

Volume 12, n 1, 2024

Clinical Psychology

Transtheoretical, transdiagnostic, and empirical-based understanding of defense mechanisms

Mariagrazia Di Giuseppe ¹

Abstract

Thirty years after the inclusion of an axis defense mechanisms in the DSM-IV (American Psychiatric Association, 1994), recently included in the M axis of the PDM-2 (Lingiardi & McWilliams, 2017), the original description of the psychoanalytic construct appears partial and incomplete (Di Giuseppe et al., 2021; Metzger, 2014). Like many aspects of mental functioning, the understanding of defense mechanisms has influenced and has been influenced by empirical research (Cramer, 2006; 2015; Fiorentino et al., 2024; Liotti et al., 2023; Maffei et al., 1995; Perry, 1990; 2014; Vaillant, 1971; 1992), significantly changing the way we look at the construct in the broader perspective of psychological functioning (Cramer, 2000; Di Giuseppe & Conversano, 2022; Di Giuseppe & Lingiardi, 2023; Vaillant, 2000). In this regard, it is useful to clarify how defense mechanisms are nowadays defined, considered, analyzed, and assessed, and by which professionals and in which fields of study defenses can be applied.

In the present article, new facets of the defense mechanism construct will be described, such as its transtheoretical and transdiagnostic application, which mark relevant advance in the empirical research of defense mechanisms. The gold-standard theory of defenses will also be described, with reference to its new empirical techniques which finally allow its application in various areas of clinical research.

¹ Department of History, Humanities and Society, University of Rome Tor Vergata,
Rome, Italy

E-mail corresponding author: mariagrazia.di.giuseppe@uniroma2.it



Keywords:

Defense mechanisms; DMRS; Emotion regulation; Assessment; Clinical psychology.

Received: 24 January 2024

Accepted: 26 April 2024

Published: 30 April 2024

Citation: Di Giuseppe, M. (2024). Transtheoretical, transdiagnostic, and empirical-based understanding of defense mechanisms. *Mediterranean Journal of Clinical Psychology* 12(1). <https://doi.org/10.13129/2282-1619/mjcp-4036>

1. A transtheoretical construct

The concept of defense mechanisms was conceived by Sigmund Freud over a century ago. Mostly focusing on repression, Freud defined defenses as unconscious operations that allow the individual to excluded from awareness unacceptable or excessively distressing internal representations. (Freud, 1894, 1915). Since its first formulation, the construct of defense mechanisms has gone through numerous revisions (Békés et al., 2021; Carveth, 2021; Cramer,

1987; Erkuş, 2020; Freud, 1936; Haan, 1965; Kernberg, 1967; Perry & Cooper, 1989; Vaillant, 1977; 2000), considering the advance of attachment theory and the idea of Internal Working Models (Bowlby, 1969; 1973; Prunas et al., 2019), but also the further cognitivist reconceptualization of coping mechanisms (Folkman, Lazarus, 1985; Skinner & Zimmerman-Gembeck, 2007). In recent years, defense mechanisms have been also integrated into the broader concept of emotional regulation, being conceived as implicit and automatic strategies that work in synergy with explicit and conscious strategies to regulate individual's emotions (Braunstein, et al., 2017; Gross, 2015; Messina et al., 2023; Rice & Hoffman, 2014; Prout et al., 2019; Sala et al., 2015). All these revisions of the original concept have contributed to reducing the initial theoretical boundaries (i.e. psychoanalysis versus cognitive-behavioral psychology) and promoting of a common language across different psychological approaches to understand defense mechanisms as an essential aspect of the individual's mental functioning that foster adaptation (Lingiardi & Bornstein, 2017; Perry & Bond, 2017).

2. A transdiagnostic construct

In recent years defense mechanisms have broadened their scope of application in clinical psychology (Di Giuseppe et al., 2020a; 2020b Gangemi et al., 2021; Mostowik et al., 2022; Nava et al., 2022; Settineri et al., 2019). Although the principal area of investigation remains research in psychotherapy, where it has been largely documented that changes in defensive functioning are associated with therapeutic outcomes (Babl et al., 2019; Conversano et al., 2023; Kramer et al., 2010; Lingiardi et al., 2010; Olson et al., 2011; Perry & Bond, 2012), defense mechanisms are nowadays considered a crucial aspect of clinical work at various levels (Conversano et al., 2020; Martino et al., 2023; Ricciardi et al. 2023; Vijayapriya, & Tamarana, 2023). Thinking on chronic diseases, it is the pathological condition itself that generates anxiety, frustration and inevitable changes in the quality of life (Catalano et al., 2020; Martino et al., 2020; 2021). The individual response to the consequences of the illness it is highly related to individual's personality and defensive functioning (Beresford et al., 2006; Galli et al., 2019; Hyphantis et al., 2005; Sardella et al., 2021). While defenses protect the individual from experiencing feelings and ideas associated with the threat of the disease, they also allow the patient to find new adaptive ways of living with the diseases (Kreitler, 2004).

