criticism and low self-esteem experiences adverse circumstances or events, this combination predicts depressive symptoms (Abela & Taylor, 2003; Gittins & Hunt, 2020). Second, self-compassion may buffer the effect of self-criticism on depression, as self-critical individuals with high levels of self-compassion exhibit less expressive depressive symptoms than self-critical individuals with low levels of self-compassion (Brophy et al., 2020; Liu & Hu, 2020).

These findings enhance that an individual’s perception of self is a critical factor in preventing and treating depression. Therefore, interventions aimed at increasing self-esteem, self-efficacy and self-compassion, and reducing reactive emotional expression to negative stimuli may be relevant targets for interventions aimed at reducing depressive symptoms in women.

In our study, non-depressed women had significantly better results in the sub-scale “Planned Future” (RSA2) than the depressed ones and the second highest percentage of variance in depression was accounted for by the RSA2. The “Planned Future” sub-scale assesses a positive view and a sense of purpose about one’s future, a belief and expectation about the opportunity for success and the ability to plan and set achievable goals. Our findings reinforce those obtained in other investigations where individuals with higher scores on RSA2 have a lower risk of developing depression and are generally more effective in achieving their plans than vulnerable individuals (Nezlek, 2001).

The most significant psychopathological aspects of depression are anhedonia, hopelessness and lack of motivation (Pettorruso et al., 2020). Hopelessness seems to mirror an emotional state associated with believing that no change depends on the individual’s behaviour (Karakus, 2018). Not trusting the personal impact on the context and situations compromises motivation, removes hope in the future and may explain difficulties in setting and achieving goals.

The mental representation of possible futures seems to be a universal mechanism (Seligman et al., 2013), often explained by its role in preparing for the future and allowing the individual to survive and thrive (Suddendorf & Henry, 2013). The mental representation of possible futures, identified as “Prospection” (Gilbert & Wilson, 2007), elicits an emotional response depending on the nature of the simulations and impacts decision-making and self-regulation. It has recently been proposed that when prospection does not match the individual’s potential and abilities, it negatively influences emotions, cognitions and behaviours and that negative prospection leads to depressive disorders (Roepke & Seligman, 2016). Expressly, the combination of three prospection problems could lead to depression: poor generation and poor evaluation of possible futures, and negative beliefs about the future. A cycle of reciprocal conditioning between negative prospection and depression is suggested. Depression seems to increase the appreciation of negative memories, increase interpersonal conflicts, and limit activities and relational investment, reducing the possibility of simulating the future as rewarding.

These data allow us to value the need for depression prevention programmes focused on the defining future goals that are objective and rewarding, on the ability to deal with difficulties and challenge oneself in overcome them, and on building positive, rewarding experiences.

Implicit in the ability to define personal goals assessed by RSA2, the concept of life purpose refers to intentions, private functions to be fulfilled and the definition of goals that are satisfactory to the subject and possible to achieve (Boyle et al., 2009). Life purpose, which can evolve throughout life into positive adaptation (Musich et al., 2018), has been considered an indicator of intrinsic motivation to engage in life activities that promote well-being and health (Hooker & Masters, 2016). Promoting strategies to develop a purpose in life, maintain motivation and define and pursue goals can be a formative factor to better deal with challenges and adversity.

The present study reinforces that individuals with high Self Perception and Planned Future outcomes are less likely to develop depression, highlighting the characteristics implicit in these concepts as core protective factors that can help women adapt positively to life’s demands.

The Social Resources, Social Competence, Family Cohesion and Structured Style sub-scales showed lower scores in depressed women than in those who did not present depressive

indicators. However, these RSA sub-scales were not included in the explanatory model for depression. Social Resources (RSA5) assesses an individual's perception of the availability of social support, relational quality and closeness, and how much support is available in times of need. Poor perceived support from the extended peer group, friends, and family members has been strongly associated with depressive symptomatology (Rueger et al., 2016). Self-perception of good available social support influences memories and feelings of rewarding social experiences, predictability, and self-control under challenging times (Pietras et al., 2011; Rueger et al., 2016), and the fact that they are poorly present or little activated in depressed individuals may justify the results found. Social support has been highlighted as a protective factor for mental health in general and depression in particular (Sanders et al. 2017), with the need to strengthen the role of social interaction and social capital models in promoting well-being and health well documented (Calmeiro et al., 2018).

