Research Article

"Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2)": Development, regulation and validation of a psychometric instrument for the identification of the functioning of individual Ego defense mechanisms

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Abstract

Introduction: To date, theorizations on the workings of psychological ego defense mechanisms are affected by the psychodynamic influence and theoretical scaffolding of the last century. There is a need to update theories and models to make them more consistent and modern with recent innovations in psychotherapy.

Materials and methods: A model related to the functioning of defense mechanisms was generated and the Perrotta Human Defence Mechanisms Questionnaire (PDM-Q-v2) was created to be administered to a selected population to compare it with the Defense Mechanisms Rating Scales-Self-Report-30 (DMRSSR- 30) and finally validate it.

Results: Statistical analysis showed that the psychometric test has a well-defined and stable construct ($r = 0.999$; $p \leq 0.001$), with the variables well represented ($r = 0.818$; $p \leq 0.001$) and positively correlated with another construct already validated ($r = 0.766$; $p \leq 0.001$).

Conclusion: The Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2) is a valid, efficient, and effective psychometric tool to identify the functioning or dysfunction of psychological ego defense mechanisms.

Abbreviations

DMRS: Perry's Defense Mechanisms Rating Scale; DMI: Defense Mechanism Inventory; DSQ: Bond's Defense Style Questionnaire; CDS: Haan's Coping and Defending Scale; LSI: Plutchik's Life Style Index; COPE: Carver's Coping Orientation to Problems Experienced; DMP: Johnson–Gold's Defense Mechanism Profile; DMRSSR-30: Defense Mechanisms Rating Scales–Self–Report–30; PICI: Perrotta Integrative Clinical Interviews; PHEM: Perrotta Human Emotions Model; PDM-M, v. 2: Perrotta Human Defence Mechanisms Model v2; PDM-Q-v2: Perrotta Human Defence Mechanisms Questionnaire v2

Background

The "human defense mechanisms", in the psychological field, are psychic processes, followed by a behavioral reaction, implemented by the ego to deal with difficult situations, manage conflicts and preserve its functioning from the interference of disturbing, painful, and unacceptable thoughts, feelings and experiences. These are mechanisms that: a) are activated as a

result of a threat, presumed or real, automatically and therefore outside the sphere of awareness; b) consist of mental operations of a cognitive type, to ensure the best possible adaptation; c) contribute to the stability, integrity, and functionality of the personality structure; d) are clearly distinguished from each other, by function. The dysfunctionality or immaturity of one or more defense mechanisms must be evaluated based on the age adequacy compared to the actual maturity, based on the intensity of the measure compared to the consequences of the action and coping strategies, based on the balance between opportunity, efficiency, effectiveness and cost-effectiveness of the defense mechanism intervened compared to the need and the actual or potential threat, and based on the reversibility or otherwise of the action compared to the defensive function that was expected [1].

Based on this assumption and the definition of "human defense mechanisms", the Perrotta Human Defense Mechanisms Questionnaire (PDM-Q) was created [2], to identify the workings of individual psychological ego defense mechanisms, based on the model that reinterpreted all the major theories in the literature, then relying on the PICI model [3] regarding the ideation of functional and dysfunctional components. In particular, the defense mechanism model has these characteristics: <<1) *The relationship between the Super-Ego and the defense mechanism.* According to the PICI-2 model, the psychic instance Super-Ego becomes a function of the Ego, together with the Self, where the defense mechanism becomes a tool to filter the unconscious drives of the Id and allow a better adaptation of one's needs to the external environment. As such, the defense mechanism is therefore necessary and irreplaceable, provided that it is adaptive and functional; it loses this characteristic by becoming maladaptive and dysfunctional when the basic emotion that regulates it is poorly managed by the Self (another function of the ego, always according to the PICI-2 model). So, when the drive arrives from the id at the doors of the ego, the self regulates the basic emotions necessary to decide which and how many defense mechanisms should intervene to filter the unconscious content, before manifesting the emotional-behavioral reaction and therefore the externalized behaviors in the environment; if, however, the self does not ensure a correct perception of basic emotions, these interfere with the superego that in response will strengthen the defense mechanisms in a dysfunctional way, causing maladjustment. Therefore, in psychotherapy, working on the emotional alphabet means reinforcing the Self in a functional way that will not negatively influence the Super-Ego in its filtering work. 2) *The ambivalent role of the defense mechanism.* In the past, defense mechanisms were distinguished according to the level of maturation (mature/immature, or adaptive or maladaptive), to the time of their development (primary/ primitive or secondary/ superior, or if already possessed from birth or formed during life experiences) and according to their psychopathological implication (neurotic area, borderline area, and psychotic area). Although these subdivisions, in the opinion of the writer, find their normative and structural dignity, we see the need to rearrange them according to another logic, namely the emotional one (the emotional origin of each mechanism), and then subdivide each according