The good practice of including psychological components in the comprehensive assessment of patients affected by chronic diseases is finally promoting a multidisciplinary approach to healthcare, which is mainly moving from care-as-usual to personalized medicine (Allegra et al., 2023; de Queiroz & Andersen, 2020; Fortunato et al., 2022; Klocek & Řiháček, 2023; La Tona et al. 2023; Masci et al., 2022; Roefs et al., 2022; Spatari et al., 2015). Nonetheless, the evaluation

of emotional regulation and defense mechanisms has been also applied to other aspects of mental functioning, such as normal and pathological development (Cramer & Jones, 2007; Malone et al., 2013; Sardella et al., 2022), individual responses to stressful life events (Békés et al., 2023; Jun et al., 2015; Prout et al., 2019), personality psychopathology (Boldrini et al., 2020; Perry et al., 2013; Siefert & Porcerelli, 2015), gender differences (Cramer, 2002; Drapeau et al., 2011; Giovanardi et al., 2021), attitude toward parenting (Carone et al., 2023; Gugliandolo et al., 2020; Perry, 2016), attachment and mentalization (Békés et al., 2021; Parolin et al., 2023; Tasca et al., 2023). Thinking on the extensive research on psychological responses during the COVID-19 pandemic, an unexpected stressful event that affected us all without distinction, we have seen the proliferation of studies exploring defense mechanisms and their relationships with psychopathology, risk behaviors, suicide, but also their impact on adaptive responses and resiliency (Di Giuseppe et al., 2022; Giovanardi et al., 2022; Perry et al., 2022; Tanzilli et al., 2018; 2022; 2023).

3. An empirical-based construct

Unlike the predominantly unconscious nature of this construct, defense mechanisms have clear definitions and are easily observable through appropriate measurement tools. As recently highlighted by Silvermann and Aafjes-van Doorn (2023), research on defense mechanisms has progressed profoundly to reach a widely consensus theoretical and empirical model (Vaillant et al., 1986) developed by J. Christopher Perry and well-known as the Defense Mechanism Rating Scale (DMRS; Perry, 1990). In contrast, less impactful progress has been achieved in coping research, which lacks a shared theoretical and empirical model that favors original and effective research, consistent with advances in defense mechanism research (Di Giuseppe & Lingardi, 2023).

Thanks to the methodological reworking of the gold standard DMRS model, Di Giuseppe and colleagues have developed new empirical tools to evaluate the entire hierarchy of defenses in order to broaden the areas of application, the study populations, the professionals involved, while maintaining a solid and valid empirical basis theoretically based approach. With the publication of the DMRS-Q (Di Giuseppe et al., 2014), the DMRS has acquired the form of an easy-to-use Q-sort of clinical reports applicable in clinical practice without the need for transcription of clinical interviews or psychotherapy sessions. The significant reduction in the required training and the availability of free online coding software (<https://webapp.dmr-q.com>) represented the first important sign of openness and facilitation of empirical knowledge of defense mechanisms outside of experts in the field. Guidelines for using the tool are available in the DMRS-Q manual (Di Giuseppe & Perry, 2021), of which a training is available upon

request from the authors. This has been followed by the development of the self-report version of the 30-item DMRS (DMRS-SR-30; Di Giuseppe et al., 2020c), conceived during the first weeks of the diffusion of the COVID-19 pandemic, and already validated in several languages and with excellent psychometric properties (Prout et al., 2022; Volkert et al., 2022). As all DMRS-based measures, this questionnaire provides scores for Overall Defensive Functioning, defense levels, and individual defense mechanisms, and includes a three-factor structure that recalls the well-known three categories of defensive maturity (i.e. mature, neurotic, and immature defenses). Finally, with the development of the DMRS-Q version for children (DMRS-Q-C; Di Giuseppe et al., 2021), Di Giuseppe and colleagues proposed an important innovation in the theoretical and empirical understanding of the hierarchy of defenses from early childhood. Currently under validation, the DMRS-Q-C will not only expand theoretical knowledge on the evolutionary lines of defense mechanisms but will also offer the possibility of longitudinally studying the development of defenses over the course of life in a much more in-depth manner than previously.

4. Discussion

In light of these reflections, studying defense mechanisms today cannot ignore their hierarchical organization (Di Giuseppe & Perry, 2021; Perry, 2014), which inevitably embraces both conscious and unconscious components (i.e., explicit versus implicit emotion regulation), both intrapsychic and interpersonal correlates (i.e. self- perception versus defensive relational patterns), both adaptive and maladaptive way of functioning (mature versus immature defenses). Defensive functioning must be understood in the complexity of psychological and environmental context in which they operate, considering the role they play in regulating emotions, in the perception of well-being, in the development of personality, in the quality of relationships, in mentalization etc. (Fiorini Bincoletto et al., 2023; Jurist et al., 203; Li et al., 2023). An in-depth understanding of the patient's defense mechanisms can provide relevant information to the clinician, which may help in tailoring therapeutic interventions among different therapeutic approaches. Therefore, it is necessary to leave an old-fashioned perspective of defenses as a "niche" field of study to fully understand the overall individual mental functioning in which defense mechanisms are inevitably involved (Di Giuseppe & Lingardi, 2023).

Conflict of Interest Statement

The author declare that the research was conducted in the absence of any potential conflict of interest.