The Social Competence factor (RSA3) assesses the self-perception of the ability to initiate verbal contact and be socially comfortable, as well as of a style that promotes social interaction, namely through relational flexibility. Social competence, which emerges from meaningful interactions, is the product of a wide range of cognitive, emotional and behavioural skills conditioned by the subject's personal, social and cultural development and activated differently in different situations (Topping et al., 2000). Social competence reflects a complex network of emotional and regulatory competencies, and only a positive self-perception of social competence improves the development and maintenance of social networks and the quality of interpersonal relationships. Considering that better social competence promotes quality of life and mental health, the literature presents several approaches to promote social competencies that integrate a range of underlying competencies, among which stand out: empathy, effective communication, problem-solving skills, social encoding and emotional regulation (Junge et al., 2020).

Another characteristic of resilience with lower expression in the group of depressed women than in the non-depressed group was "Family Cohesion", assessed by the sub-scale RSA4. Defined as a close and connected emotional bond between family members and the sharing of common values and beliefs, family cohesion can give individuals a sense of belonging and identity, and provide them with emotional and practical support (Barber & Buehler, 1996). The quality and frequency of communication, along with the constructive expression of emotions, clear and consistent role expectations within the family, emotional support provided by family members, capacity to resolve family conflicts constructively and respectfully, and shared family rituals and traditions, are variables that can help building good family cohesion (Zahra et al., 2020). The literature highlights a greater propensity for girls to value family and parental support throughout development and early adulthood, suggesting that girls' life satisfaction may depend more on the quality of their family relationships and that high family cohesion protects against depressive disorders,

particularly in the female population (Moreira & Telzer, 2015).

The Structured Style (RSA6) sub-scale also showed significantly better results on non-depressed women than on depressed ones, although it was through this scale that the lowest percentage of variance in depression was accounted for. RSA6 concerns the ability to approach life situations in an organized manner, formulate plans and establish routines, and implies a preference for clear goals before undertaking activities. However, as the internal consistency of the Structured Style sub-scale (RSA6) was low, the authors chose not to interpret the data obtained from this sub-scale.

Data from the present study indicated that the highest percentage of variance in depression was explained by the resilience characteristics of Self Perception and Planned Future, the first implying self-esteem, self-efficacy, emotional reactivity and self-compassion and the second involving prospection and life purpose. As resilience is a dynamic and changing process that responds to positive stimuli, developing strategies to build these resilient characteristics should be the target of depression prevention and recovery programs. The study of the relationship between female depression and resilience should contribute to the design of practical prevention projects, enhancing the development of strategies adapted to the needs of specific populations. Promoting resilience should be considered at the individual, family, organizational and community levels, involving public policies committed to improving populations' quality of life and health.

### Strengths and limitations

Using a convenience sample and an online survey could lead to bias. In addition, the group of depressed women was selected based on the results of the self-reported BDI-SF. It, therefore, cannot fully be assumed that it meets the criteria for a clinical diagnosis of depression.

Strengths of this research include the study design and use of standardized and reliable measures for depression and resilience, objectivity and data analysis.

### Acknowledgement

The first author was awarded a Doctoral Scholarship from the General Directorate of Higher Education, Portugal, under Order No. 8584/2017 (2nd series), of 29 September.

### Disclosure Statement

No potential conflict of interest was reported by the authors.

### Conclusion / Key-messages

- The significant difference in resilience between depressed and non-depressed women reinforces the importance of this variable in prevention programs for depressive illness.
- In the female population, promoting resilience focused on self-esteem, self-efficacy, emotional reactivity, self-compassion, prospecting, and life purpose can reduce the risk of depression.
- The effects of Self Perception and Planned Future - as

conceptualized in the RSA scale - on the probability of women having depression should be considered in clinical and psychotherapeutic contexts.