to the level of functioning (functional/dysfunctional). The level of development is instead superfluous data for clinical purposes, of mere academic interest, and without objective utilitarian feedback. Therefore, each defense mechanism can be both functional and dysfunctional depending on the factual circumstances and the psychic impairment of the patient. 3) *The role of emotions.* In PDM-Q-v2 and PHEM, the role of emotions becomes central, as they are regulated by the Self and modulate the response of the Super-Ego, inducing it to a functional or dysfunctional response based on factual circumstances (external) and unconscious reactions (internal). Mastery of one's Self guarantees the possession of a robust emotional alphabet and a significant awareness that can facilitate the filtering process of the Super-Ego and the related reactions and emotional-behavioral consequences. 4) *Psychopathological implications.* According to the PICI-2 model, the "psychopathologies" are the product of structural and functional alterations of the instances contained in the model itself, in response to the external environment (hypertrophic Ego - hypertrophic Id / hypotrophic Ego - hypertrophic Id); in this model attention is paid exclusively to the "functions of the Ego" (Super-Ego and Self, pathological if hypervigilant, unstable or shattered), as physically the Ego and the Id remain structurally unchanged. In the light of this new view, psychopathological disorders become "creative adaptations of the mind" that, by structure and functioning, are shaped based on the main traumatic event, according to the internal response (emotions and sentiments) to external stimuli (factual circumstances), reinforcing themselves positively or negatively according to them. Chronicling a perceptual dysfunction of one or more basic emotions generates a dysfunctional emotional-behavioral response capable of reinforcing the psychopathological tendency of the personality and thus the stiffening of the person's personality traits. So: if we examine the neurotic area, the major dysfunctional tendency will be related primarily to fear and anger, and then secondarily to anxiety; if we examine the borderline area, the major dysfunctional tendency will be related primarily to anger and anxiety, and then secondarily to pleasure; if we examine the psychotic area, the major dysfunctional tendency will be related primarily to anxiety, and then secondarily to pleasure, fear and anger. However, it is not possible to make a clear distinction because the psychopathological universe is formed by an infinite combination of variables that can also take into account more emotions combined and recombined among them. 5) *The individual defense mechanisms and their classification>>.* [1,2,4].

To assess the functioning of the ego's psychological defense mechanisms, several psychometric instruments are used to date: <<1) *Perry's Defense Mechanisms Rating Scale* (*DMRS*). This is a measurement scale based on the "hierarchical model of defenses" studied by Vaillant since the 1970s. The scale tends to identify 30 defense mechanisms (from the most primitive to the most mature), hierarchically ordered into 7 defensive clusters: acting out, borderline, narcissism, denial, neurotic, obsessive, and mature. 2) *Defense Mechanism Inventory* (*DMI*) of Gleser and Ihilevich. It is a projective test that, through the telling of ten stories, detects five defensive styles, such as aggression,

projection, falsification of reality, self-punishment behaviors, and minimization of the severity of internal or external threats. 3) *Bond's Defense Style Questionnaire (DSQ)*. This is an 88-item questionnaire on a 9-point Likert scale that detects 4 defensive styles: acting-out as passive aggression and projection; image distortion as splitting, primitive idealization, and devaluation; self-sacrificing as reactive training and pseudo-altruism; and mature defenses such as humor, suppression, and sublimation. 4) *Haan's Coping and Defending Scale (CDS)*. It is a scale that describes ten generic processes, with three modes of expression (coping, defensive, and fragmented), later revised by Joffe and Naditch who identify ten defenses for ten coping strategies, in a questionnaire with 377 items that can identify four factors: controlled coping, expressive coping, structured defenses, and primitive defenses. 5) *Plutchik's Life Style Index (LSI)*. According to the author, defenses are derivatives of emotions and therefore according to a scheme of event-stimulus, emotion, defense, and coping strategy, the research differentiates a) threat, fear, removal, repression; b) obstacle, anger, displacement, replacement; c) partner, joy, reactive formation, transformation into the opposite; d) loss, sadness, compensation, search; e) unpleasantness, disgust, projection, complaint; f) unexpected, surprise, regression, request for help. 6) *Carver's Coping Orientation to Problems Experienced (COPE)*. This is a 60-item questionnaire on a 0-4 scale to identify the fifteen coping styles in different stressful situations broken down by problem-focused, emotion-focused, and dysfunctional coping. 7) *Johnson-Gold's Defense Mechanism Profile (DMP)*. It is a questionnaire of 40 sentences to complete, able to identify four mechanisms of tension reduction and nine defenses ordered hierarchically. 8) *Defense Mechanisms Rating Scales-Self-Report-30 (DMRSSR- 30)*. It is a questionnaire that identifies 30 mechanisms with 150 response items, on a L0.7 scale, and studies their functioning or dysfunctional>> [2,5-20].

To date, constructs related to psychological ego defense mechanisms all refer primarily to psychodynamic theorizing from the 1900s [21-32], and thus it is important to review and innovate knowledge in this area to foster a more modern approach.