References

1. Allegra, A., Cicero, N., Mirabile, G., Giorgianni, C. M., & Gangemi, S. (2023). Novel Biomarkers for Diagnosis and Monitoring of Immune Thrombocytopenia. *International journal of molecular sciences*, 24(5), 4438. <https://doi.org/10.3390/ijms24054438>
2. American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). American Psychiatric Publishing, Inc..
3. Babl, A., Grosse Holtforth, M., Perry, J. C., Schneider, N., Dommann, E., Heer, S., Stähli, A., Aeschbacher, N., Eggel, M., Eggenberg, J., Sonntag, M., Berger, T., & Caspar, F. (2019). Comparison and change of defense mechanisms over the course of psychotherapy in patients with depression or anxiety disorder: Evidence from a randomized controlled trial. *Journal of affective disorders*, 252, 212–220. <https://doi.org/10.1016/j.jad.2019.04.021>
4. Barchetta, S., Martino, G., Craparo, G., Salehinejad, M. A., Nitsche, M. A., & Vicario, C. M. (2021). Alexithymia Is Linked with a Negative Bias for Past and Current Events in Healthy Humans. *International journal of environmental research and public health*, 18(13), 6696. <https://doi.org/10.3390/ijerph18136696>
5. Békés, V., Aafjes-van Doorn, K., Spina, D., Talia, A., Starrs, C. J., & Perry, J. C. (2021). The Relationship Between Defense Mechanisms and Attachment as Measured by Observer-Rated Methods in a Sample of Depressed Patients: A Pilot Study. *Frontiers in psychology*, 12, 648503. <https://doi.org/10.3389/fpsyg.2021.648503>
6. Békés, V., Prout, T. A., Di Giuseppe, M., Ammar, L. W., Kui, T., Arsena, G., & Conversano, C. (2021). Initial validation of the defense mechanisms rating scales Q-sort: a comparison of trained and untrained raters. *Mediterranean Journal of Clinical Psychology*, 9(2). <https://doi.org/10.13129/2282-1619/mjcp-3107>
7. Békés, V., Starrs, C. J., Perry, J. C., Prout, T. A., Conversano, C., & Di Giuseppe, M. (2023). Defense mechanisms are associated with mental health symptoms across six countries. *Research in psychotherapy (Milano)*, 26(3). <https://doi.org/10.4081/ripppo.2023.729>
8. Beresford, T. P., Alfors, J., Mangum, L., Clapp, L., & Martin, B. (2006). Cancer survival probability as a function of ego defense (adaptive) mechanisms versus depressive symptoms. *Psychosomatics*, 47(3), 247–253. <https://doi.org/10.1176/appi.psy.47.3.247>
9. Boldrini, T., Tanzilli, A., Di Cicilia, G., Gualco, I., Lingiardi, V., Salcuni, S., Tata, M. C., Vicari, S., & Pontillo, M. (2020). Personality Traits and Disorders in Adolescents at Clinical High Risk for Psychosis: Toward a Clinically Meaningful Diagnosis. *Frontiers in psychiatry*, 11, 562835. <https://doi.org/10.3389/fpsy.2020.562835>
10. Bowlby J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
11. Bowlby J. (1973). *Attachment and loss: Vol. 2. Separation: Anxiety and anger*. New York: Basic Books.

12. Braunstein, L. M., Gross, J. J., & Ochsner, K. N. (2017). Explicit and implicit emotion regulation: a multi-level framework. *Social cognitive and affective neuroscience*, 12(10), 1545–1557.
<https://doi.org/10.1093/scan/nsx096>
13. Carone, N., Benzi, I. M. A., Muzi, L., Parolin, L. A. L., & Fontana, A. (2023). Problematic internet use in emerging adulthood to escape from maternal helicopter parenting: defensive functioning as a mediating mechanism. *Research in psychotherapy (Milano)*, 26(3), 693.
<https://doi.org/10.4081/ripppo.2023.693>
14. Carveth, D. L. (2021). The psychoanalytic theory of anxiety and defense. *Metalepsis: Journal of the American Board and Academy of Psychoanalysis*, 1(1), 12-24.
<https://doi.org/10.52112/mtl.v1i1.3>
15. Catalano, A., Sardella, A., Bellone, F., Lasco, C. G., Martino, G., & Morabito, N. (2020). Executive functions predict fracture risk in postmenopausal women assessed for osteoporosis. *Aging clinical and experimental research*, 32(11), 2251–2257. <https://doi.org/10.1007/s40520-019-01426-w>
16. Conversano, C., Di Giuseppe, M., Miccoli, M., Ciacchini, R., Di Silvestre, A., Lo Sterzo, R., Gemignani, A., Orrù, G. (2020). Retrospective analyses of psychological distress and defense style among cancer patients. *Clinical Neuropsychiatry*, 17(4), 217-224.
<https://doi.org/10.36131/cnforiteditore20200403>
17. Conversano, C., Di Giuseppe, M., & Lingiardi V. (2023) Case report: Changes in defense mechanisms, personality functioning, and body mass index during psychotherapy with patients with anorexia nervosa. *Frontiers in Psychology*, 14, 1081467.
<https://doi.org/10.3389/fpsyg.2023.1081467>
18. Cramer, P. (1987). The development of defense mechanisms. *Journal of Personality*, 55, 597-614.
19. Cramer P. (2000). Defense mechanisms in psychology today. Further processes for adaptation. *The American psychologist*, 55(6), 637–646. <https://doi.org/10.1037//0003-066x.55.6.637>
20. Cramer, P. (2002). The study of defense mechanisms: Gender implications. In R. F. Bornstein & J. M. Masling (Eds.), *The psychodynamics of gender and gender role* (pp. 81–127). American Psychological Association. <https://doi.org/10.1037/10450-003>
21. Cramer, P. (2006). *Protecting the self: Defense mechanisms in action*. Guilford Press.
22. Cramer P. (2015). Understanding Defense Mechanisms. *Psychodynamic psychiatry*, 43(4), 523–552.
<https://doi.org/10.1521/pdps.2015.43.4.523>
23. Cramer, P., & Jones, C. J. (2007). Defense mechanisms predict differential lifespan change in self-control and self-acceptance. *Journal of Research in Personality*, 41(4), 841–855. <https://doi.org/10.1016/j.jrp.2006.10.005>
24. de Queiroz, F. S., & Andersen, M. B. (2020). Psychodynamic approaches. In *Applied Sport, Exercise, and Performance Psychology* (pp. 12-30). Routledge.

