Anaclitic-sociotropic and introjective-autonomic personality dimensions and depressive symptoms: a systematic review

Angelica Marfoli, Federica Viglia, Micaela Di Consiglio, Sheila Merola, Stefano Sdoia and Alessandro Couyoumdjian*

Abstract
Sociotropy (anaclitic) and autonomy (introjective) are conceptualised as two personality dimensions that confer vulnerability to depression. According to Blatt and Beck’s theories, sociotropic individuals exhibit distinctive patterns of symptoms such as prominent anxiety, depressed mood, helplessness, crying and somatic concerns, while self-critical ones seem to exhibit a pattern of symptoms including prominent guilt, hopelessness, feelings of failure and worthlessness and other cognitive symptoms.

This systematic review was performed with the aim of investigating whether and to what extent psychological dimensions of anaclitic-sociotropic and introjective-autonomy are related to a specific core of depressive symptoms. The search was conducted in three databases (PubMed, PsycINFO and Scopus) and 27 articles were selected. Results showed a weak association between somatic symptoms and dependent personality traits, while the relationship between self-criticism and cognitive symptomatology was significantly higher. These findings are discussed in the context of future research, necessary to corroborate the existence of a form of depression characterised by somatic features usually ignored by diagnostic criteria, essential to direct psychological treatments to these depressive personality differences.

Keywords: Sociotropic personality, Autonomic personality, Psychological dimensions, Depression, Depressive symptoms, Complicated grief

Introduction
Depression is one of the most common and invalidating mental disorders in current society [45] and it can be very heterogeneous due to several possible combinations of symptoms [39]. Zimmermann and colleagues (2015 identified 227 possible depressive patterns, suggesting that depressed people may have clinical conditions that differ drastically. Furthermore, the comorbidity of depression with other psychological or medical disorders, such as anxiety disorders or post-traumatic stress disorder (PTSD, [2, 20, 46], or even other chronic illnesses [53], shows how depressive symptomatology can vary. Also, specific behaviours that are often considered to be the clinical manifestation of major depressive disorder, particularly suicidality and suicidal ideation, seem to not be typical of depression, but can emerge from human sadness. This lack of information can also affect therapeutic efficiency [66]. The tendency to ignore...
symptomatic variations of Major Depressive Disorder could explain the lack of progress about the validation of under-diagnosis and the identification of differential treatments that are effective and adequate. In line with this hypothesis, Sidney Blatt [12]—from a psychoanalytic perspective—and Aaron T. Beck [8]—from a cognitive point of view—assumed that different traumatic experiences in childhood can lead to two different personality dimensions that are prone to depression in adulthood. The personality dimensions described by Blatt—anacritic and introjective—and those described by Beck—sociotropic and autonomic—can be considered as equivalents: anacritic and sociotropic are overlapping concepts, as are introjective and autonomic. They are also referred to as dependency and self-criticism, respectively. The anacritic-sociotropic dimension refers to a dependent personality style that is sensitive to the disruption of interpersonal relationships and is characterised by a strong need to be loved and taken care of, together with exaggerated fears of loss and abandonment, and a tendency to seek help and support from the others, especially when faced with stress. It includes feelings of loneliness, weakness and helplessness, and it is more frequent in women. An introjective-autonomic personality instead implies a strong emphasis on control, self-definition, autonomy, and concerns about personal goals and high standards. The main feelings associated with this are self-devaluation, low self-worth, self-criticism, sense of inferiority and guilt, and it has to do with a narcissistic vision of oneself [12, 51]. Several studies [19, 30, 47, 69] in recent decades have focused on these distinctive patterns of symptoms shown by these different personality configurations according to the Symptoms Specificity Hypothesis [13], the aim of which was to clarify the specific relationships between a pre-existing depressive personality and specific depression symptoms. According to this hypothesis, sociotropic individuals in particular should show distinctive patterns of symptoms such as prominent anxiety, depressed mood, helplessness, crying and somatic concerns. Self-critical individuals, on the other hand, are more prone to developing a pattern of symptoms that includes prominent guilt, hopelessness, feelings of failure and worthlessness, suicidality, and other cognitive symptoms.

The general purpose of this systematic review is to provide robust data concerning the relationship between anacritic-sociotropic and introjective-autonomic dimensions and specific depressive symptoms among depressed patients. Thus, different typical depressive symptoms such as anhedonia, shame, uncontrolled crying, suicidality, anger, insomnia, rumination, and self-criticism are taken into consideration to evaluate if they are more often frequent in people showing an anacritic-sociotropic personality or an introjective-autonomic one.

The ultimate goal of this work is to demonstrate how often diagnostic criteria for depression, for example Diagnostic and Statistical Manual of Mental Disorders diagnostic criteria [2] tend to mainly highlight only a cognitive symptom pattern, which is typical of the introjective-autonomic configuration of depressive personality. However, little attention is paid to other depressive forms distinguished by a more somatic symptomatology, which is recurrent in anacritic-sociotropic personalities. This manifestation also appears to be strongly related to the emotional experiences of people who suffer from Complicated Grief Disorder.

For this reason, complicated grief symptomatology will be considered in order to underline its correlation to anacritic-sociotropic depression symptoms and to show that there are many different forms of major depressive disorder that should not be ignored.

Considering these personality differences while orienting depression treatment is another important purpose of this study.

Method
A systematic review was performed in compliance with the PRISMA guidelines for systematic reviews and meta-analyses (see Fig. 1) [54].

Information sources and database search
In order to systematically collect empirical studies on the relation between personality dimensions (anacritic-sociotropic trait versus introjective-autonomic trait) and different depressive manifestations, several keywords were used to search for appropriate publications in three electronic databases: PubMed, Scopus, PsycINFO.

Two separate reviewers conducted the search in each database for the following two groups of keywords: (a) terms related to personality traits: “anacritic” and “introjective” personality OR trait*, “dependency” and “self-critical” personality OR trait*, “sociotropic” and “autonomic” personality OR trait*, “Complicated Grief Disorder”, “Depressive Experiences Questionnaire” (DEQ), “Sociotropy and Autonomy Scale” (SAS); (b) terms related to pathological outcomes: “depressive symptom*”, “depression”, “complicated grief”, “bereavement”.

Key words should be part of the title or the abstract of the literature.

Literature search strategy and eligibility criteria
All duplicates and non-relevant records focusing on title and abstract were removed and the most relevant full texts were analysed and included according to eligibility criteria. The inclusion criteria are the following: (1) only articles published in English in peer-reviewed journals; (2) studies had to consider the
relationship between anaclitic-sociotropic or introjective-autonomic personality and depressive symptoms; (3) depressive symptoms had to be assessed using a validated method; all tests measuring self-critical and dependent personality traits and depressive symptoms were selected; (4) the population group of interest were adults (over 18 years of age). Exclusion criteria are as follow: (1) the presence of comorbidities with other psychiatric disorders; (2) children's samples.

Additionally, citations in retrieved articles were screened to identify extra relevant publications. All
worthwhile articles were selected and screened based on the aforementioned eligibility criteria.

**Data extraction**

The analysis was conducted by two separate reviewers, who applied the eligibility criteria in each database. The same two authors carried out the selection of the studies, separately and together. In case of disagreement on the inclusion of a study, the two authors discussed their point of view until a consensus was reached. Where necessary, a third reviewer was involved to reach a consensus.

**Assessing the quality of selected studies**

The evaluation of the risk of bias was conducted by a quality index derived from the Qualysyst Tool [48]. The quality assessment of the studies appears from moderate to strong (see Appendix A).

**Results**

For the purpose of this systematic review, 27 studies examining the relationship between personality and depression symptoms in adults were identified, fulfilling the inclusion and exclusion criteria. Tables 1, 2 and 3 summarise data about samples, assessment of personality and depression symptoms, and the main results of each study per cluster of symptoms (somatic and cognitive symptoms, other symptoms and complicated grief, respectively). Figure 2 provides an overview of the tests that each study utilised to assess personality (Fig. 2, 2.2) and depression symptoms (Fig. 2, 2.1).

In the following paragraphs, all included articles have been described according to the cluster of symptoms.

**Somatic and cognitive symptoms**

Seven studies [30, 47, 51, 59, 69, 71, 79] were identified examining the relationship between personality and somatic symptoms in adults (age range 18–70 years).

The main result is a significant positive association between dependent personality and indecisiveness \( \beta = 0.229; F(1,25) = 8.811; p = 0.003 \), worthlessness \( \beta = 0.251; F(1,25) = 12.280; p = 0.001 \) [30], and guilty feelings \( \beta = 0.383, t = 2.898, p = 0.006 \) [79]. The self-critical personality also showed significant positive associations with Beck Depression Inventory-II [9] symptoms: pessimism \( \beta = 0.215; F(1,25) = 7.551; p = 0.007 \) [30], past failure \( \beta = 0.379, t = 2.869, p = 0.006 \) [79], past failure \( \beta = 0.324; F(1,25) = 19.123; p = 0.000 \) [30], past failure \( \beta = 0.436, t = 3.391, p = 0.001 \) [79], guilty feelings \( \beta = 0.356; F(1,25) = 23.325; p = 0.000 \) [30], self-dislike \( \beta = 0.390; F(1,25) = 29.484; p = 0.000 \) [30], self-criticalness \( \beta = 0.391; F(1,25) = 28.675; p = 0.000 \) [30], self-criticalness \( \beta = 0.437, t = 3.400, p = 0.001 \) [79], crying \( \beta = 0.240; F(1,25) = 9.772; p = 0.002 \) [30], indecisiveness \( \beta = 0.234; F(1,25) = 9.561; p = 0.002 \) [30], worthlessess \( \beta = 0.306, t = 2.248, p = 0.029 \) [79], worthlessness \( \beta = 0.396; F(1,25) = 31.599; p = 0.000 \) [30], punishment feelings \( \beta = 0.341, t = 2.540, p = 0.014 \) [79], loss of interest \( \beta = 0.328, t = 2.430, p = 0.019 \) [79], change in appetite \( \beta = 0.363, t = 2.723, p = 0.009 \) [79], difficulty concentrating \( \beta = 0.299, t = 2.194, p = 0.033 \) [79], and tiredness or fatigue \( \beta = 0.321, t = 2.375, p = 0.021 \) [79].

Results also show a significant relationship between Sociotropy and mood-variability, reactivity and loneliess, as well as Autonomy and loss of interest or pleasure, loss of interest in people, self-blame, irritability, and concern about inability to function [69], similar to Klein and colleagues’ study [47] reporting higher levels of self-criticism being associated with the presence of loss of interest (overall Rao’s \( V = 11.17 \), change in \( V = 9.50, p = 0.002 \), and irritability (overall Rao’s \( V = 6.17 \) change in \( V = 6.07, p = 0.01 \)). Furthermore, in the same study, higher levels of dependency were significantly associated with the presence of only one symptom, such as crying or tearfulness (overall Rao’s \( V = 22.69 \), change in \( K = 11.78, p < 0.001 \)). [47]

Considering a theoretical sociotropic and autonomous symptoms composite as the sum of standardised scores on Beck Depression Inventory (BDI, [6] items, Hamilton Rating Scale for Depression (HRSD, [40] items and the Symptom Checklist-90 (SCL-90; [3] items, Robins and colleagues [71] report a stronger correlation between autonomy and autonomous symptoms (BDI items—hopelessness, guilt, self-blame, feeling like a failure, punishment, irritability, loss of satisfaction, disappointment in self and loss of functioning; HRSD items—feelings of guilt, difficulty working and social withdrawal; SCL-90 items—self-blame, hopelessness, loss of interest, worthlessness and feeling critical of others) than with theoretically sociotropic symptoms (BDI items—sad feelings, crying, decision-making difficulty, negative body image and somatization; HRSD items—depressed mood, general somatic problems, somatic anxiety, and positive psychic anxiety; SCL-90 items—all anxiety and phobic anxiety) \( \rho = 3.03, p < 0.01 \). Instead, sociotropy does not show the predicted pattern [71].