- The previous outcome provides an important message for both mental health professionals and policy deciders, with a strong impact on service provision.

## References

1. Hyde, J. S., & Mezulis, A. H. (2020). Gender Differences in Depression: Biological, Affective, Cognitive, and Sociocultural Factors. *Harvard review of psychiatry*, 28(1), 4–13. <https://doi.org/10.1097/HRP.0000000000000230>
2. Breslau, J., Gilman, S. E., Stein, B. D., Ruder, T., Gmelin, T. & Miller, E. (2017). Sex Differences in Recent First-Onset Depression in an Epidemiological Sample of Adolescents. *Translational Psychiatry*, 7, e1139. <https://doi.org/10.1038/tp.2017.105>
3. Fonseca, A., Lebre, P., Fialbo, T., Gois, C., & Gaspar de Matos M. (2021). Female Depression: Adverse Childhood and Adolescent Experiences and its relations with Depressive Triggers. *Mediterranean Journal of Clinical Psychology*, 9(3). 1-22. <https://doi.org/10.13129/2282-1619/mjcp-3164>
4. Carbonell, D. M., Reinherz, H. Z., Giaconia, R. M., Stashwick, C. K., Paradis, A. D., & Beardslee, W. R. (2002). Adolescent protective factors promoting resilience in young adults at risk for depression. *Child and Adolescent Social Work Journal*, 19(5), 393-412. DOI:10.1023/A:1020274531345
5. Friborg, O., Hjemdal, O., Rosenvinge, J., & Martinussen, M. (2003). A new rating scale for adult resilience: What are the central protective resources behind healthy adjustment? *International Journal of Methods in Psychiatric Research*, 12(2), 65-76. <https://doi.org/10.1002/mpr.143>
6. Friborg, O., Martinussen, M., & Rosenvinge, J. H. (2006). Likert-based versus semantic differential-based scorings of positive psychological constructs: A psychometric comparison of two versions of a scale measuring resilience. *Personality and Individual Differences*, 40(5), 873-884. <https://doi.org/doi:10.1016/j.paid.2005.08.015>
7. Dudek, K. A., Dion-Albert, L., Kaufmann, F. N., Tuck, E., Lebel, M., & Menard, C. (2021). Neurobiology of resilience in depression: immune and vascular insights from human and animal studies. *European Journal of Neuroscience*, 53(1), 183-221. <https://doi.org/10.1111/ejn.14547>
8. Breton, J. J., Labelle, R., Berthiaume, C., Royer, C., St-Georges, M., Ricard, D., Abadie, P., Gérardin, P., Cohen, D., & Guilé, J. M. (2015). Protective factors against depression and suicidal behaviour in adolescence. *Canadian Journal of Psychiatry*, 60(2 Suppl 1), S5-S15. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4345848/pdf/cjp-2015-vol60-february-supplement-s5-s15.pdf>
9. Smith, G. C., & Hayslip, B. Jr. (2012). Resilience in adulthood and later life: What does it mean and where are we heading? In B. Hayslip, Jr. & G. C. Smith (Eds.), *Annual review of gerontology and geriatrics*, Vol. 32. Emerging perspectives on resilience in adulthood and later life (pp. 3–28). Springer Publishing Company. Retrieved from <https://psycnet.apa.org/record/2013-13451-001>