25. Di Giuseppe, M., & Conversano, C. (2022). Psychological components of chronic diseases: the link between defense mechanisms and alexithymia. *Mediterranean Journal of Clinical Psychology*, 10(3).
<https://doi.org/10.13129/2282-1619/mjcp-3602>
26. Di Giuseppe, M., & Lingiardi, V. (2023). From theory to practice: The need of restyling definitions and assessment methodologies of coping and defense mechanisms. *Clinical Psychology: Science and Practice*, 30(4), 393–395. <https://doi.org/10.1037/cps0000145>
27. Di Giuseppe, M., Miniati, M., Miccoli, M., Ciacchini, R., Orrù, G., Sterzo, R. L., Di Silvestre, A., & Conversano, C. (2020a). Defensive responses to stressful life events associated with cancer diagnosis. *Mediterranean Journal of Clinical Psychology*, 8(1), 1-22.
<https://doi.org/10.6092/2282-1619/mjcp-2384>
28. Di Giuseppe, M., Orrù, G., Gemignani, A., Ciacchini, R., Miniati, M., Conversano, C. (2022). Mindfulness and Defense mechanisms as explicit and implicit emotion regulation strategies against psychological distress during massive catastrophic events. *International Journal of Environmental Research and Public Health*, 19, 12690. <https://doi.org/10.3390/ijerph191912690>
29. Di Giuseppe, M., & Perry, J. C. (2021). The Hierarchy of Defense Mechanisms: Assessing Defensive Functioning With the Defense Mechanisms Rating Scales Q-Sort. *Frontiers in psychology*, 12, 718440. <https://doi.org/10.3389/fpsyg.2021.718440>
30. Di Giuseppe, M., Perry, J. C., Lucchesi, M., Michelini, M., Vitiello, S., Piantanida, A., Fabiani, M., Maffei, S., Conversano, C. (2020c). Preliminary reliability and validity of the DMRS-SR-30, a novel self-report based on the Defense Mechanisms Rating Scales. *Frontiers in Psychiatry*, 11:870.
<https://doi.org/10.3389/fpsyg.2020.00870>
31. Di Giuseppe, M., Perry, J.C., Petraglia, J., Janzen, J., & Lingiardi, V. (2014). Development of a Q-sort version of the defense mechanisms rating scales (DMRS-Q) for clinical use. *Journal of Clinical Psychology*, 70, 452-465. <https://doi.org/10.1002/jclp.22089>
32. Di Giuseppe, M., Perry, J. C., Prout, T. A., & Conversano, C. (2021). Editorial: Recent empirical research and methodologies in defense mechanisms: Defenses as fundamental contributors to adaptation. *Frontiers in Psychology*, 12:802602. <https://doi.org/10.3389/fpsyg.2021.802602>
33. Di Giuseppe, M., Prout, T. A., Ammar, L., Kui, T., & Conversano, C. (2021). Assessing children's defense mechanisms with the Defense Mechanisms Rating Scales Q-sort for Children. *Research in Psychotherapy: Psychopathology, Process and Outcome*, 24, 320-327.
<https://doi.org/10.4081/ripppo.2021.590>
34. Di Giuseppe, M., Prout, T. A., Fabiani, M., & Kui, T. (2020b). Defensive profile of parents of children with externalizing problems receiving Regulation-Focused Psychotherapy for Children (RFP-C): A pilot study. *Mediterranean Journal of Clinical Psychology*, 8(2).
<https://doi.org/10.6092/2282-1619/mjcp-2515>