Luyten et al. [51] also considered dependent (D-COM) and self-critical (SC-COM) symptom composites. For D-COM, the authors identified symptoms such as: sad mood, feeling ugly, crying spells, worrying about physical problems (BDI), constipation, tachycardia, crying spells (ZUNG Self-Rating Depression Scale; ZUNG-SDS, 1965), crying easily, feeling lonely, worrying too much about things and feeling hurt and rejected (SCL-90). For SC-COM they considered the items: pessimism, guilty feeling, self-blame, irritability, indecisiveness, feelings of
| Reference                  | Country | Sample Description               | Symptoms                                                                 | Measures of Self-criticism and Dependency | Measure of psychopathology | Analysis                          | Results                                                                 |
|----------------------------|---------|----------------------------------|--------------------------------------------------------------------------|-------------------------------------------|---------------------------|-----------------------------------|--------------------------------------------------------------------------|
| Klein et al. [47]          | –       | 63 outpatients 100% female       | Pervasive anhedonia, Loss of interest, Decreased energy, Insomnia, Hypersomnia, Loss of weight or appetite, Difficulty concentrating or making decisions, Guilt, Feelings of inadequacy or worthlessness, Psychomotor retardation, Psychomotor agitation, Suicidal thoughts or behaviour, Qualitative difference in mood, Lack of reactivity of mood, Diurnal variation (a.m. worse), Crying or tearfulness, Social withdrawal, Dependency, Irritability, Brooding, Self-pity, Somatic complaints, Pessimism or hopelessness | DEQ                         | BDI-R, CRSD                        | Discriminant analysis (alpha sets at 0.01) | Self-criticism: Loss of interest (overall Rao’s V = 11.17, change in V = 9.50, \( p = 0.002 \))
Irritability (overall Rao’s V = 6.17, change in V = 6.07, \( p = 0.01 \))
Dependency:
Crying or tearfulness (overall Rao’s V = 22.69, change in \( K < 11.78, \ p < 0.001 \))
Presence of both dependency and self-criticism:
Decreased energy (overall Rao’s V = 32.95, change in V = 31.99, \( p < 0.001 \)) |
| Robins and Luten [69]      | USA     | 50 depressed sample 26% male \((n = 13)\) 74% female \((n = 37)\) Mean age = 44.12 SD = ± 11.80 | Crying, Variability of mood, Reactivity of mood, Feeling lonely, Loss of interest or pleasure, Loss of interest in people, Self-blame, Irritability, Concern about inability to function | PSI                         | ICF                        | Exploratory analysis                        | Sociotropy:
Crying
Mood-variability and reactivity
Loneliness
Autonomy
Loss of interest or pleasure
Loss of interest in people
Self-blame, irritability, concern about inability to function |
| Reference          | Country | Sample | Symptoms                                                                 | Measures of Self-criticism and Dependency | Measure of psychopathology | Analysis          | Results                                                                 |
|--------------------|---------|--------|--------------------------------------------------------------------------|------------------------------------------|----------------------------|-------------------|-------------------------------------------------------------------------|
| Robins et al. [71] | Ontario | 103 patients | 38 men  
65 females  
Mean age = 39.8  
SD = 11.1 | Theoretical sociotropic symptoms composite: Sad feelings  
Crying  
Decision-making difficulty  
Negative body image  
Somaticization  
Depressed mood  
General somatic problems  
Somatic anxiety  
Positive psychic anxiety  
Anxiety and phobic anxiety  
Theoretical autonomous symptoms composite:  
Hopelessness  
Guilt  
Self-blame  
Feeling like a failure  
Punishment  
Irritability  
Loss of satisfaction  
Disappointment in self  
Loss of functioning  
Feelings of guilt  
Difficulty working  
Social withdrawal  
Self-blame  
Hopelessness  
Loss of interest  
Worthlessness  
Feeling critical of others | PSI  
BDI  
HRSD  
SCL-90  
SCID-I | Correlational analysis  
Exploratory analysis | Stronger correlation between autonomy and autonomous symptoms than with theoretically sociotropic symptoms  
(z = 3.03, p < 0.01)  
Sociotropy did not show the predicted pattern  
Sociotropy was strongly and significantly related to the sociotropic symptoms; instead, autonomy showed the opposite pattern |
Table 1 (continued)