10. Reich, J. W., Zautra, A. J., & Hall, J. S. (2010). *Handbook of adult resilience*. Guilford Press, New York, NY. Retrieved from <https://www.guilford.com/books/Handbook-of-Adult-Resilience/Reich-Zautra-Hall/9781462506477>
11. Poole, J. C., Dobson, K. S., & Pusch, D. (2017). Childhood adversity and adult depression: The protective role of psychological resilience. *Child abuse & neglect*, 64, 89-100. <https://doi.org/10.1016/j.chiabu.2016.12.012>
12. Lee, T. S., Wu, Y., Chao, E., Chang, C., Hwang, K., & Wu, W. (2021). Resilience as a mediator of interpersonal relationships and depressive symptoms amongst 10th to 12th grade students. *Journal of Affective Disorders*, 278, 107-113. <https://doi.org/10.1016/j.jad.2020.09.033>
13. Laird, K., Lavretsky, H., Paholpak, P., Vlasova, R., Roman, M., St. Cyr, N., & Siddarth, P. (2019). Clinical correlates of resilience factors in geriatric depression. *International Psychogeriatrics*, 31(2), 193-202. <https://doi.org/10.1017/S1041610217002873>
14. Hjemdal, O., Friborg, O., Braun, S., Kempnaers, C., Linkowski, P. & Fossion, P. (2011). The Resilience Scale for Adults: Construct Validity and Measurement in a Belgian Sample, *International Journal of Testing*, 11(1), 53-70. <https://doi.org/10.1080/15305058.2010.508570>
15. Hjemdal, O., Friborg, O., Stiles, T. C., Rosenvinge, J. H., & Martinussen, M. (2006). Resilience Predicting Psychiatric Symptoms: A Prospective Study of Protective Factors and their Role in Adjustment to Stressful Life Events. *Clinical Psychology & Psychotherapy*, 13(3), 194–201. <https://doi.org/10.1002/cpp.488>
16. Morote, R., Hjemdal, O., Martinez Uribe, P., & Corveleyn, J. (2017). Psychometric properties of the Resilience Scale for Adults (RSA) and its relationship with life-stress, anxiety and depression in a Hispanic Latin-American community sample. *PLoS One*, 12(11), e0187954. <https://doi.org/10.1371/journal.pone.0187954>
17. Mesman, E., Vreeker, A., & Hillegers, M. (2021). Resilience and mental health in children and adolescents: an update of the recent literature and future directions. *Current Opinion in Psychiatry*, 34(6), 586–592. <https://doi.org/10.1097/YCO.0000000000000741>
18. Grob, R., Schlesinger, M., Wise, M., & Pandhi, N. ((2020). Stumbling Into Adulthood: Learning From Depression While Growing Up. *Qualitative Health Research*, 30(9), 1392-1408. DOI:10.1177/1049732320914579
19. Alexandra, F., Margarida Gaspar de, M., Carlos, G., & Fábio Botelho, G. (2022). Interpersonal Problems, Resilience, Self-Regulation and Depression on A Non-Clinical Female Population - A Cross-Sectional Study. *Psychol Behav Sci Int J.*, 19(3), 556011. DOI:10.19080/PBSIJ.2022.19.556011
20. Pereira, M., Cardoso, M., Alves, S., Narciso, I., & Canavarro, M. C. (2013). Estudos preliminares das características psicométricas da Escala de Resiliência para Adultos (ERA). In A. Pereira, M. Calheiros, P. Vagos, I. Direito, S. Monteiro, C. F. Silva, & A. Allen