35. Drapeau, M., Thompson, K., Petraglia, J., Thygesen, K. L., & Lecours, S. (2011). Defense mechanisms and gender: An examination of two models of defensive functioning derived from the Defense Style Questionnaire. *International Journal of Psychology & Psychological Therapy*, 11(1), 149–155.
36. Erkuş, Ö. K. (2020). Lacanian Perverse Structure and Disavowal Mechanism: A Clinical Examination. *Mediterranean Journal of Clinical Psychology*, 8(2).
<https://doi.org/10.6092/2282-1619/mjcp-2283>
37. Fiorentino, F., Lo Buglio, G., Morelli, M., Chirumbolo, A., Di Giuseppe, M., Lingiardi, V., Tanzilli, A. (2024). Defensive functioning in individuals with depressive disorders: A systematic review and meta-analysis. *Journal of Affective Disorders*. <https://doi.org/10.1016/j.jad.2024.04.091>
38. Fiorini Bincoletto, A., Zanini, L., Spitoni, G. F., & Lingiardi, V. (2023). Negative and positive ageism in an Italian sample: how ageist beliefs relate to epistemic trust, psychological distress, and well-being. *Research in psychotherapy (Milano)*, 26(2), 676. <https://doi.org/10.4081/ripppo.2023.676>
39. Fortunato, A., Tanzilli, A., Lingiardi, V., & Speranza, A. M. (2022). Psychodiagnostic Chart-Child (PDC-C): a valid and clinically sensitive diagnostic tool for patient-tailored intervention planning. *Research in psychotherapy (Milano)*, 25(1), 591. <https://doi.org/10.4081/ripppo.2022.591>
40. Freud, A. (1936). Ego and defense mechanisms. In *The Writings of Anna Freud* (Vol. 2, pp. 3-191). New York, NY International Universities Press.
41. Freud, S. (1894). Neuropsychosis of defense. In *The standard edition of the complete psychological works of Sigmund Freud*. (J. Strachey, Ed.). Macmillan.
42. Freud, S. (1915). The Repression. In *The standard edition of the complete psychological works of Sigmund Freud*. (J. Strachey, Ed.). Macmillan.
43. Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48(1), 150–170. <https://doi.org/10.1037/0022-3514.48.1.150>
44. Galli, F., Tanzilli, A., Simonelli, A., Tassorelli, C., Sances, G., Parolin, M., Cristofalo, P., Gualco, I., & Lingiardi, V. (2019). Personality and Personality Disorders in Medication-Overuse Headache: A Controlled Study by SWAP-200. *Pain research & management*, 2019, 1874078.
<https://doi.org/10.1155/2019/1874078>
45. Gangemi, S., Ricciardi, L., Caputo, A., Giorgianni, C., Furci, F., Spatari, G., Martino, G. (2021). Alexithymia in an unconventional sample of Forestry Officers: a clinical psychological study with surprising results. *Mediterranean Journal of Clinical Psychology*, 9(3).
<https://doi.org/10.13129/2282-1619/mjcp-3245>

46. Giovanardi, G., Fiorini Bincoletto, A., Baiocco, R., Ferrari, M., Gentile, D., Siri, M., Tanzilli, A., & Lingiardi, V. (2022). Lockdown dreams: Dream content and emotions during the COVID-19 pandemic in an Italian sample. *Psychoanalytic Psychology, 39*(2), 111–126.
<https://doi.org/10.1037/pap0000385>
47. Giovanardi, G., Mirabella, M., Di Giuseppe, M., Lombardo, F., Speranza, A. M., & Lingiardi, V. (2021). Defensive Functioning of Individuals Diagnosed With Gender Dysphoria at the Beginning of Their Hormonal Treatment. *Frontiers in Psychology, 12*, 665547.
<https://doi.org/10.3389/fpsyg.2021.665547>
48. Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry, 26*(1), 1–26. <https://doi.org/10.1080/1047840X.2014.940781>
49. Gugliandolo, M.C., Costa, S., Cuzzocrea, F., Larcan, R., & Martino, G. (2020). Adolescents and Body Uneasiness: the Contribution of Supportive Parenting and Trait Emotional Intelligence. *Journal of Child and Family Studies, 29*, 2453–2462. <https://doi.org/10.1007/s10826-020-01779-1>
50. Haan, N. (1965). Coping and defense mechanisms related to personality inventories. *Journal of Consulting Psychology, 29*, 373–378.
51. Hyphantis, T. N., Triantafyllidis, J. K., Pappa, S., Mantas, C., Kaltsouda, A., Cherakakis, P., Alamanos, Y., Manousos, O. N., & Mavreas, V. G. (2005). Defense mechanisms in inflammatory bowel disease. *Journal of Gastroenterology, 40*(1), 24–30. <https://doi.org/10.1007/s00535-004-1491-x>
52. Jun, J. Y., Lee, Y. J., Lee, S. H., Yoo, S. Y., Song, J., & Kim, S. J. (2015). Association between defense mechanisms and psychiatric symptoms in North Korean Refugees. *Comprehensive Psychiatry, 56*, 179–187. <https://doi.org/10.1016/j.comppsy.2014.10.001>
53. Jurist, E., Greenberg, D., Pizziferro, M., Alaluf, R., & Perez Sosa, M. (2023). Virtue, well-being, and mentalized affectivity. *Research in Psychotherapy (Milano), 26*(3), 710.
<https://doi.org/10.4081/ripppo.2023.710>
54. Kernberg, O. F. (1967). Borderline personality organization. *Journal of the American Psychoanalytical Association, 15*, 41–68.
55. Klocek, A., & Řiháček, T. (2023). The associations between interoceptive awareness, emotion regulation, acceptance, and well-being in patients receiving multicomponent treatment: a dynamic panel network model. *Research in Psychotherapy: Psychopathology, Process and Outcome, 26*(2).
<https://doi.org/10.4081/ripppo.2023.659>
56. Kramer, U., Despland, J. N., Michel, L., Drapeau, M., & de Roten, Y. (2010). Change in defense mechanisms and coping over the course of short-term dynamic psychotherapy for adjustment disorder. *Journal of Clinical Psychology, 66*(12), 1232–1241. <https://doi.org/10.1002/jclp.20719>
57. Kreitler, S. (2004). Defense mechanism and physical health. In U. Hentschel, G. Smith, J. G. Draguns, & W. Ehlers (Eds.), *Defense mechanisms: Theoretical, research and clinical perspectives* (pp. 477–519). Elsevier Science Ltd. [https://doi.org/10.1016/S0166-4115\(04\)80046-3](https://doi.org/10.1016/S0166-4115(04)80046-3)