| Reference          | Country | Sample Characteristics  | Symptoms                                                                 | Measures of Self-criticism and Dependency | Measure of psychopathology | Analysis                  | Results                        |
|--------------------|---------|--------------------------|--------------------------------------------------------------------------|-------------------------------------------|---------------------------|---------------------------|--------------------------------|
| Desmet et al. [30] | Belgium | 163 outpatients          | 28.2% male 
71.7% female 
(n = 46) 
(n = 117) | sadness, pessimism, past failure, guilty feelings, self-dislike, self-criticalness, suicidal thoughts, crying, agitation, loss of interest, indecisiveness, worthlessness, loss of energy, changes in sleeping, irritability, changes in appetite, concentration difficulty, tiredness or fatigue, loss of interest in sex | DEQ-DEP: Indecisiveness (DEP) and self-criticism (SC) subscales | BDI-II somatic and cognitive subscales | Regression analysis Conservative significance test (p < 0.01) | F-test |
|                    |         | Age range 19–64 years, | M = 39.45 
SD = ± 9.97 | | | Raw item score | DEQ-DEP: | |
|                    |         | | | | | Indecisiveness [\(\beta = 0.229; F(1,25) = 8.811; p = 0.003]\] | | |
|                    |         | | | | | Worthlessness [\(\beta = 0.251; F(1,26) = 12.280; p = 0.001]\] | | |
|                    |         | | | | | DEQ-SC: | |
|                    |         | | | | | Pessimism [\(\beta = 0.215; F(1,25) = 7.551; p = 0.007]\] | | |
|                    |         | | | | | Past failure [\(\beta = 0.324; F(1,25) = 19.123; p = 0.000]\] | | |
|                    |         | | | | | Guilty feelings [\(\beta = 0.356; F(1,25) = 23.325; p = 0.000]\] | | |
|                    |         | | | | | Self-dislike [\(\beta = 0.390; F(1,25) = 29.484; p = 0.000]\] | | |
|                    |         | | | | | Self-criticalness [\(\beta = 0.391; F(1,25) = 28.675; p = 0.000]\] | | |
|                    |         | | | | | Crying [\(\beta = 0.240; F(1,25) = 9.772; p = 0.002]\] | | |
|                    |         | | | | | Indecisiveness [\(\beta = 0.234; F(1,25) = 9.561; p = 0.002]\] | | |
|                    |         | | | | | Worthlessness [\(\beta = 0.396; F(1,25) = 31.599; p = 0.000]\] | | |
|                    |         | | | | | After ipsatization | |
|                    |         | | | | | DEQ-DEP: | |
|                    |         | | | | | Worthlessness [\(\beta = 0.008; F(1,155) = 8.849; p = 0.003]\] | | |
|                    |         | | | | | DEQ-SC: | |
|                    |         | | | | | Self-dislike [\(\beta = 0.390; F(1,155) = 8.228; p = 0.005]\] | | |
|                    |         | | | | | Self-criticalness [\(\beta = 0.391; F(1,155) = 10.219; p = 0.002]\] | | |
|                    |         | | | | | Worthlessness [\(\beta = 0.396; F(1,155) = 12.080; p = 0.001]\] | | |
| Reference    | Country   | Sample Description | Symptoms                                                                 | Measures of Self-criticism and Dependency | Measure of psychopathology | Analysis | Results                                                                                      |
|--------------|-----------|--------------------|---------------------------------------------------------------------------|-------------------------------------------|---------------------------|----------|-----------------------------------------------------------------------------------------------|
| Luyten et al. [51] | Belgium  | 93 depressed sample 27 males 66 females Mean age = 39.24 SD = 9.46 | Dependent symptom composites (D-COM): Sad mood Crying spells Feeling ugly Worrying about physical Problems Constipation Tachycardia Crying easily Feeling lonely Worrying too much about things Feeling hurt and rejected Self-critical symptom composites (SC-COM): Pessimism Feelings of failure Lack of satisfaction Guilty feelings Sense of punishment Self-hatred Self-blame Irritability Social withdrawal Indecisiveness Work inhibition Personal devaluation Feeling easily annoyed or irritated Feeling of being caught or trapped Feeling blocked in getting things done | DEQ BDI Zung SDS SCL-90 (Depression subscale) | Bivariate correlation Partial correlation | Dependency didn’t show a strong relation with the dependent composite in (Hotelling’s $t(90) = 1.90, ns$) Self-criticism showed a strong relation to self-critical composite ($Hotelling’s t(90) = -3.49, Ps < 0.01$) Controlling for the self-critical symptom composite, dependency resulted more strongly related to the dependent symptom composite ($Ps < 0.001$) |
| Reference  | Country | Sample | Symptoms                  | Measures of Self-criticism and Dependency | Measure of psychopathology | Analysis                          | Results                                      |
|------------|---------|--------|---------------------------|------------------------------------------|----------------------------|-----------------------------------|---------------------------------------------|
| Otani et al. [59] | Japan   | 362 healthy volunteers 58.02% male  41.98% female  
            |         | Interpersonal sensitivity | SAS                                      | Interpersonal sensitivity; Separation anxiety; Timidity and Fragile Inner Self subscales | Linear regression analysis and multiple regression analysis | Authors considered a p-value less than 0.05 statistically significant  
            |         |        |                           |                           |                           | Correlational analysis among IPSM and SAS scores |                           |
|            |         |        |                           |                           |                           | Sociotropy                       |                             |
|            |         |        |                           |                           |                           | IPSM total (r = 0.621; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Interpersonal awareness (r = 0.551; p < 0.01) |                             |
|            |         |        |                           |                           |                           | Separation anxiety (r = 0.569; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Timidity (r = 0.513; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Fragile inner self (r = 0.419; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Autonomy                          |                             |
|            |         |        |                           |                           |                           | IPSM total (r = 0.152; p < 0.01) |                             |
|            |         |        |                           |                           |                           | Interpersonal awareness (r = 0.114; p < 0.05) |                             |
|            |         |        |                           |                           |                           | Separation anxiety (r = 0.160; p < 0.01) |                             |
|            |         |        |                           |                           |                           | Fragile inner self (r = 0.193; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Multiple regression analysis     |                             |
|            |         |        |                           |                           |                           | Sociotropy                        |                             |
|            |         |        |                           |                           |                           | IPSM total (β = 0.613; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Interpersonal Awareness (β = 0.547; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Separation Anxiety (β = 0.558; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Timidity (β = 0.518; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Fragile Inner Self (β = 0.398; p < 0.001) |                             |
|            |         |        |                           |                           |                           | Autonomy                          |                             |
|            |         |        |                           |                           |                           | Fragile Inner Self (β = 0.130; p < 0.01) |                             |
| Reference     | Country | Sample | Symptoms                                                                 | Measures of Self-criticism and Dependency | Measure of psychopathology | Analysis                | Results                                                                 |
|---------------|---------|--------|--------------------------------------------------------------------------|------------------------------------------|---------------------------|-------------------------|------------------------------------------------------------------------|
| Straccamore et al. [79] | Italy   | 51 patients | 33.3% male  
66.66% female  
(n=17)  
Mean age = 51.59  
SD = ± 11.68 | Sadness  
Pessimism  
Past failure  
Loss of pleasure  
Guilty feelings  
Punishment feelings  
Self-dislike  
Self-criticalness  
Suicidal thoughts  
Crying  
Agitation  
Loss of interest  
Indecisiveness  
Worthlessness  
Loss of energy  
Changes in sleeping  
Irritability  
Changes in appetite  
Concentration difficulty  
Tiredness or fatigue  
Loss of interest in sex  
Depressed mood  
Anxiety psychic  
Anxiety somatic  
Retardation  
Depersonalization and derealization | DEQ  
BDI-II | HAMD | Regression analysis | Relation between DEQ personality factors and BDI-II symptoms  
Self-criticism  
Pessimism (β = 0.379, t = 2.869, p = 0.006)  
Past Failure (β = 0.436, t = 3.391, p = 0.001)  
Guilty Feelings (β = 0.406, t = 3.112, p = 0.003)  
Punishment Feelings (β = 0.341, t = 2.540, p = 0.014)  
Self-criticalness (β = 0.437, t = 3.400, p = 0.003)  
Past Failure (β = 0.383, t = 2.898, p = 0.006)  
Depression (β = 0.383, t = 2.898, p = 0.006) |  
Relation between DEQ personality factors and HAMD symptoms  
Self-criticism  
Depressed Mood (β = 0.396, t = 3.022, p = 0.004)  
Anxiety Psychic (β = 0.294, t = 2.157, p = 0.036)  
Anxiety Somatic (β = 0.336, t = 2.496, p = 0.016)  
Dependence (β = 0.349, t = 2.194, p = 0.033)  
Anxiety Psychic (β = 0.321, t = 2.373, p = 0.021)  
Depersonalization and Derealization (β = −0.358, t = −2.685, p = 0.010) |
| Reference                          | Country     | Sample                              | Symptoms                                      | Measures of self-criticism and dependency | Measures of psychopathology | Analysis                  | Results                                                                 |
|-----------------------------------|-------------|-------------------------------------|-----------------------------------------------|-------------------------------------------|----------------------------|---------------------------|-------------------------------------------------------------------------|
| Schachter and Zlotogorski [74]    | Israel      | 58 volunteers 35 males 35 females    | Loneliness                                    | DEQ                                       | SRULS                      | Regression analysis       | Inter-correlational analysis                                            |
|                                   |             |                                     |                                               |                                           |                            |                           |                           |
| Burke and Haslam, [19]            | USA         | 74 depressed patients 39 females (53%) 35 males (47%) Age range: 19-61 years Mean age = 39.0 | Self-punitiveness (guilt, feelings of failure), Anhedonic symptoms (loss of interest, fatigue), Hopelessness (pessimism, suicidal ideation) | SAS, PSI-R, DEQ, DABS | BDI, IDD                  | Principal components analysis, Correlation analyses | Correlation analyses:  
- Self-direction and freedom from attachments component of autonomy (core autonomy) and anhedonic symptoms: $r = 30, p < 0.01$  
- Concern with others’ disapproval component of dependency and self-punitive symptoms: $r = 34, p < 0.01$  
- Self-criticism/perfectionism component of autonomy and self-punitive symptoms: $r = 57, p < 0.001$  
- Self-criticism/perfectionism component of autonomy and hopelessness: $r = 32, p < 0.01$ |
| Reference          | Country   | Sample                      | Symptoms | Measures of self-criticism and dependency | Measures of psychopathology          | Analysis                  | Results                                                                 |
|-------------------|-----------|-----------------------------|----------|------------------------------------------|--------------------------------------|---------------------------|------------------------------------------------------------------------|
| Besser et al. [11]| Canada    | 167 volunteers              | Loneliness | DEQ (McGill revision) CES-D UCLA Loneliness Scale-Revised | Zero-order correlations Regression analysis | Self-criticism \( r = 0.43, p < 0.0001 \) and \( r = 0.62, p < 0.0001 \) for intimate and non-intimate relationships, respectively Dependency \( r = 0.22, p < 0.05 \) and \( r = 0.13, p = 0.22 \) for intimate and non-intimate relationships, respectively CES-D \( \beta = 0.44, t = 3.94, p < 0.0001 \) and \( \beta = 0.24, t = 2.18, p < 0.03 \) for relationship and no relationship subsamples, respectively Self-criticism \( \beta = 0.22, t = 2.05, p < 0.04 \) and \( \beta = 0.46, t = 4.28, p < 0.0001 \) for the relationship and no relationship subsamples, respectively The low effect of dependency on loneliness found in the zero-order correlations for the romantic relationships group was no longer evident when controlling for participants’ levels of depressive symptoms \( \beta = 0.04, t = 0.43, p = 0.18 \) and \( \beta = 0.05, t = 0.65, p = 0.51 \) for relationship and no relationship subsamples, respectively |
| Reference              | Country        | Sample                                                                 | Symptoms                  | Measures of self-criticism and dependency | Measures of psychopathology | Analysis                                 | Results                                                                                   |
|------------------------|----------------|------------------------------------------------------------------------|---------------------------|------------------------------------------|----------------------------|------------------------------------------|-------------------------------------------------------------------------------------------|
| Fazaa and Page [36]    | Canada         | 807 university students Caucasian (76%), the remaining 24% came from the Middle East, Africa, the Caribbean, or Asia | Suicidality               | DEQ (66 items)                           | BDI-II                    | Correlations                            | Self-criticism-risk ($r = 0.53$), Self-criticism-risk rescue ($r = 0.55$)                |
|                        |                | Mean age: 20 years                                                     |                           |                                          | Risk Rescue Rating Scale (lethality of attempts) | Standard multiple regressions | Self-criticism subjective lethality ($r = 0.42$), Self-criticism-intent score ($r = 0.49$) |
|                        |                |                                                                       |                           |                                          |                           |                                          | Self-criticism-rescue ($r = -0.50$), Self-criticism-subjective lethality ($β = 0.50$)  |
|                        |                |                                                                       |                           |                                          |                           |                                          | Self-criticism-intensity of wish to die ($β = 0.76$), Dependency-subjective lethality ($β = -1.57$) |
|                        |                |                                                                       |                           |                                          |                           |                                          | Dependency-intensity of wish to die ($β = -1.83$)                                     |
| Vanhuele et al. [80]   | Belgium        | 134 adult outpatients (DMS-IV mild-severe Depression)                 | Suicidality               | DEQ (66 items)                           | BDI-II                    | Latent class analysis                   | Self-directed aggression: self-mutilation-suicide attempts self-critical                |
|                        |                |                                                                       |                           |                                          |                           |                                          |                                                                                         |
| Fazaa and Page [37]    | Canada         | 96 students (13 male, 83 female) 75% Caucasian, remaining sample from Middle Eastern, African, Asian, and Hispanic individuals | Suicidality (Impulsivity, intent, and lethality) | DEQ (66 items) | SIS (Suicide intent with previous attempt) (2 items) Dickman’s Impulsivity Inventory (23 items self-report) Likert type item (Suicide item) Risk Rescue Rating Scale (lethality of attempts) (10 items) | Discriminant Function Analysis (DFA) Receiver Operating characteristics curve (ROC) analysis | Correlation Dependency-State impulsivity ($r = 0.40$, $n = 96$, $p < 0.001$) Correlation Self-criticism-State Impulsivity ($r = 0.35$, $n = 96$, $p < 0.001$) |
| Reference                  | Country | Sample Details                  | Symptoms | Measures of self-criticism and dependency | Measures of psychopathology | Analysis                                                                 | Results                                                                 |
|----------------------------|---------|---------------------------------|----------|------------------------------------------|-----------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|
| O’Riley and Fiske [57]     | USA     | 636 adults (70.9% women; 92.2% European American) Age range: 18–24 years | Suicidality | PSI-II                                   | SBQ-14 (propensity for suicidal behaviour) (14 items)                  | Pearson’s correlation (relationship between autonomy and propensity for suicidality) | Young sample: Autonomy-suicidality ($r = 0.27$) Older sample: Need for Control-suicidality ($r = 0.26$) Defensive Separation ($\beta = 0.11$, SE = 0.03, $p < 0.01$, 95% CI = 0.05, 0.16), Perfectionism ($\beta = 0.38$, SE = 0.06, $p < 0.01$, 95% CI = 0.25, 0.50), Need for Control ($\beta = -0.05$, SE = 0.04, $p > 0.05$, 95% CI = $-0.01$, 0.04) and suicidality in younger sample: Need for Control ($\beta = 0.21$, SE = 0.08, $p < 0.01$, 95% CI = 0.05, 0.37), Defensive Separation ($\beta = -0.04$, SE = 0.06, $p > 0.013$, 95% CI = $-0.14$, 0.07), Perfectionism ($\beta = -0.10$, SE = 0.14, $p > 0.013$, 95% CI = $-0.38$, 0.19) and suicidality in older sample: |
| Reference          | Country                  | Sample Description                                                                 | Symptoms                          | Measures of self-criticism and dependency | Measures of psychopathology                  | Analysis                                      | Results                                                                                     |
|--------------------|--------------------------|------------------------------------------------------------------------------------|------------------------------------|-------------------------------------------|---------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------|
| Campos et al. [23] | Portugal                 | 105 volunteers adults (51 male, 54 female) Age range: 19–64 years M: 36.3 SD: 11.5 | Suicidality Through distress      | DEQ (66 items)                            | BSI (53 items self-report) Sociodemographic Questionnaires (2 items on suicidality) | Structural equation modelling (SEM)           | Direct association model: Self-criticism - Suicidality: $\beta = 0.40, t = 2.394, p < 0.017$ Dependency - Suicidality: $\beta = 0.10, t = 0.712, \text{n.s.}$ Mediation structural equation modelling: Self-criticism - Suicidality through distress: $\beta = 0.54, t = 6.452, p < 0.0001$ Dependency - Distress: $\beta = 0.36, t = 4.459, p < 0.0001$ Distress - Suicidality: $\beta = 0.51, t = 2.284, p < 0.022$ |
| Dorahy and Hanna [32] | New Zealand and Northern Ireland | 315 students 17.1% males (n = 54) 82.9% females (n = 261) Age range: 18–64 years Mean age = 22.54 SD = 7.24 | Shame, guilt, embarrassment Interpersonal intimacy | DEQ-SF DES-IV, shame, guilt, and hostility-inward subscales (SG&HI-DES-IV) | Path analysis | Standardized Regression Coefficients for Each of the Model Paths ($p = <0.01$): Introjective orientation - Embarrassment: $\beta = 0.281$ - Shame: $\beta = 0.381$ - Guilt: $\beta = 0.232$ - Interpersonal Intimacy: $\beta = 0.426$ Anacritic orientation - Embarrassment: $\beta = 0.359$ - Guilt: $\beta = 0.215$ - Interpersonal Intimacy: $\beta = 0.266$ |
Table 2 (continued)