- Gomes (Eds.), Livro de atas do VIII *Simpósio Nacional de Investigação em Psicologia* (pp. 93-103). Associação Portuguesa de Psicologia. Retrieved from <https://estudogeral.uc.pt/handle/10316/23602?locale=pt>
21. Pereira, M., Cardoso, M., Albuquerque, S., Janeiro, C., & Alves, S. (2016). Escala de Resiliência para Adultos (ERA). In A. P. Relvas & S. Major (Eds.), *Instrumentos de avaliação familiar: Vol. II – Vulnerabilidade, stress e adaptação* (pp. 37-62). Imprensa da Universidade de Coimbra. Retrieved from <https://estudogeral.uc.pt/handle/10316/47268>
  22. Beck, A. T. & Beck, R. W. (1972). Screening Depressed Patients in Family Practice – A Rapid Technic. *Postgraduate Medicine*, 52(6), 81-85. <https://doi.org/10.1080/00325481.1972.11713319>
  23. Beck, Aaron T., Steer, R. A. & Carbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, 8(1), 77–100. [https://doi.org/10.1016/0272-7358\(88\)90050-5](https://doi.org/10.1016/0272-7358(88)90050-5)
  24. Kunkel, E. J., Kim, J. S., Hann, H. W., Oyesanmi, O., Menefee, L. A., Field, H. L., Lartey, P. L., & Myers, R. E. (2000). Depression in Korean immigrants with hepatitis B and related liver diseases. *Psychosomatics*, 41(6), 472-480. <https://doi.org/10.1176/appi.psy.41.6.472>
  25. Furlanetto, L. M., Mendlowicz, M. V., & Romildo Bueno, J. (2005). The validity of the Beck Depression Inventory-Short Form as a screening and diagnostic instrument for moderate and severe depression in medical inpatients. *Journal of affective disorders*, 86(1), 87–91. <https://doi.org/10.1016/j.jad.2004.12.011>
  26. Sharpley, C. F., Bitsika, V., Jesulola, E., Fitzpatrick, K., & Agnew, L. L. (2016). The association between aspects of psychological resilience and subtypes of depression: implications for focussed clinical treatment models. *International journal of psychiatry in clinical practice*, 20(3), 151-156. <https://doi.org/10.1080/13651501.2016.1199810>
  27. Walker, A., Witteveen, A., Otten, R., Verhoeven, C., Henrichs, J., & De Jonge, A. (2022). Resilience-enhancing interventions for antepartum depressive symptoms: Systematic review. *BJPsych Open*, 8(3), E89. <https://doi.org/10.1192/bjo.2022.60>
  28. van Tuijl, L. A., Glashouwer, K. A., Bockting, C. L. H., Brenda Penninx, W. J. H. (2018). *Self-Esteem Instability in Current, Remitted, Recovered, and Comorbid Depression and Anxiety*. *Cogn Ther Res* 42, 813–822. <https://doi.org/10.1007/s10608-018-9926-5>
  29. Orth, U., Robins, R. W., Meier, L. L., & Conger, R. D. (2016). Refining the vulnerability model of low self-esteem and depression: Disentangling the effects of genuine self-esteem and narcissism. *J. Pers. Soc. Psychol.* 110(1), 133-149. <https://doi.org/10.1037/pspp0000038>
  30. Bhattacharya, S., Kennedy, M., Miguel, C., Tröger, A., Hofmann, S. G., & Cuijpers, P. (2023). Effect of psychotherapy for adult depression on self-esteem: A systematic review and meta-analysis. *Journal of Affective Disorders*, 325(15), 572-581. <https://doi.org/10.1016/j.jad.2023.01.047>