58. La Tona, A., Tagini, S., Brugnera, A., Poletti, B., Aiello, E. N., Lo Coco, G., Del Piccolo, L., & Compare, A. (2023). Italian validation of the *Clinical Outcomes in Routine Evaluation-10* (CORE-10): a short measure for routine outcome monitoring in clinical practice. *Research in psychotherapy (Milano)*, 26(1), 671. <https://doi.org/10.4081/ripppo.2023.671>
59. Li, E., Campbell, C., Midgley, N., & Luyten, P. (2023). Epistemic trust: a comprehensive review of empirical insights and implications for developmental psychopathology. *Research in psychotherapy (Milano)*, 26(3), 704. <https://doi.org/10.4081/ripppo.2023.704>
60. Lingiardi, V., & McWilliams, N. (Eds.). (2017). *Psychodynamic diagnostic manual: PDM-2* (2nd ed.). The Guilford Press.
61. Lingiardi, V., & Bornstein, R. F. (2017). Profile of mental functioning—M axis. In V. Lingiardi & N. McWilliams (Eds.), *Psychodynamic diagnostic manual: PDM-2* (pp. 75–133). The Guilford Press.
62. Lingiardi, V., Gazzillo, F., Colli, A., De Bei, F., Tanzilli, A., Di Giuseppe, M., Nardelli, N., Caristo, C., Condino, V., Gentile, D., Dazzi, N. (2010). Diagnosis and assessment of personality, therapeutic alliance and clinical exchange in psychotherapy research. *Research in Psychotherapy: Psychopathology, Process and Outcome*, 2, 97-124. <https://doi.org/10.4081/ripppo.2010.36>
63. Liotti, M., Milesi, A., Spitoni, G. F., Tanzilli, A., Speranza, A. M., Parolin, L., Campbell, C., Fonagy, P., Lingiardi, V., & Giovanardi, G. (2023). Unpacking trust: The Italian validation of the Epistemic Trust, Mistrust, and Credulity Questionnaire (ETMCQ). *PloS one*, 18(1), e0280328. <https://doi.org/10.1371/journal.pone.0280328>
64. Maffei, C., Fossati, A., Lingiardi, V., Madeddu, F., et al. (1995). Personality maladjustment, defenses, and psychopathological symptoms in nonclinical subjects. *Journal of Personality Disorders*, 9(4), 330–345. <https://doi.org/10.1521/pedi.1995.9.4.330>
65. Malone, J. C., Cohen, S., Liu, S. R., Vaillant, G. E., & Waldinger, R. J. (2013). Adaptive midlife defense mechanisms and late-life health. *Personality and individual differences*, 55(2), 85–89. <https://doi.org/10.1016/j.paid.2013.01.025>
66. Martino, G., Viola, A., Vicario, C.M., Bellone, F., Silvestro, O., Squadrito, G., Schwarz, P., Lo Coco, G., Fries, W., Catalano, A. (2023). Psychological impairment in inflammatory bowel diseases: the key role of coping and defense mechanisms. *Research in Psychotherapy: Psychopathology, Process and Outcome*, 26(3), 731. <https://doi.org/10.4081/ripppo.2023.731>
67. Martino, G., Caputo, A., Vicario, C. M., Feldt-Rasmussen, U., Watt, T., Quattropani, M. C., Benvenga, S., & Vita, R. (2021). Alexithymia, Emotional Distress, and Perceived Quality of Life in Patients With Hashimoto's Thyroiditis. *Frontiers in psychology*, 12, 667237. <https://doi.org/10.3389/fpsyg.2021.667237>

68. Martino, G., Sardella, A., Bellone, F., Lasco, C., Langher, V., Cazzato, V., Penna, A., Vicario, C., Morabito, N., Catalano, A. (2029). Executive functions and bone health: a focus on cognitive impulsivity and bone mineral density. *Mediterranean Journal of Clinical Psychology*, 7(2).
<https://doi.org/10.6092/2282-1619/2019.7.2167>
69. Masci, F., Spatari, G., Bortolotti, S., Giorgianni, C. M., Antonangeli, L. M., Rosecrance, J., & Colosio, C. (2022). Assessing the Impact of Work Activities on the Physiological Load in a Sample of Loggers in Sicily (Italy). *International Journal of Environmental Research and Public Health*, 19(13), 7695.
<https://doi.org/10.3390/ijerph19137695>
70. Metzger J. A. (2014). Adaptive defense mechanisms: function and transcendence. *Journal of clinical psychology*, 70(5), 478–488. <https://doi.org/10.1002/jclp.22091>
71. Messina, I., Calvo, V., & Grecucci, A., (2023). Attachment orientations and emotion regulation: new insights from the study of interpersonal emotion regulation strategies. *Research in Psychotherapy: Psychopathology, Process and Outcome*, 26(3), 703.
<https://doi.org/10.4081/ripppo.2023.703>
72. Mostowik, J., Mielimąka, M., Rutkowski, K., & Ostrowski, T. (2022). Time in the Mental Health Context: Neurotic Symptomatology, Defense Mechanisms and the Perception of Time Perspective Among Patients Diagnosed With Neurotic and Personality Disorders - A Clinical Study. *Psychological reports*, 125(1), 232–255. <https://doi.org/10.1177/0033294120978164>
73. Nava, V., Albergamo, A., Bartolomeo, G., Rando, R., Litrenta, F., Lo Vecchio, G., Giorgianni, M.C., Cicero, N. (2022). Monitoring Cannabinoids and the Safety of the Trace Element Profile of Light *Cannabis sativa* L. from Different Varieties and Geographical Origin. *Toxics* 2022, 10, 758.
<https://doi.org/10.3390/toxics10120758>
74. Olson, T. R., Perry, J. C., Janzen, J. I., Petraglia, J., & Presniak, M. D. (2011). Addressing and interpreting defense mechanisms in psychotherapy: general considerations. *Psychiatry*, 74(2), 142–165. <https://doi.org/10.1521/psyc.2011.74.2.142>
75. Parolin, L., Milesi, A., Comelli, G. & Locati, F., (2023). The interplay of mentalization and epistemic trust: a protective mechanism against emotional dysregulation in adolescent internalizing symptoms. *Research in Psychotherapy: Psychopathology, Process and Outcome*, 26(3), 707.
<https://doi.org/10.4081/ripppo.2023.707>
76. Perry J. C. (1990). Defense Mechanism Rating Scales (DMRS), 5th Edn. Cambridge, MA: Author
77. Perry J. C. (2014). Anomalies and specific functions in the clinical identification of defense mechanisms. *Journal of clinical psychology*, 70(5), 406–418. <https://doi.org/10.1002/jclp.22085>
78. Perry J. C. (2016). Maternal Defense Mechanisms Influence Infant Development. *The American journal of psychiatry*, 173(2), 99–100. <https://doi.org/10.1176/appi.ajp.2015.15111501>
79. Perry, J. C., Bekes, V., & Starrs, C. J. (2022). A systematic survey of adults' health-protective behavior use during early COVID-19 pandemic in Canada, Germany, United Kingdom, and the