| Reference                  | Country   | Sample                                                                 | Symptoms                      | Measures of self-criticism and dependency | Measures of psychopathology | Analysis                                                                 | Results                                                                 |
|----------------------------|-----------|------------------------------------------------------------------------|-------------------------------|------------------------------------------|----------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------|
| Abi-Habib and Luyten [1]   | Belgium   | 253 community adults 58.33% females Mean age = 32.21 SD = 5.40         | Anger                         | DEQ                                      | BDI                        | Zero-order correlations                                                   | Self-criticism (p < 0.01)                                             |
|                            |           |                                                                        |                               |                                          | STAXI                      | - State anger: r = 0.177                                                  | - Trait anger: r = 0.393                                               |
|                            |           |                                                                        |                               |                                          |                            | - Anger-control: r = −0.220                                               | - Anger-in: r = 0.455                                                   |
|                            |           |                                                                        |                               |                                          |                            | - Anger-out: r = 0.319                                                    | - State anger: r = 0.045                                               |
|                            |           |                                                                        |                               |                                          |                            | - Trait anger: r = 0.060                                                  | - Anger-control: r = 0.070                                             |
|                            |           |                                                                        |                               |                                          |                            | - Anger-in: r = 0.119                                                    | - Anger-out: r = −0.117                                                |
| Campos and Holden [21]     | Portugal  | 810 non-clinical adults                                                | Suicidality                   | DEQ (66 items)                           | CES-D (20 items)            | Discriminant Function Analysis (DFA) Receiver Operating characteristics curve (ROC) analysis | Standardized discriminant function coefficient (0.46 (95% CI (0.13, 0.66)) for self-criticism |
|                            |           |                                                                        |                               |                                          | SBQ2-R (4 items)            |                                                                           |                                                                       |
| Campos and Holden [22]     | Portugal  | 200 adults (102 men, 98 women) Age range: 19–67 years M: 36.7 years SD: 12.46 | Suicidality (ideation and attempt, recent ideation, intention and future probability) | DEQ (66 items)                           | CES-D (20 items)            | Structural Equation Modelling (SEM)                                        | Indirect effects                                                      |
|                            |           |                                                                        |                               |                                          |                            |                                                                           | Self-criticism-suicidality: (β=0.20, t = 4.17, p < 0.001) SE = 0.029, 95% CI (0.11, 0.30), p < 0.001 |
|                            |           |                                                                        |                               |                                          |                            |                                                                           | Neediness-suicidality: (β=0.21, t = 4.71, p < 0.001) SE = 0.028, 95% CI (0.14, 0.30), p < 0.001 |
| O’Keefe et al. [56]        | USA       | 113 Under-graduated students (75.3% women; 93.4% Caucasian, 5.7% African Americans, 0.9% Asian Americans) M: 19.43 DS: 2.28 | Suicidality                   | PSI.II (48 items)                         | CES-D (20 items)            | Structural Equation Modelling                                             | Time 1 autonomy predicted Time 2 depression symptoms (β=0.137, p = 0.002) Time 2 depression symptoms predicted Time 3 perceived burdensomeness (β=0.251, p = 0.002) and Time 3 thwarted belongingness (β=0.285, p = 0.005) |
| Reference          | Country   | Sample                                      | Symptoms          | Measures of self-criticism and dependency | Measures of psychopathology | Analysis                          | Results                                                                 |
|--------------------|-----------|---------------------------------------------|-------------------|-------------------------------------------|-----------------------------|----------------------------------|------------------------------------------------------------------------|
| Silva et al. [76]  | Chile     | 177 undergraduate students (Normal: 52 introjective: 38 anaclitic: 38 mixed Al: 49) 71 males; 106 females Mean age = 21.1 SD = 1.65 | Anhedonia         | DEQ                                       | BDI (anhedonia and melancholia subscales) | One-way ANOVA post-hoc comparisons | Anhedonia: group effect $F(3, 176) = 5.64, p < 0.01, \eta^2 = 0.08$ normal vs. introjective ($\Delta M = -1.20, SE = 0.32, p < 0.01$ Bonferroni) normal vs. mixed Al ($\Delta M = -0.98, SE = 0.30, p < 0.01$ Bonferroni) |                                                                                                                                 |
| Park and Kim [60, 61] | South Korea | 334 students (113 male, 200 female) Age range: 19–27 years M: 21.51 DS: 1.95 | Suicidality       | Personal Style Inventory-II (Korean version; 18–19 items) | K-INQ14 (14 items) DSI-SS (4 items) K-DBI-II (21 items) | Correlations Hierarchical regression | Sociotropy—BDI-II: $r (311) = 0.23, p < 0.001$ Autonomy—BDI-II: $r (311) = 0.25, p < 0.00$ Autonomy—Suicide ideation: $r (311) = 0.16, p < 0.01$ Model 2: PB ($\beta = 0.24, t (298) = 0.42, p < 0.001$) and sociotropic personality, $\beta = -0.11, t (298) = -2.26, p < 0.05$ predicted suicide Model 3: Significance TB and sociotropy ($\beta = -0.11, t (294) = -2.01, p < 0.05$) and PB and autonomy ($\beta = 0.19, t (294) = 2.94, p < 0.01$) |
| Reference | Country   | Sample                        | Symptoms | Measures of self-criticism and dependency | Measures of psychopathology | Analysis          | Results                                                                 |
|----------|-----------|-------------------------------|----------|--------------------------------------|---------------------------|------------------|------------------------------------------------------------------------|
| Bar et al. [4] | Israel    | 161 young adults 36 males 125 females Age range = 20–30 years Mean age = 25 SD = 1.4 | Insomnia | DEQ-SC6 | BDI-II PSQI ISI | Regression analysis | Association between self-criticism (Time 1) and insomnia (Time 2) evidenced a trend ($\beta = 0.12$, SE = 0.07, $p = 0.09$, 95% CI [−0.02, 0.26]) Two-wave interaction: the self-criticism by depressive symptoms interaction predicted time 2 insomnia ($\beta = 0.19$, SE = 0.07, $p = 0.007$, 95% CI [0.05, 0.33]) The positive association between time 1 self-criticism and time 2 insomnia was marginally significant for individuals with high (1SD above the mean) levels of depressive symptoms ($\beta = 0.03$, SE = 0.02, $p = 0.07$, 95% CI [−0.00, 0.08]), but not for individuals with mean ($\beta = 0.01$, SE = 0.01, $p = 0.40$, 95% CI [−0.02, 0.05]) and below mean (1SD below the mean) levels of depressive symptoms ($\beta = −0.00$, SE = 0.02, $p = 0.68$, 95% CI [−0.05, 0.03]) At 2SDs above the mean of depressive symptoms, the positive association between time 1 self-criticism and time 2 insomnia was statistically significant ($\beta = 0.06$, SE = 0.03, $p = 0.04$, 95% CI [0.00, 0.12]) |
| Reference       | Country | Sample                                                                 | Symptoms                                                                 | Main Personality Traits                                                                 | Measure of Dependency                      | Measure of psychopathology | Analysis                                                                 | Results |
|-----------------|---------|------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------|---------------------------------------------------------------------------|---------|
| Piper et al. [65] | Canada  | 277 psychiatric outpatients 70% women Types of losses: parent (45%), partner (10%), sibling (9%), friend (84%), child (7%), grandparents (5%), other (15%) Age range M: 43.1 | Grief symptoms Patient's promotion of dependence of the deceased | INTREX Questionnaire (16 items) | Present Feeling Subscale of the Texas Revised Inventory of Grief (TRIG) PGI IES SAS-SR | Pearson Correlations, Stepwise Regression Analyses | Pearson Correlations: Significant direct association between patient's promotion of dependence of the deceased and TRIG grief score: r (129) = 0.21, p = 0.015 Stepwise Regression Analysis: Patient's promotion of dependence of the deceased accounted for 4% of the variation in the TRIG grief score |         |
| Bonanno et al. [16] | USA     | 205 widowed persons (non-clinical sample) 180 male, 25 female Age range M: 72 SD: 6.5 | Grief symptoms Interpersonal Dependency on the spouse | Interpersonal Dependency Scale (5 items) | Bereavement index Present feelings about loss scale Texas Revised Inventory of Grief (TRIG) | ANOVA | Interpersonal Dependency (F (4–80) = 3.30, p < 0.05): - Chronic grievers: M = 0.31, SD = 0.88 - Resilient individuals: M = 0.11, SD = 0.89 Dependency on the spouse (F (4–80) = 2.58, p < 0.03): - Chronic grievers: M = 0.19, SD = 0.86 - Resilient individuals: M = 0.29, SD = 1.10 |         |
| Denckla et al. [28] | USA     | 102 non-clinical sample (Married 36, prolonged grief 25, resolved grief 41) | Grief symptoms Healthy Dependency, Destructive Overdependence | RPT Structured Clinical Interview for DSM-IV-TR Axis I Disorders | | ANOVA | Healthy Dependency (F = 5.12, p = 0.008): - Prolonged: M = 31.00, SD = 6.52 - Resolved: M = 35.73, SD = 6.44 Destructive Overdependence (F = 0.12, p = 0.883): - Prolonged: M = 27.36, SD = 9.39 - Resolved: M = 26.22, SD = 8.46 |         |
| Reference        | Country | Sample                                                                 | Symptoms               | Main Personality Traits | Measure of Dependency | Measure of psychopathology | Analysis                                                                 | Results                                                                 |
|------------------|---------|------------------------------------------------------------------------|------------------------|-------------------------|-----------------------|----------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------|
| Mancini et al. [52] | USA     | 178 non-clinical sample (104 bereaved, 74 married participants; 33 resilient, 40 recovered, 31 prolonged grievers) | Grief symptoms         | Healthy Dependency, Destructive Overdependence | RPT                   | Structured clinical interview | Univariate analyses, multivariate analyses (polychotomous logistic regression model) | Univariate analysis Healthy Dependency (F = 5.16, p < 0.05):  
- Prolonged: M = 3.19, SD = 0.66  
- Resilient: M = 3.65, SD = 0.55  
- Recovered: M = 3.66, SD = 0.54  
Destructive Overdependence (F = 1.22, p < 0.25):  
- Prolonged: M = 2.85, SD = 0.83  
- Resilient: M = 2.43, SD = 0.71  
Multivariate analysis:  
Healthy Dependency:  
- Prolonged vs. resilient: OR [95% CI] = 2.35 [0.25, 0.06]  
- Recovered vs Prolonged: OR [95% CI] = 5.98 [1.26, 28.35]  
Destructive Overdependence:  
- Prolonged vs. resilient: OR [95% CI] = 6.42 [1.70, 24.21]  
- Recovered vs prolonged: OR [95% CI] = 0.51 [0.22, 1.18] |
2.1 SS (Somatic Symptoms): loss of pleasure, crying, agitation, loss of interest, loss of energy, changes in sleeping, irritability, changes in appetite, concentration difficulty, tiredness or fatigue, loss of interest in sex, interpersonal sensitivity. CG (Cognitive Symptoms): such as sadness, pessimism, past failure, guilty feelings, punishment feelings, self-dislike, self-criticalness, indecisiveness, worthlessness, self-blame, work difficulty, social withdrawal, hopelessness. Ang: Anger; Sh: Shame; Lo: Loneliness; An: Anhedonia; In: Insomnia; SI: Suicidal Ideation. Coloured circles indicate that the scale measures a cluster of symptoms. Empty circles indicate that the scale measures only the symptom of interest.