  31. Tus, J. (2020). Self-concept, self-esteem, self-efficacy and academic performance of the senior high school students. *International Journal Of All Research Writings*, 2(6), 1-19. DOI:10.6084/m9.figshare.13174991.v1
  32. Bandura, A. (1997). *Self-efficacy: The exercise of control*. W H Freeman/Times Books/ Henry Holt & Co, New York. Retrieved from [https://www.scrip.org/\(S\(vtj3fa45qm1ean45%20vvffcz55\)\)/reference/referencespapers.aspx?referenceid=2718448](https://www.scrip.org/(S(vtj3fa45qm1ean45%20vvffcz55))/reference/referencespapers.aspx?referenceid=2718448)
  33. Maddux, J. E., & Meier, L. J. (1995). Self-efficacy and depression. In J. E. Maddux (Ed.), *Self-efficacy, adaptation, and adjustment: Theory, research, and application* (pp. 143–169). *The Plenum Series in Social/Clinical Psychology*. Springer. [https://doi.org/10.1007/978-1-4419-6868-5\\_5](https://doi.org/10.1007/978-1-4419-6868-5_5)
  34. Chen, H-C, Wang, J-Y, Lin, Y-L, Yang, S-Y. (2020). Association of Internet Addiction with Family Functionality, Depression, Self-Efficacy and Self-Esteem among Early Adolescents. *International Journal of Environmental Research and Public Health*, 17(23), 8820. <https://doi.org/10.3390/ijerph17238820>
  35. Garofalo, C., Holden, C. J., Zeigler-Hill, V., & Velotti, P. (2016). Understanding the connection between self-esteem and aggression: The mediating role of emotion dysregulation. *Aggressive behavior*, 42(1), 3–15. <https://doi.org/10.1002/ab.21601>
  36. Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 32, pp. 1–62). Academic Press. [https://doi.org/10.1016/S0065-2601\(00\)80003-9](https://doi.org/10.1016/S0065-2601(00)80003-9)
  37. Wakelin, K. E., Perman, G., & Simonds, L. M. (2022). Effectiveness of self-compassion-related interventions for reducing self-criticism: A systematic review and meta-analysis. *Clinical Psychology & Psychotherapy*, 29(1), 1-25. <https://doi.org/10.1002/cpp.2586>
  38. Abela, J. R. Z. & Taylor, G. (2003). Specific Vulnerability to Depressive Mood Reactions in Schoolchildren: The Moderating Role of Self-Esteem. *Journal of Clinical Child & Adolescent Psychology*, 32(3), 408-418, [https://doi.org/10.1207/S15374424JCCP3203\\_09](https://doi.org/10.1207/S15374424JCCP3203_09)
  39. Gittins, C. B., & Hunt, C. (2020). Self-criticism and self-esteem in early adolescence: do they predict depression?. *PLoS one*, 15(12), e0244182. <https://doi.org/10.1371/journal.pone.0244182>
  40. Brophy, K., Brähler, E., Hinz, A., Schmidt, S., & Körner, A. (2020). The role of self-compassion in the relationship between attachment, depression, and quality of life. *Journal of affective disorders*, 260, 45-52. <https://doi.org/10.1016/j.jad.2019.08.066>
  41. Liu, Q. Q., & Hu, Y. T. (2020) Self-compassion mediates and moderates the association between harsh parenting and depressive symptoms in Chinese adolescent. *Curr Psychol*. <https://doi.org/10.1007/s12144-020-01034-2>
  42. Nezlek, J. B. (2001). Daily psychological adjustment and the planfulness of day-to-day behavior. *Journal of Social and Clinical Psychology*, 20(4), 452–475. <https://doi.org/10.1521/jscp.20.4.452.22398>