- United States, and vaccination hesitancy and status eight months later. *Preventive medicine reports*, 30, 102013. <https://doi.org/10.1016/j.pmedr.2022.102013>
80. Perry, J. C., & Bond, M. (2012). Change in defense mechanisms during long-term dynamic psychotherapy and five-year outcome. *The American journal of psychiatry*, 169(9), 916–925. <https://doi.org/10.1176/appi.ajp.2012.11091403>
81. Perry, J. C., & Bond, M. (2017). Addressing defenses in psychotherapy to improve adaptation. *Psychoanalytic Inquiry*, 37(3), 153–166. <https://doi.org/10.1080/07351690.2017.1285185>
82. Perry, J. C., Cooper, S. H. (1989), An empirical study of defense mechanisms. i. Clinical interview and life vignette ratings. *Archives of General Psychiatry*, 46, 5, 444-452. <https://doi.org/10.1001/archpsyc.1989.01810050058010>
83. Perry, J. C., Presniak, M. D., & Olson, T. R. (2013). Defense mechanisms in schizotypal, borderline, antisocial, and narcissistic personality disorders. *Psychiatry*, 76(1), 32–52. <https://doi.org/10.1521/psyc.2013.76.1.32>
84. Prout, T. A., Di Giuseppe, M., Zilcha-Mano, S., Perry, J. C., & Conversano, C. (2022). Psychometric Properties of the Defense Mechanisms Rating Scales-Self-Report-30 (DMRS-SR-30): Internal consistency, Validity and Factor Structure. *Journal of Personality Assessment*, 104, 833-843. <https://doi.org/10.1080/00223891.2021.2019053>
85. Prout, T. A., Malone, A., Rice, T., & Hoffman, L. (2019). Resilience, defense mechanisms, and implicit emotion regulation in psychodynamic child psychotherapy. *Journal of Contemporary Psychotherapy: On the Cutting Edge of Modern Developments in Psychotherapy*, 49(4), 235–244. <https://doi.org/10.1007/s10879-019-09423-w>
86. Prunas, A., Di Pierro, R., Huemer, J., & Tagini, A. (2019). Defense mechanisms, remembered parental caregiving, and adult attachment style. *Psychoanalytic Psychology*, 36(1), 64–72. <https://doi.org/10.1037/pap0000158>
87. Ricciardi, L., Spatari, G., Vicario, C.M., Liotta, M., Cazzato, V., Gangemi, S., Martino, G. (2023). Clinical Psychology and Clinical Immunology: is there a link between Alexithymia and severe Asthma?. *Mediterranean Journal of Clinical Psychology* 11(1). <https://doi.org/10.13129/2282-1619/mjcp-3704>
88. Rice, T. R., & Hoffman, L. (2014). Defense mechanisms and implicit emotion regulation: a comparison of a psychodynamic construct with one from contemporary neuroscience. *Journal of the American Psychoanalytic Association*, 62(4), 693–708. <https://doi.org/10.1177/0003065114546746>
89. Roefs, A., Fried, E. I., Kindt, M., Martijn, C., Elzinga, B., Evers, A. W. M., Wiers, R. W., Borsboom, D., & Jansen, A. (2022). A new science of mental disorders: Using personalised, transdiagnostic,