2.2 Tests measuring depressive symptoms, complicated grief, and personality dimensions. PD (Personality dimensions); CG (complicated Grief)
failure, work inhibition, sense of punishment, lack of satisfaction, self-hatred, social withdrawal (BDI), irritability, indecisiveness, personal devaluation (ZUNG-SDS), feeling blocked in getting things done, feeling easily annoyed or irritated and feeling of being caught or trapped (SCL-90). Dependency doesn’t show a strong relationship with the dependent composite in the Major Depressive Disorder sample (Hotelling’s t (90) = 1.90, ns). By contrast, self-criticism shows a strong relationship with the self-critical composite in the Major Depressive Disorder sample (Hotelling’s t (90) = −3.49, Ps < 0.01). To specifically examine the Interpersonal Sensitivity \((r = 0.621; p < 0.001)\), Otani and colleagues \[59\] demonstrated a significant correlation between sociotropy and interpersonal sensitivity \(r = 0.621; p < 0.001\) and its subscales, such as interpersonal awareness \(r = 0.551; p < 0.001\), separation anxiety \(r = 0.569; p < 0.001\), irritability \(r = 0.513; p < 0.001\), and fragile inner self \(r = 0.419; p < 0.001\); whereas only the fragile inner self subscale was significantly correlated \(r = 0.193; p < 0.001\) with the autonomy subscale. Also, multiple regression analyses showed that sociotropy predicted total interpersonal sensitivity scores \((\beta = 0.613; p < 0.001)\), interpersonal awareness \((\beta = 0.547; p < 0.001)\), separation anxiety \((\beta = 0.558; p < 0.001)\), irritability \((\beta = 0.518; p < 0.001)\), fragile inner self \((\beta = 0.398; p < 0.001)\), with autonomy predicting only fragile inner self \((\beta = 0.130; p < 0.01)\).

Other depressive symptoms (loneliness, self-conscious emotions, anhedonia, insomnia, anger)

Seven studies \[1, 4, 11, 19, 32, 74, 76\] examined potential differences between autonomic and sociotropic personality styles in levels of loneliness, shame, guilt, embarrassment, interpersonal intimacy, self-punitiveness, anhedonia, hopelessness, insomnia, and anger.

A positive and stronger association is reported between self-criticism and loneliness \((r = 0.43, p < 0.0001; r = 0.62, P < 0.0001\) for self-criticism for intimate and non-intimate relationships, respectively) \[11\]; \((r = 0.67, p < 0.01)\) and a smaller association between dependency and loneliness \((r = 0.22, p < 0.05; r = 0.13, p = 0.22\) for intimate and non-intimate relationships, respectively) \[11\], \((r = 0.34, p < 0.01)\) \[74\]. Regression analysis also revealed that self-criticism has a stronger effect in predicting loneliness \((\beta = 0.22, t = 2.05, p < 0.04\) and \(\beta = 0.46, t = 4.28, p < 0.0001\) in intimate and non-intimate relationships groups, respectively) \[11\], \((\beta = 0.63, t = 6.761, p < 0.05)\) \[74\] compared to dependency \((\beta = 0.04, t = 0.43, p = 0.18\) and \(\beta = 0.05, t = 0.65, p = 0.52\), in intimate and non-intimate relationships) \[11\], \((\beta = 0.29, t = 2.888, p < 0.05)\) \[74\].

Regarding self-conscious emotions, introjective orientation appears to be significantly associated \((p \leq 0.01)\) with increased embarrassment \((\beta = 0.281)\), shame \((\beta = 0.381)\), guilt \((\beta = 0.232)\), and it is also reported to predict \((p \leq 0.01)\) significantly reduced interpersonal intimacy \((\beta = −0.426)\). The self-criticism subcomponent was also related to self-punitive symptoms \(r = 0.57\) and hopelessness \(r = 0.32\) \[19\]. By contrast, anaclitic orientation appears to be significantly associated \((p \leq 0.01)\) only with embarrassment \((\beta = 0.359)\) and guilt \((\beta = 0.215)\) and it significantly predicts increased interpersonal intimacy \((\beta = 0.266)\) \[32\], an association between dependency and self-punitive symptoms \((r = 34\) has also been found \[19\]. An enhanced anhedonic symptomatology also emerged in introjective but not in anaclitic individuals compared to normal ones (normal vs. introjective \(\Delta M = −1.20, SE = 0.32, p < 0.01\) Bonferroni) \[76\], in line with the association between anhedonia and only “pure” autonomy components \((r = 30)\) \[19\]. Furthermore, in Bar and colleagues’ study \[4\], they observed that self-criticism predicts insomnia only in individuals with quite high (2SDs above the mean depression symptoms \((\beta = 0.06, SE = 0.03, p = 0.04, 95\% CI [0.00, 0.12]\), and it is marginally significant for those with high (1SD above the mean depression symptoms \((\beta = 0.03, SE = 0.02, p = 0.07, 95\% CI [−0.00, 0.08]\), and not significant in those with mean \((\beta = 0.01, SE = 0.01, p = 0.40, 95\% CI [−0.02, 0.05]\) and below mean (1SD below the mean levels of depression symptoms \((\beta = −0.00, SE = 0.02, p = 0.68, 95\% CI [−0.05, 0.03]\). Finally, findings suggest that self-criticism is significantly associated \((p < 0.01)\) with high levels of both state \((r = 0.177)\) and trait anger \((r = 0.393)\), low anger control \((r = −0.220)\), and high levels of anger towards the self \((r = 0.455)\) and others \((r = 0.319)\), whereas dependency appears to be related with high levels of trait anger \((r = 0.060)\), the turning of anger towards the self \((r = 0.119)\), and low levels of anger directed towards others \((r = −0.117)\) \[1\].

Suicidality

Six \[21, 36, 37, 57, 74, 80\] examined whether the personality dimensions of self-criticism and dependency are differently associated with suicidal behaviour and the subcategories related to it. Self-critical individuals are shown to have a higher tendency toward suicide than dependents \[74\]. Pearson r correlations indicate a total correlation between autonomy and its subscales with suicidal ideation \((r = 0.116, p < 0.01)\) \[60, 61\], with people scoring higher on self-criticism also showing higher risk \((r = 0.53)\), risk-rescue \((r = 0.55)\), subjective lethality \((r = 0.42)\), intent scores \((r = 0.49)\), and lower rescue scores \((r = −0.50)\) compared to dependents \((r = −0.44)\), \((r = −0.55)\); \((r = −0.25)\); \((r = −0.24)\); \((r = 0.58)\). Furthermore, standard multiple regressions showed that only self-criticism was a significant predictor of subjective
lethality ($\beta=0.50$) and of the intensity of a person's desire to die ($\beta=0.76$) while dependency was not ($\beta=-1.57$); ($\beta=-1.83$) [36]. Another study found standardised discriminant function coefficients for self-criticism as a predictor of suicidal behaviour to be 0.46 (95% CI (0.13, 0.66)), suggesting its implication in suicidality and general psychological distress [21]. This result was also confirmed in another study [23], with a structural equation modelling or direct association model (SEM) demonstrating a significant association only between self-criticism and suicidality ($\beta=0.40$, $t=2.394$, $p<0.017$), and a non-significant association between dependency and suicidality ($\beta=0.10$, $t=0.712$, ns). A $2 \times 2$ between subject multivariate analysis of variance (MANOVA) confirmed a difference between dependency and self-criticism on different lethality indices ($p=0.05$), and a significant negative correlation was found between dependency and state impulsivity ($r=0.40$, $n=96$, $p<0.01$), while a significant positive correlation was found between self-criticism and state impulsivity ($r=0.35$, $p<0.01$) [37]. Moreover, a difference has been found between younger adult and older adult samples concerning the association between the autonomic personality trait and its subscales—Need for Control, Perfectionism and Defensive Separation—measured on the PSI-II [70] and suicidal behaviour [57]. In the younger adult sample, the total score on the autonomy scale ($r=0.27$ and each autonomy subscales of Need for Control ($r=0.16$, Perfectionism ($r=0.29$) and Defensive Separation ($r=0.23$) was significantly and positively associated with suicidality, while in the older adult sample, this association was only shown in Need for Control ($r=0.26$). Also, multiple linear regressions examining the association between propensity for suicidal behaviour and autonomy subscales have indicated only Defensive Separation ($\beta=0.11$, $SE=0.03$, $p<0.01$, 95%CI=0.05, 0.16), and Perfectionism ($\beta=0.38$, $SE=0.06$, $p<0.01$, 95% CI=0.25, 0.50) as being significantly related to suicidality in the younger sample; as opposed to Need for Control ($\beta=-0.05$, $SE=0.04$, $p>0.05$, 95% CI=−0.01, 0.04). In contrast, in older people only Need for Control appears to be significantly and positively associated with propensity for suicidality ($\beta=0.21$, $SE=0.08$, $p<0.01$, 95% CI=0.05, 0.37), while Defensive Separation ($\beta=-0.04$, $SE=0.06$, $p>0.013$, 95% CI=−0.14, 0.07) and Perfectionism ($\beta=-0.10$, $SE=0.14$, $p>0.013$, 95% CI=−0.38, 0.19) are not.

**Indirect effects and distress of suicidality**

In studies examining if the interaction between the independent variables of interpersonal needs—perceived burdensomeness (PB) and thwarted belongingness (TB)—and self-criticism and dependency predict suicidality or suicidal ideation dependent variables, regression analysis in a model including TB, PB, sociotropy and autonomy for moderation effects revealed TB not being a valid predictor of suicidal ideation, while PB ($\beta=0.24$, $t (298)=0.42$, $p<0.001$) and sociotropic personality ($\beta=-0.11$, $t (298)=-2.26$, $p<0.05$) demonstrated significance in predicting current suicidal ideation. Other simple slope analyses have shown that sociotropic effects on suicidality were significant when the level of TB was high (i.e., one standard deviation above the mean), $t (294)=-2.62$, $p=0.009$, while autonomy was a predictor of suicide when PB levels were either low (i.e., one standard deviation below the mean), $t (294)=-2.35$, $p=0.019$, or high (i.e., one standard deviation above the mean), $t (294)=2.56$, $p=0.011$, indicating autonomy to be the only risk factor for suicidality [60, 61]. Also, with regard to indirect effects, in a design with three-time points, depression symptoms seem to mediate the relationship between self-criticism and TB. A structural equation modelling showed that Time 1 autonomy predicted Time 2 depression symptoms ($\beta=0.137$, $p=0.002$), and Time 2 depression symptoms predicted Time 3 PB ($\beta=0.251$, $p=0.002$), as well as Time 3 TB ($\beta=0.283$, $p=0.005$) [56]. However, dependency, or needness, was also shown to be significantly related to suicidality ($\beta=0.21$, $t=4.71$, $p<0.001$; SE=0.028, 95% CI [0.14, 0.30], $p<0.001$) as well as self-criticism ($\beta=0.20$, $t=4.17$, $p<0.001$; SE=0.029, 95% CI [0.11, 0.30], $p<0.001$) and depression ($\beta=0.57$, $t=8.00$, $p<0.001$; SE=0.004, 95% CI [0.44, 0.70], $p<0.001$) indirectly through the effect of psychache and interpersonal needs (TB, PB) [22].