43. Pettorruso, M., d'Andrea, G., Martinotti, G., Cocciolillo, F., Miuli, A., Di Muzio, I., Collevecchio, R., Verrastro, V., De-Giorgio, F., Janiri, L., di Giannantonio, M., Di Giuda, D., & Camardese, G. (2020). Hopelessness, Dissociative Symptoms, and Suicide Risk in Major Depressive Disorder: *Clinical and Biological Correlates. Brain Sci.*, *10*(8), 519. <https://doi.org/10.3390/brainsci10080519>
44. Karakuş, Ö. (2018). Depression and Hopelessness Levels of University Students According to Their Opinions on Finding Employment or Falling out of Labor Force in Turkey. *Universal Journal of Educational Research Vol*, *6*(1), 190–194. <https://doi.org/10.13189/ujer.2018.060120>
45. Seligman, M. E. P., Railton, P., Baumeister, R. F., & Sripada, C. (2013). Navigating Into the Future or Driven by the Past. *Perspectives on Psychological Science*, *8*(2), 119–141. <https://doi.org/10.1177/1745691612474317>
46. Suddendorf, T., & Henry, J. (2013). Proximate and ultimate perspectives on memory. *Journal of Applied Research in Memory and Cognition*, *2*(4), 246–247. <https://doi.org/10.1016/j.jarmac.2013.10.005>
47. Gilbert, D., & Wilson, T. (2007). Propection: Experiencing the future. *Science*, *317*(5843), 1351–1354. <https://doi.org/10.1126/science.1144161>
48. Roepke, A. M., & Seligman, M. E. (2016). Depression and propection. *British Journal of Clinical Psychology*, *55*(1), 23–48. <https://doi.org/10.1111/bjc.12087>
49. Boyle, P. A., Barnes, L. L., Buchman, A. S., & Bennett, D. A. (2009). Purpose in life is associated with mortality among community-dwelling older persons. *Psychosomatic medicine*, *71*(5), 574–579. <https://doi.org/10.1097/PSY.0b013e3181a5a7c0>
50. Musich, S., Wang, S. S., Kraemer, S., Hawkins, K., & Wicker, E. (2018). Purpose in Life and Positive Health Outcomes Among Older Adults. *Population health management*, *21*(2), 139–147. <https://doi.org/10.1089/pop.2017.0063>
51. Hooker, S. A., & Masters, K. S. (2016). Purpose in life is associated with physical activity measured by accelerometer. *Journal of health psychology*, *21*(6), 962–971. <https://doi.org/10.1177/1359105314542822>
52. Rueger, S. Y., Malecki, C. K., Pyun, Y., Aycock, C., & Coyle, S. (2016). A meta-analytic review of the association between perceived social support and depression in childhood and adolescence. *Psychological Bulletin*, *142*(10), 1017–1067. <http://dx.doi.org/10.1037/bul0000058>
53. Pietras, T., Witusik, A., Panek, M., Szemraj, J., & Górski, P. (2011). Anxiety, depression and methods of stress coping in patients with nicotine dependence syndrome. *Medical science monitor : international medical journal of experimental and clinical research*, *17*(5), CR272–CR276. <https://doi.org/10.12659/msm.881767>
54. Sanders, J., Munford, R., & Liebenberg, L. (2017). Positive youth development practices and better outcomes for high-risk youth. *Child abuse and neglect*, *69*, 201–212. <https://doi.org/10.1016/j.chiabu.2017.04.029>
55. Calmeiro, L., Camacho, I., & Matos, M. G. (2018). Life Satisfaction in Adolescents: The Role of Individual and Social Health Assets. *The Spanish Journal of Psychology*, *21*, E23. <https://doi.org/10.1017/sjp.2018.24>
56. Topping, K., Bremner, W., & Holmes, E. (2000). Social competence: The social construction of the concept. In R. Bar-On & J. D. A. Parker (Eds.), *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace* (pp. 28–39). San Francisco, CA: Jossey-Bass. Retrieved from <https://discovery.dundee.ac.uk/en/publications/social-competence-the-social-construction-of-the-concept>
57. Barber, B. K., & Buehler, C. (1996). Family Cohesion and Enmeshment: Different Constructs, Different Effects. *Journal of Marriage and Family*, *58*(2), 433–441. <https://doi.org/10.2307/353507>
58. Zahra, S. T., & Saleem, S. (2021). The development of a family cohesion scale: A preliminary validation. *FWU Journal of Social Sciences*, *15*(1), 120–131. DOI: <http://doi.org/10.51709/19951272/spring2021/15-10>
59. Moreira, J. F. G., & Telzer, E. H. (2015). Changes in family cohesion and links to depression during the college transition. *Journal of adolescence*, *43*(1), 72–82. <https://doi.org/10.1016/j.adolescence.2015.05.012>
60. Cheng, K., You, Y., Ye, B., and Chen, Z. (2022). The relationship between family function and middle school students' suicide attitude. *Psychol. Dev. Educ.* *38*(2), 272–278. <http://www.devpsy.com.cn/EN/10.16187/j.cnki.issn1001-4918.2022.02.14>
61. Fonseca, A., de Matos, M. G., Gois, C. (2023). Can Interpersonal Problems Predict Female Depression? *Mediterranean Journal of Clinical Psychology* *11*(1). <https://doi.org/10.13129/2282-1619/mjcp-3614>
62. Friborg, O. (2005). Validation of [a] scale to measure resilience in adults. Department of Psychology, Faculty of Social Sciences, University of Tromsø.
63. Gomez, M., Vincent, A., & Toussaint, L. L. (2013). Correlates of resilience in adolescents and adults. *International Journal of Clinical Psychiatry and Mental Health*, *1*, 18–24. DOI:10.12970/2310-8231.2013.01.01.2.

**Copyright:** ©2023 Alexandra Fonseca. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.