- dynamical systems to understand, model, diagnose and treat psychopathology. *Behaviour research and therapy*, 153, 104096. <https://doi.org/10.1016/j.brat.2022.104096>
90. Sala, M. N., Testa, S., Pons, F., & Molina, P. (2015). Emotion regulation and defense mechanisms. *Journal of Individual Differences*, 36(1), 19–29. <https://doi.org/10.1027/1614-0001/a000151>
91. Sardella, A., Lenzo, V., Basile, G., Martino, G., & Quattropani, M. C. (2023). Emotion regulation strategies and difficulties in older adults: A systematic review. *Clinical gerontologist*, 46(3), 280-301. <https://doi.org/10.1080/07317115.2022.2128706>
92. Sardella, A., Lenzo, V., Bonanno, G. A., Martino, G., Basile, G., & Quattropani, M. C. (2021). Dispositional Optimism and Context Sensitivity: Psychological Contributors to Frailty Status Among Elderly Outpatients. *Frontiers in psychology*, 11, 621013. <https://doi.org/10.3389/fpsyg.2020.621013>
93. Settineri, S., Merlo, E. M., Frisone, F., Alibrandi, A., Carrozzino, D., Diaconu, C. C., & Pappalardo, S. M. (2019). Suppression Mental Questionnaire App: a mobile web service-based application for automated real-time evaluation of adolescent and adult suppression. *Mediterranean Journal of Clinical Psychology*, 7(1). <https://doi.org/10.6092/2282-1619/2019.7.2056>
94. Siefert, C., & Porcerelli, J. H. (2015). Object relations theory and personality disorders: Internal representations and defense mechanisms. In S. K. Huprich (Ed.), *Personality disorders: Toward theoretical and empirical integration in diagnosis and assessment* (pp. 203–224). American Psychological Association. <https://doi.org/10.1037/14549-009>
95. Silverman, J., & Aafjes-van Doorn, K. (2023). Coping and defense mechanisms: A scoping review. *Clinical Psychology: Science and Practice*, 30(4), 381. <https://doi.org/10.1037/cps0000139>
96. Skinner, E. A., & Zimmer-Gembeck, M. J. (2007). The development of coping. *Annual review of psychology*, 58, 119–144. <https://doi.org/10.1146/annurev.psych.58.110405.085705>
97. Spatari, G., Saitta, S., Giorgianni, C., Cristani, M. T., Quattrocchi, P., Abbate, A., Carrieri, M., Ferraro, G., Saija, A., & Gangemi, S. (2015). Interleukin-10 involvement in exposure to low dose of benzene. *Toxicology and industrial health*, 31(4), 351–354. <https://doi.org/10.1177/0748233713475518>
98. Tanzilli, A., Boldrini, T., Carone, N., Gualco, I., Lingiardi, V., & Williams, R. (2023). Patient personality dimensions, relational patterns and therapeutic alliance in clinical practice: An empirical investigation. *Clinical psychology & psychotherapy*, 30(1), 97–111. <https://doi.org/10.1002/cpp.2779>
99. Tanzilli, A., Cibelli, A., Liotti, M., Fiorentino, F., Williams, R., & Lingiardi, V. (2022). Personality, Defenses, Mentalization, and Epistemic Trust Related to Pandemic Containment Strategies and the COVID-19 Vaccine: A Sequential Mediation Model. *International Journal Of Environmental Research And Public Health*, 19(21), 14290. <https://doi.org/10.3390/ijerph192114290>

100. Tanzilli, A., Colli, A., Gualco, I., & Lingiardi, V. (2018). Patient Personality and Relational Patterns in Psychotherapy: Factor Structure, Reliability, and Validity of the Psychotherapy Relationship Questionnaire. *Journal of personality assessment*, *100*(1), 96–106.
<https://doi.org/10.1080/00223891.2016.1272050>
101. Tasca, A. N., Carlucci, S., Wiley, J. C., Holden, M., El-Roby, A., & Tasca, G. A. (2023). Detecting defense mechanisms from Adult Attachment Interview (AAI) transcripts using machine learning. *Psychotherapy research : journal of the Society for Psychotherapy Research*, *33*(6), 757–767.
<https://doi.org/10.1080/10503307.2022.2156306>
102. Vaillant G. E. (1971). Theoretical hierarchy of adaptive ego mechanisms: a 30-year follow-up of 30 men selected for psychological health. *Archives of general psychiatry*, *24*(2), 107–118.
<https://doi.org/10.1001/archpsyc.1971.01750080011003>
103. Vaillant, G.E. (1977). *Adaptation to Life*. Little, Brown, Boston.
104. Vaillant, G. E. (1992). *Ego mechanisms of defense: A guide for clinicians and researchers*. American Psychiatric Association.
105. Vaillant, G. E. (2000). Adaptive mental mechanisms: Their role in a positive psychology. *American psychologist*, *55*(1), 89.
106. Vaillant, G. E., Bond, M., & Vaillant, C. O. (1986). An empirically validated hierarchy of defense mechanisms. *Archives of general psychiatry*, *43*(8), 786–794.
<https://doi.org/10.1001/archpsyc.1986.01800080072010>
107. Vijayapriya, C., & Tamarana, R. (2023). Effectiveness of dialectical behavior therapy as a transdiagnostic treatment for improving cognitive functions: a systematic review. *Research in Psychotherapy: Psychopathology, Process and Outcome*, *26*(2). <https://doi.org/10.4081/ripppo.2023.662>
108. Volkert, J., Zettl, M., & Taubner, S. (2022). *Transdiagnostic Assessment of Psychopathology and Resilience: Psychometric Evaluation of the German Version of the Defence Mechanism Rating Scale (DMRS-SR-30) and Relationship with Personality Functioning and Associated Constructs*. PsychArchives.
<https://doi.org/10.23668/psycharchives.5406>



©2024 by the Author(s); licensee Mediterranean Journal of Clinical Psychology, Messina, Italy. This article is an open access article, licensed under a Creative Commons Attribution 4.0 Unported License. Mediterranean Journal of Clinical Psychology, Vol. 12, No. 1 (2024). International License (<https://creativecommons.org/licenses/by/4.0/>).
DOI: 10.13129/2282-1619/mjcp-4036