Distress, in terms of independent variable, also seems to indirectly mediate the relationship between personalities of self-criticism, dependency and suicidality dependent variables, with a mediational structural equation modelling (SEM) including self-criticism, dependency, distress and suicidality revealing that the relationship between self-criticism and high levels of suicidal behaviours was mediated by high levels of distress ($\beta=0.54$, $t=6.452$, $p<0.0001$), as well as high levels of dependency significantly associated with high levels of distress ($\beta=0.36$, $t=4.459$, $p<0.0001$), and high levels of distress significantly associated with suicidality ($\beta=0.51$, $t=2.284$, $p<0.022$). Indirect association between high levels of self-criticism and high levels of suicidality ($z=2.18$, $p<0.03$) and high levels of dependency and high levels of suicidality ($z=2.08$, $p<0.04$) were also all found to be significant [23].

**Complicated grief**

Higher scores of interpersonal dependency and dependency on the spouse have been found in chronic griever

ID: $M=0.31$, $SD=0.88$, F (4–80) = 3.30, $p<0.05$; DOS:


Discussion

This systematic review was conducted in order to test the Symptom Specificity Hypothesis according to which anaclitic-sociotropic and introjective-autonomic personality dimensions are related to specific depression symptoms. More specifically, in line with this hypothesis, we hypothesised that a dependent-sociotropic-anaclitic personality style would have been related to more somatic symptoms and complaints such as crying, tearfulness, shame, loneliness, anger, anxiety symptoms, anhedonia and a more masked depressive form; while self-critical-autonomic-introjective personality would have been associated with cognitive symptoms, including failure feelings, self-hate, guilt, hostility, loss of interest and suicidality. Data collected showed a high heterogeneity and contrasting results across studies that do not totally support the hypothesis. In fact, most of the studies found weaker associations between somatic symptoms and dependent personalities. By contrast, as we had assumed, the relationship between self-criticism and cognitive symptomatology was significantly higher, with self-criticism being significantly associated with worthlessness, self-dislike, self-criticalness, defeat and failure, irritability, guilty feelings, self-hate, loss of interest, concentration difficulty, tiredness, changes in appetite and concerns about the ability to function [30, 47, 51, 69, 79]. Furthermore, self-criticism—in contrast to Blatt’s [12] view of the introjective configurations—seems to be able to predict poorer social functioning at follow-up [47], as well as both cognitive and somatic symptoms of depression [79]. Some studies, however, supported the symptoms specificity hypothesis, reporting a relationship between dependency and symptoms specifically associated with crying or tearfulness, loss and deprivation and helplessness [47], mood-variability, reactivity and loneliness [69], interpersonal awareness, separation anxiety, timidity, fragile inner self [59], and self-punitive symptoms [19].

Contrary to what we expected—according to the theoretical link between dependency and loneliness suggested by Blatt [12]—loneliness seems to be more closely related to the introjective personality than the anaclitic one, highlighting the interpersonal difficulties associated with the self-critical dimension [11, 55, 74, 90]. Also, an enhanced anhedonic symptomatology has been found to specifically characterise introjective individuals but not anaclitic individuals compared to normal ones [76]. In particular, Burke and Haslam [19] reported a link between anhedonia and core autonomy, a component of autonomy that comprised self-direction and freedom from attachments, this finding may account for the association between autonomy and endogenous depression reported by Peselow and colleagues [64]. Furthermore, self-emotions such as embarrassment [32] and guilt [19, 32] were shown to be associated both with sociotropy and autonomy, while shame appears to be the only emotion related to the introjective personality, supporting the opinion that shame is a fundamental emotion in the introjective personality, resulting in reduced interpersonal intimacy in these individuals [32, 75]. Finally, self-criticism also appears to be strongly associated with high levels of both state and trait anger, low anger control and high levels of anger towards the self and others, suggesting that introjective personality is characterised by hostile and irritable issues in depression [1]. The association between high levels of self-criticism and increased anger towards others could play an important role in explaining the associated vulnerability to depression. That is, the turning of anger towards others has been shown to lead to vicious interpersonal cycles characterised by increased feelings of frustration and anger in significant others, resulting in social exclusion and subsequent loneliness and depression [1, 11, 50, 74]. On the other hand, the anaclitic personality has been found to be associated with elevated levels of trait anger, low levels of anger directed toward others, and directing anger towards the self, suggesting that dependency is most closely related to depression associated with inhibited anger [1]. In this sense, some studies showed that dependent individuals often seem to underreport feelings of anger [1, 34, 73], indicating that they may fear that admitting anger towards others will lead to rejection and abandonment. Finally, the interaction between the introjective personality and depression symptoms has been found to predict insomnia, while no study identified the presence of sleep disorders in the anaclitic personality dimension.
Several studies [36, 37, 57, 71, 80], also tried to apply the Symptoms Specificity Hypothesis on suicidal behaviour in order to investigate whether different suicidal paths and patterns can be observed between the two groups, showing both sociotropy and autonomy to be associated with different suicidal characteristics. In particular, self-critical individuals indicate a greater intent to die, higher lethality behaviours, and higher risk and risk-rescue scores along with lower rescue scores compared to patients scoring lower in the introjective-autonomic personality, while sociotropics seem to show higher rescue scores and lower suicidal risk, lower intent to die and risk-rescue if compared to those lower in dependency and to self-critical individuals. Lower rescue scores in self-criticism show the tendency of these individuals to adopt more precautionary behaviours against the possibility of being discovered during the suicidal act compared to dependents and use more active practices of suicide such as firearms [8], highlighting the greater risk of these individuals for suicidality. Dependent people otherwise utilise fewer precautions against being discovered, by adopting less lethal and more passive suicide methods and attempts such as overdose [37]. In summary, self-critics and dependents are reported to have a different vulnerability to attempting suicide, even depending on interpersonal or intrapsychic life events [36]: while sociotropics are more worried about dependent issues, autonomic individuals show more suicidal thoughts and their suicidal acts seem to be gestures rather than attempts, showing a greater risk for successful suicide [80].

More specific differences have been found between younger and older adults in relation to three introjective-autonomic personality subcomponents, where in younger adults, suicidality appears to be associated with autonomy’s subscale of Perfectionism and Defensive Separation, in older adults only Need for Control autonomy’s subscale was related to increased propensity for suicidal behaviour. Data suggest that the autonomy personality and its propensity to suicide can be different in relation to suicide risk, with age having a mediation role. For this reason, suicidal behaviour could also differ across the life span [26], with the Need for Control subcomponent seeming to reflect inflexibility, which in turn is associated with suicidality in old age [27]. According to the Interpersonal-Psychological Theory of Suicide [44], four studies [60, 61], focused on the possibility that sociotropy and autonomy could contribute to the development of two interpersonal dysfunctions—PB and TB—that lead to suicide risk. Main results indicate an association between autonomy and PB and TB in predicting suicide, even with the mediation role of depression symptoms. Contrasting results, however, seem to show that sociotropy is also significantly related to suicidality through the indirect effect of PB and TB, and distress [23].

With regard to complicated grief, DSM-5 defines this clinical condition as a chronic grief experience that follows the loss of a loved one and is frequently associated with the expression of various somatic complaints such as digestive problems and pain and fatigue, resembling in some cases the masked form of depression typical of the anaclitic personality dimension. For this reason, we hypothesised that dependency was a risk factor and a predictor of complicated grief.

Conclusions

Overall, studies included in this review support the association between dependency and complicated grief, indirectly providing evidence of the hypothesised relationship between dependence and masked symptoms of depression. Nevertheless, it is important to note the limited number of studies examining the symptoms specificity hypothesis and their fragmented results, which in turn, leads to contrasting results in this review. This variability of results might be due to the fact that the selected studies do utilise different tests measuring anaclitic-sociotropic and introjective-autonomic personality styles because relatively little attention has been focused only on the original DEQ and SAS according to Blatt’s and Beck’s theories (1874, 1983). Particularly, these tests assess different subcomponents of these personalities. Thus, it would be useful to create more unitary methodologies of evaluation, combining the components measured by all the tests included in this review. In addition, many studies examining depression symptoms are based on diagnostic criteria including mainly cognitive symptoms rather than other depressive forms, such as the somatic one.

Future directions should provide data from experimental and longitudinal research to specifically investigate the symptoms specificity hypothesis and, thus, to corroborate the hypothesised correlation between personality styles and specific clusters of depression symptoms. This might make an important contribution to the clinical context in terms of therapeutic implications, supporting the existence of a form of depression characterised by somatic features which should not be ignored by the main diagnostic criteria currently in use. This would improve the implementation of more effective and personalised treatments built on the single individual and on different symptoms among depressed patients.
# Appendix A

| Study                  | Question described | Appropriate study design | Appropriate subject selection | Characteristics described | Random allocation | Researchers blinded | Subject blinded | Outcome measures well defined and robust to bias | Sample size appropriate | Analytic methods well described | Estimate of variance reported | Controlled for confounding | Results reported in detail | Conclusion supported by results? | Rating (%) |
|------------------------|--------------------|--------------------------|-------------------------------|---------------------------|-------------------|---------------------|---------------|-----------------------------------------------|--------------------------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|--------------------------------|--------------|
| Klein et al. [47]      | 2                  | 2                        | 1                             | NA                        | 0                 | 0                   | 2             | 1                                                             | 2                        | 2                              | 2                           | 1                           | 2                           | 2                             | Moderate (64.3%) |
| Robins and Luten [69]  | 2                  | 2                        | 2                             | NA                        | 0                 | 0                   | 1             | 1                                                             | 2                        | 1                              | 1                           | 1                           | 1                           | 2                             | Moderate (64.3%) |
| Robins et al. [71]     | 2                  | 2                        | 2                             | NA                        | 0                 | 0                   | 1             | 2                                                             | 2                        | 0                              | 2                           | 2                           | 2                           | 2                             | Moderate (67.9%) |
| Desmet et al. [30]     | 2                  | 2                        | 2                             | NA                        | 0                 | 0                   | 2             | 2                                                             | 2                        | 2                              | 1                           | 1                           | 1                           | 2                             | Moderate (71.4%) |
| Luyten et al. [51]     | 2                  | 2                        | 2                             | NA                        | 0                 | 0                   | 2             | 1                                                             | 2                        | 2                              | 2                           | 2                           | 2                           | 2                             | Strong (79%)   |
| Otani et al. [59]      | 2                  | 2                        | 1                             | NA                        | 0                 | 0                   | 2             | 2                                                             | 2                        | 0                              | 1                           | 1                           | 2                           | 2                             | Moderate (64.3%) |
| Stroccamore et al. [79] | 2                  | 2                        | 2                             | NA                        | 0                 | 0                   | 2             | 1                                                             | 2                        | 1                              | 2                           | 2                           | 2                           | 2                             | Moderate (71.4%) |
| Schachter and Zlotogorski [74] | 2 | 2 | 1 | 1 | NA | 0 | 0 | 2 | 1 | 2 | 0 | 2 | 2 | 2 | 2 | Moderate (60.7%) |
| Besser et al. [11]     | 2                  | 2                        | 1                             | NA                        | 0                 | 0                   | 2             | 2                                                             | 2                        | 2                              | 2                           | 2                           | 2                           | 2                             | Strong (79%)    |
| Dorohy and Hanna [32]  | 2                  | 2                        | 1                             | NA                        | 0                 | 0                   | 2             | 2                                                             | 2                        | 2                              | 2                           | 2                           | 2                           | 2                             | Strong (79%)    |
| Burke and Haslam [19]  | 2                  | 2                        | 2                             | NA                        | 0                 | 0                   | 2             | 1                                                             | 2                        | 1                              | 2                           | 2                           | 2                           | 2                             | Moderate (71.4%) |
| Abi-Habib and Luyten [1] | 2                  | 2                        | 1                             | NA                        | 0                 | 0                   | 2             | 2                                                             | 2                        | 2                              | 1                           | 2                           | 2                           | 2                             | Moderate (71.4%) |
| Silva et al. [76]      | 2                  | 2                        | 2                             | NA                        | 0                 | 0                   | 2             | 2                                                             | 2                        | 0                              | 1                           | 2                           | 2                           | 2                             | Moderate (67.9%) |
| Bar et al. [4]         | 2                  | 2                        | 1                             | NA                        | 0                 | 0                   | 2             | 2                                                             | 2                        | 0                              | 2                           | 2                           | 2                           | 2                             | Moderate (67.9%) |
| Fazaa and Page [36]    | 2                  | 2                        | 1                             | NA                        | 0                 | 0                   | 2             | 2                                                             | 2                        | 1                              | 2                           | 1                           | 2                           | 1                             | Moderate (67.9%) |
| Vanhuele and Desmet [80] | 2 | 2 | 2 | 2 | NA | 0 | 0 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | Moderate (67.9%) |
| Study                          | Question described | Appropriate study design | Appropriate subject selection | Characteristics/Random allocation | Researchers Blinded | Subject blinded | Outcome measures well defined and robust to bias | Sample size appropriate | Analytic methods well described | Estimate of variance reported | Controlled for confounding | Results reported in detail | Conclusion supported by results? | Rating (%) |
|-------------------------------|--------------------|--------------------------|-------------------------------|----------------------------------|----------------------|-----------------|--------------------------------------------------|--------------------------|-------------------------------|-------------------------------|-----------------------------|-----------------------------|--------------------------------|-----------|
| Faaza and Page [37]          | 2                  | 2                        | 1                             | 2                               | NA                   | 0               | 0                                               | 1                        | 2                             | 1                            | 1                           | 2                           | 2                             | Moderate (60%)             |
| O'Riley and Fiske [57]        | 2                  | 2                        | 1                             | 2                               | NA                   | 0               | 0                                               | 2                        | 1                             | 2                            | 2                           | 1                           | 2                             | Moderate (67.8%)            |
| Campos and Holden [21]        | 2                  | 1                        | 1                             | 2                               | NA                   | 0               | 0                                               | 2                        | 2                             | 2                            | 2                           | 1                           | 2                             | Moderate (67.8%)            |
| O'Keeffe et al. [56]          | 2                  | 2                        | 1                             | 2                               | NA                   | 0               | 0                                               | 1                        | 2                             | 2                            | 2                           | 1                           | 2                             | Moderate (67.8%)            |
| Campos and Holden [22]        | 2                  | 2                        | 1                             | 2                               | NA                   | 0               | 0                                               | 1                        | 2                             | 2                            | 2                           | 1                           | 2                             | Moderate (67.8%)            |
| Park and Kim [60, 61]         | 2                  | 2                        | 1                             | 2                               | NA                   | 0               | 0                                               | 1                        | 2                             | 2                            | 2                           | 2                           | 2                             | Moderate (71%)              |
| Campos, Besser and Blatt [23] | 2                  | 1                        | 1                             | 2                               | NA                   | 0               | 0                                               | 1                        | 2                             | 2                            | 2                           | 2                           | 2                             | Moderate (67.8%)            |
| Piper et al. [65]             | 2                  | 2                        | 2                             | 2                               | NA                   | 0               | 0                                               | 2                        | 2                             | 2                            | 2                           | 2                           | 1                             | Moderate (67.8%)            |
| Bonanno et al. [16]           | 2                  | 2                        | 1                             | 2                               | NA                   | 0               | 0                                               | 1                        | 2                             | 2                            | 1                           | 2                           | 2                             | Moderate (67.8%)            |
| Denckla et al. [28]           | 2                  | 2                        | 1                             | 1                               | NA                   | 0               | 0                                               | 1                        | 2                             | 1                            | 2                           | 2                           | 2                             | Moderate (64.2%)            |
| Mancini et al. [32]           | 2                  | 2                        | 1                             | 2                               | NA                   | 0               | 0                                               | 1                        | 2                             | 2                            | 1                           | 2                           | 2                             | Moderate (67.8%)            |

NA not applicable, 2 indicates yes, 1 indicates partial, 0 indicates no

Quality scores ≥ 75% strong, 56 ≥ 74% moderate, ≤ 55% weak
Abbreviations

An: Anhedonia; Ang: Anger; BDHI-II: Beck Depression Inventory-Second Edition; BSI: Brief symptom inventory; CDI: Clinical diagnostic interview; CES-D: Center for Epidemiologic Studies Depression scale; CG: Cognitive symptoms; CRSD: Carroll rating scale for depression; DABS: Dependency and Achievement Belief Scales; DEQ: Depressive Experiences Questionnaire; DES-I: Differential Emotions Scale; DSI-SS: Depressive Symptoms Index Subscale; DSM-IV-TR: Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revised; DSM-5: Diagnostic and Statistical Manual of Mental Disorders, fifth edition; HAMD: Hamilton Depression Rating Scale; ICF: Inventory of clinical features; IED: Inventory to Diagnose Depression; IDS: Interpersonal dependency scale; IES: Impact of events scale; Insomnia; INQ (TB–PB): Interpersonal Needs Questionnaire; K-INQ14: Korean version of Interpersonal Needs Questionnaire; Lo: Loneliness; MCM: Millon clinical multiaxial inventory; MDD: Major depressive disorder; PGI: Pathological grief items; PRISMA: Preferred reporting items for systematic reviews and meta-analyses; PSI: Personal Style Inventory; PSQI: Pittsburgh Sleep Quality Index; PTSD: Post-traumatic stress disorder; RPT: Relationship Profile Test; SADS: Schedule for affective disorders and Schizophrenia; SAS-SR: Social Adjustment Scale-Self-Report; SAS: Sociotropy/Autonomy Scale; SBQ-R: The Suicide Behaviours Questionnaire-Revised; SCID: Structured Clinical Interview for the DSM; SCL-90: Symptom Checklist-90; Sh: Shame; SI: Suicidal ideation; SIS: Suicide Intent Scale; SS: Somatic symptoms; STAXI: State–Trait Anger Expression Inventory; SRULS: UCLA Loneliness Scale-Revised; TRIG: Texas Revised Inventory of Grief; ZUNG-SDS: Zung Self-Rating Depression Scale.

Acknowledgements

None.

Disclosures

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Authors’ contributions

AC: conceptualization, supervision. MDC: writing—reviewing and editing. AM: conceptualization, methodology, writing—original draft preparation, data curation. SM: writing—reviewing and editing. SS: writing—reviewing and editing. FV: writing—original draft preparation, methodology, data curation. All authors have read and approved the final manuscript.

Funding

No financial support was provided.

Availability of data and materials

The authors can confirm that all relevant data are included in the article and/or its Additional files.

Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

Received: 3 August 2021   Accepted: 25 November 2021

Published online: 16 December 2021

References

1. Abi-Habib R, Luyten P. The role of dependency and self-criticism in the relationship between anger and depression. Personality Individ Differ. 2013;55(8):921–5.
2. American Psychiatric Association. Diagnostic and statistical manual of mental disorders (DSM-5). American Psychiatric Pub. 2013.
3. Arrindell WA, Ettema RJH, Klachtenlijst (SCI-90) [Dutch version of the Symptom Checklist-90]. 1986.
4. Bar M, Schrieber G, Gueron-Sela N, Shahar G, Tiktzoky L. Role of self-criticism, anxiety, and depressive symptoms in young adults’ insomnia. Int J Cogn Ther. 2020;13(1):15–29.
5. Bastien CH, Vallières A, Morin CM. Validation of the insomnia severity index as an outcome measure for insomnia research. Sleep Med. 2001;2(4):297–307.
6. Beck AT, Ward CH, Mendelson M, Mock J, Erbaugh J. An inventory for measuring depression. Arch Gen Psychiatry. 1961;4:568–71.
7. Beck AT, Kovacs M, Weissman A. Assessment of suicidal intention: the Scale for Suicide Ideation. J Consult Clin Psychol. 1979;47(2):343.
8. Beck AT. Cognitive therapy of depression: new perspectives. Treatment of depression: old controversies and new approaches. 1983.
9. Beck AT, Steer RA, Brown GK. Beck depression inventory (BDI-II) (Vol. 10, p. s15327752pap6703_13). Pearson. 1996.
10. Benjamin LS. Short form Intrex users’ manual. Salt Lake City: Intrex Interpersonal Institute, University of Utah. 1988.
11. Besser A, Flett GL, Davis RA. Self-criticism, dependency, silencing the self, and loneliness: a test of a mediational model. Pers Individ Differ. 2003;35(8):1735–52.
12. Blatt SJ Levels of object representation in anacritic and intrusive depression. Psychoanal Study Child. 1974;29:107–52.
13. Blatt SJ, D’Afflitti JP, Quinlan DM. Experiences of depression in normal young adults. J Abnorm Psychol. 1976;85(4):383.
14. Blatt SJ, D’Afflitti JP, Quinlan DP. Depressive experiences questionnaire. Yale University, school of medicine, Department of psychiatry. 1976.
15. Boyce P, Parker G. Development of a scale to measure interpersonal sensitivity. Aust NZ J Psychiatry. 1989;23(3):341–51.
16. Bonanno G, Lehman DR, Tweed RG, Haring M, Wortman CB, Sonnega J, Carr D, Nesse RM. Resilience to loss and chronic grief: a prospective study from preloss to 18-months postloss. J Pers Soc Psychol. 2002;83(3):1150–64.
17. Bornstein RF, Languirand MA, Geiselman KI, Creighton JA, West MA, Gallagher HA, Eisenhart EA. Construct validity of the Relationship Profile Test: a self-report measure of dependency-determinacy. J Pers Assess. 2003;80(1):64–74.
18. Buysse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ. The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. Psychiatry Res. 1989;28(2):193–213.
19. Burke A, Haslam N. Relations between personality and depressive symptoms: a multimeasure study of depression, autonomy, and related constructs. J Clin Psychol. 2001;57(7):953–61.
20. Campbell DG, Felker BL, Liu CF, Yano EM, Kirchner JE, Chan D, et al. Prevalence of depression–PTSD comorbidity: implications for clinical practice guidelines and primary care-based interventions. J Gen Intern Med. 2007;22(6):711–8.
21. Campos RC, Holdren RR. Suicide risk in a Portuguese non-clinical sample of adults. Eur J Psychiatry. 2014;28(4):230–41.
22. Campos RC, Holdren RR. Testing a theory-based model of suicidality in a community sample. OMEGA J Death Dying. 2016;74(2):119–37.
23. Campos RC, Besser A, Blatt SJ. Distress mediates the association between personality predispositions and suicidality: a preliminary study in a Portuguese community sample. Arch Suicide Res. 2012;16(3):44–58.
24. Carroll RJ, Feinberg M, Smouse PE, Rawson SG, Greden JF. The Carroll rating scale for depression. I. Development, reliability and validation. Br J Psychiatry. 1981;138:194–200.
25. Clark DA, Steer RA, Haslam N, Beck AT, Brown GK. Personality vulnerability, psychiatric diagnoses, and symptoms: cluster analyses of the sociotropy–autonomy subscales. Cogn Ther Res. 1997;21(3):267–83.
26. Connolly J, Thompson C. Suicidal behavior in elders. Psychiatr Clin North Am. 2003;31(2):333–56.
27. Connolly J, Duberstein PR, Cox C, Herrmann JH, Forbes NT, Caine ED. Relationship of age and axis I diagnoses in victims of completed suicide: a psychological autopsy study. Am J Psychiatry. 1996. https://doi.org/10.1176/1aps.153.8.1001.
28. Dencka CA, Mancini AD, Bornstein RF, Bonanno GA. Adaptive and maladaptive dependency in bereavement: distinguishing prolonged and resolved grief trajectories. Pers Individ Differ. 2011;51(8):1012–7.
29. Deroogatis LR. Brief symptom inventory. Johns Hopkins University. 1978.
30. Desmert M, Vanheule S, Verhaeghe P. Dependency, self-criticism, and the symptom specificity hypothesis in a depressed clinical sample. Soc Behav Personal Int J. 2006;34(8):1017–26.
31. Dickman SJ. Functional and dysfunctional impulsivity: personality and cognitive correlates. J Pers Soc Psychol. 1990;58(1):95.
32. Dorothy MJ, Hanna D. Shame, intimacy and self-definition: an assessment of the emotional foundation and intimate relationship consequences of an introjective personality orientation. J Nerv Ment Dis. 2012;200(8):699–704.
33. Endicott J, Spitzer RL. A diagnostic interview: the schedule for affective disorders and schizophrenia. Arch Gen Psychiatry. 1978;35(7):837–43.
34. Evart CK, Jorgensen RS, Kelodner KB. Sociotropic cognition moderates blood pressure response to interpersonal stress in high-risk adolescent girls. Int J Psychophysiol. 1998;28(2):131–42.
35. Faschingbauer TR, Zisook S, DeVaul R. The Texas revised inventory of grief. Biopsychosocial aspects of bereavement. 1987. pp. 111–24.
36. Faza N, Page S. Dependency and self-criticism as predictors of suicidal behavior. Suicide Life Threat Behav. 2003;33(2):172–85.
37. Faza N, Page S. Personality style and impulsivity as determinants of suicidal subgroups. Arch Suicide Res. 2009;13(1):31–45.
38. First MB, Spitzer RL, Gibbon M, Williams JB. Structured clinical interview for DSM-IV-TR axis I disorders, research version, patient edition. New York, NY. APA; 2002. pp. 94–117.
39. Goldberg D. The heterogeneity of “major depression.” World Psychiatry. 2011;10(3):226.
40. Hamilton M. A rating scale for depression. J Neurol Neurosurg Psychiatry. 1960;23:56–62.
41. Hirschfeld RM, Klerman GL, Gouch HG, Barrett J, Korchin SJ, Chadoff P. A measure of interpersonal dependency. J Pers Assess. 1977;41(6):610–8.
42. Holden RR, Mehta K, Cunningham EJ, McLeod LD. Development and preliminary validation of a scale of psychache. Can J Behav Sci. 2001;33:224–32.
43. Izard CE, Libero DZ, Putnam P, Haynes OM. Stability of emotion experiences and their relations to traits of personality. J Pers Soc Psychol. 1988;97(4):399.
44. Joiner TE. Why people die by suicide. Cambridge, MA, US: Harvard University Press; 2005.
45. Kalamatianos A, Canellopoulos L. A diathesis-stress model conceptualization of depression-linked suicide attempts. Personal Int J. 2006;34(8):124–54.
46. Keane TM, Kaloupek DG. Comorbid psychiatric disorders in PTSD: Implications for research. Ann NY Acad Sci. 1997;821(1):24–34.
47. Klein DN, Harding K, Taylor EB, Dickstein S. Dependency and self-criticism in depression: evaluation in a clinical population. J Abnorm Psychol. 1988;97(4):399.
48. Kmet LM, Lee RC, Cook LS. Standard quality assessment criteria for evaluative primary research papers from a variety of fields. Edmonton: Alberta Heritage Foundation for Medical Research; 2004. 2014.
49. Likert R. A technique for the measurement of attitudes. New York: Archives of Psychology; 1932.
50. Luyten P, Blatt SJ. Psychodynamic treatment of depression. Psychiatr Clin North Am. 2012;35(1):111–29.
51. Luyten P, Sabbé B, Blatt SJ, Meganck S, Jansen B, De Grave C, et al. Dependency and self-criticism: relationship with major depressive disorder, severity of depression, and clinical presentation. Depress Anxiety. 2007;24(8):586–96.
52. Mancini AD, Sinan B, Bonanno GA. Predictors of prolonged grief, resilience, and recovery among bereaved spouses. J Clin Psychol. 2015;71(12):1245–58.
53. Mills TL. Comorbid depressive symptomatology: isolating the effects of chronic medical conditions on self-reported depressive symptoms among community-dwelling older adults. Soc Sci Med. 2001;53(5):569–79.
54. Moher D, Liberati A, Tetzlaff, J, Altman DG. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. Int J Surg. 2010;8(5):336–41.
55. Mongrain M. Parental representations and support-seeking behaviours related to dependency and self-criticism. J Pers. 1998;66:151–73.
56. O’Keefe VM, Grant DM, Tucker RP, Lechner WV, Mills AC, Judah MR, Wingate LR. Autonomy as a prospective predictor of perceived burdensomeness and thwarted belongingness through symptoms of depression. OMEGA: J Death Dying. 2016;73(1):70–86.
57. O’Riley AA, Fiske A. Emphasis on autonomy and propensity for suicidal behavior in younger and older adults. Suicide Life Threat Behav. 2012;42(4):394–404.
58. Osman A, Bagge CL, Gutierrez PM, Konick LC, Kopper BA, Barrios FX. The Suicidal Behaviors Questionnaire-Revised (SBQ-R): validation with clinical and nonclinical samples. Assessment. 2001;8(4):443–54.
59. Otani K, Suzuki A, Kamata M, Matsumoto Y, Shibuya N, Sadahiro R. Interpersonal sensitivity is correlated with sociopathy but not with autonomy in healthy subjects. J Nerv Ment Dis. 2012;200(2):153–5.
60. Park Y, Kim HS. The interaction between personality and interpersonal needs in predicting suicide ideation. Psychiatry Res. 2019;272;290–5.
61. Park Y, Kim HS. Validation of the Korean version interpersonal needs questionnaire. Suicide Life Threat Behav. 2019;49(3):739–58.
62. Parkes CM, Weiss RS. Recovery from bereavement. New York: Basic Books Inc; 1983.
63. Persoons JB, Burns DD, Perloff JM, Miranda J. Relationships between symptoms of depression and anxiety and dysfunctional beliefs about achievement and attachment. J Abnorm Psychol. 1993;102:518–24.
64. Peselow ED, Robins CJ, Sanfilippo MR, Block P, Fieve RR. Sociopathy and autonomy: relationship to antidepressant drug treatment response and endogenous–nonendogenous dichotomy. J Abnorm Psychol. 1979;89:393–417.
65. Piper WE, Ogrodniczuk JS, Joyce AS, Mccallum M, Weideman R, Azim HF. Ambivalence and other relationship predictors of grief in psychiatric outpatients. J Nerv Ment Dis. 2001;189(1):781–7.
66. Pompili M. Critical appraisal of major depression with suicidal ideation. Ann Gen Psychiatry. 2019;18(1):1–5.
67. Prigerson HG, Frank E, Kaid SV, Reynolds CF, Anderson B, Zubenko GS, et al. Complicated grief and bereavement-related depression as distinct disorders: preliminary empirical validation in elderly bereaved spouses. Am J Psychiatry. 1995;152(1):22–30.
68. Radloff LS. The CES-D scale: a self-report depression scale for research in the general population. Appl Psychol Meas. 1977;13(3):385–401.
69. Robbins CJ, Luten AG. Sociotropy and autonomy: differential patterns of clinical presentation in unipolar depression. J Abnorm Psychol. 1991;100(1):74.
70. Robbins CJ, Ladd J, Welkowitz J, Blaney PH, Diaz R, Kucher G. The Personal Style Inventory: preliminary validation studies of new measures of sociotropy and autonomy. J Psychopathol Behav Assess. 1994;16(4):277–300.
71. Robbins CJ, Bagby RM, Rector NA, Lynch TR, Kennedy SH. Sociotropy, autonomy, and patterns of symptoms in patients with major depression: a comparison of dimensional and categorical approaches. Cogn Ther Res. 1997;21(3):285–300.
72. Russell D, Peplau LA, Cutrona CE. The Revised UCLA Loneliness Scale: concurrent and discriminant validity evidence. J Pers Soc Psychol. 1980;39:472–80.
73. Santor DA, Zuroff DC. Interpersonal responses to threats to status and interpersonal relatedness: effects of dependency and self-criticism. Br J Clin Psychol. 1997;36:521–41.
74. Scachter EP, Zlotogorski Z. Self-critical and dependent aspects of loneli-ness. Isr J Psychiatry Relat Sci. 1995;32(3):205–11.
75. Shahar G. Personality, shame and the breakdown of social bonds: the voice of quantitative depression research. Psychiatry. 2001;64:228–39.
76. Silva JR, Vivanco-Carlevari A, Martinez C, Krause M. Introjective individuals tend toward anhedonia: self-report and experimental evidence. Front Psych. 2018;8:298.
77. Singh B, Raphaël B. Postdisaster morbidity of the bereaved: A possible role for preventive psychiatry? J Nerv Ment Dis. 1981;169(4):203–12.
78. Spielberger CD. State-Trait anger expression inventory. Professional manual. Odessa: Psychological Assessment Resources Inc; 1996.
79. Straccamore F, Ruggi S, Lingardi V, Zanardi R, Vecchi S, Ossi P. Personality factors and depressive configurations. An exploratory study in an Italian clinical sample. Front Psychol. 2017;8:251.
80. Vanheule S, Desmet M, Meganck R. Dependent and self-critical depression: evidence for subtypes? J Am Psychoanal Assoc. 2008;56(4):1352–7.
82. Van Orden KA, Cukrowicz KC, Witte TK, Joiner TE. Thwarted belongingness and perceived burdensomeness: construct validity and psychometric properties of the Interpersonal Needs Questionnaire. Psychol Assess. 2012;24(1):197–215.
83. Weiss DS, Marmar CR. The impact of event scale-revised. In: Wilson JP, Keane TM, editors. Assessing psychological trauma and PTSD. New York: Guilford; 1997.
84. Weisman AD, Worden JW. Risk-rescue rating in suicide assessment. Arch Gen Psychiatry. 1972;26(6):553–60.
85. Weissman MM. Social adjustment scale–self-report. New York: Multi-Health Systems; 1999.
86. Westen D. Clinical diagnostic interview. Emory University. Unpublished manual. 2004.
87. Zimmerman M, Coryell W. The Inventory to Diagnose Depression (IDD): self-report scale to diagnose major depressive disorder. J Consult Clin Psychol. 1987;55:55–9.
88. Zimmerman M, Ellison W, Young D, Chelminski I, Dalrymple K. How many different ways do patients meet the diagnostic criteria for major depressive disorder? Compr Psychiatry. 2015;56:29–34.
89. Zung WW. A self-rating depression scale. Arch Gen Psychiatry. 1965;12(1):63–70.
90. Zuroff DC, Duncan N. Self-criticism and conflict resolution in romantic couples. Can J Behav Sci. 1999;31:137–49.

Publisher’s Note
Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.