Aim

A validation study was conducted to determine whether the proposed psychometric instrument (PDM-Q-v2) is capable of being reliable, efficient, effective, and valid for the detection, classification, and analysis of the functioning of psychological ego defense mechanisms, regardless of the patient's psychopathological condition, which may or may not warrant it. Therefore, the present discussion aims to try to determine whether, in the current state of scientific knowledge, it is possible to validate the proposed psychometric instrument concerning the specific topic, according to the author's understanding of the present study's model. [2]

Materials and methods

Study design

Development, adjustment, and validation of a psychometric

instrument capable of identifying, classifying, and analyzing the functioning of psychological ego defense mechanisms, based on the Perrotta Human Defence Mechanisms Model (PDM-M, v. 2), through population sample administration to test its effectiveness, efficiency, and validity [1-2].

The Perrotta Human Defense Mechanisms Model (PDM-M, v. 2) represents, in the international literature, the first modern model capable of identifying 25 different psychological structural defense mechanisms (structural element), each of which has one or more adaptive and/or maladaptive characteristics (functional element), depending on factual circumstances, one's experience and personality, for a total of 92 different functioning. For these reasons, current psychometric instruments are unable to respond to this new approach, as some tests are aimed exclusively at investigating limited defensive (e.g., DMI and DSQ), life (e.g., LSI), and coping (e.g., COPE) styles; the more structured tests, on the other hand, describe only some of the defenses identified by the PDM-Q-v2 (e.g., CDS and DMP) and in any case not according to the new model. The only psychometric test identified that can compare at the structural level is the DMRS-Q [12,33-36], and for this reason used for validation purposes, as in the author's opinion it is probably the best construct with which to make a general comparison, relative to the PDM-Q-v2 result. Based on these considerations, it was necessary to create the Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2) to take into account all the features of the proposed new model (PDM-M, v. 2) [All. 1].

Materials and methods

Starting with the Perrotta Human Defence Mechanisms Model (PDM-M, v. 2), which identifies a precise structure and function, for each identified psychological ego defense mechanism. Specifically, the model is built based on 25 different structural defense mechanisms (structural element), each of which has one or more adaptive and/or maladaptive characteristics (functional element), depending on factual circumstances, one's experience, and personality, for a total of 92 different functionings. The method used consists of two consecutive operations: the first is related to the clinical interview, based on narrative anamnestic and documentary evidence, with an interview regarding the emotional and perceptual-reactive experience of the patient, according to the PHE-Model [4], updated to the new version PHEM-2 [37]; the second is related to the administration in the first instance of the Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2) and the Defense Mechanisms Rating Scales-Self-Report-30 (DMRS-SR-30), and the second instance, after three months, again using the PDM-Q-v2, to allow full statistical analysis for validation of the latter. The stages of the research were divided as follows: 1. Selection of the population sample, according to the parameters given in the next paragraph. 2. Clinical interview with each population group, as indicated in the next paragraph. 3. Administration of psychometrical tests. 4. Data processing after administration. 5. Comparison of the data obtained [All. 2].

Setting and participants

Inclusive criteria for the selection of the population are

1) Age between 14 years and 79 years; 2) Italian nationality; 3) Absence of neurodegenerative disorders or severe genetic diseases capable of impairing cognitive functioning. Exclusive criteria for the selection of the population are 1) Age ≤ 13 years and ≥ 80 years; 2) foreign nationality; 3) Presence of neurodegenerative disorders or severe genetic diseases capable of impairing cognitive functioning. The chosen setting, tender standing during the protracted pandemic period (already in progress since the beginning of the present research), is the online platform via Skype and WhatsApp Video Calls, both for clinical interviews and administration. The present research work was carried out from June 2021 to August 2023. All participants were guaranteed anonymity and the ethical requirements of the Declaration of Helsinki were met. Because the research is not funded by anyone, it is free of conflicts of interest. The sample of the selected population is 632 participants (156/m; 476/f) to the entire study. The drop-out rate was 0/632 (0%) (Table 1).

Results

Development and regulation of the questionnaire (PDM-Q-v2)

The Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2) measures the degree of clinical impairment of the patient's psychological ego defense mechanisms, regardless of a definite psychopathological diagnosis, throughout developmental age, from early adolescence (14 years) to adulthood (79 years). In its second version (v2), it is therefore proposed to identify the 25 specific structures and their degree of functioning, to ensure in psychotherapy the best possible knowledge of these profiles and their correlation with the stated and suffered symptomatology. Structurally, one item was added to position 2, and the former position 2 became the fourth. It consists of 25 items in narrative form with which the patient must identify; each is devoted to 1 specific structural defense mechanism [Table 2], with an L0-5 response (0 to 5 points, for each item) in which the subject identifies his or her assessment based on the response he or she feels most adheres to; that response will then be associated with a number from 0 to 5, which is thus identified in its parameter: responses 0-1 confirm the adaptive and functional nature of that specific mechanism; responses 2-3 confirm the dysfunctional or otherwise deteriorated tendency of that specific mechanism; responses 4 - 5 confirm the dysfunctional and dynastic nature of that specific mechanism. There is no unit final score, as the

Table 1: Population sample (numerousness).

Age	Male	Female	Total
14 - 24	30	94	124 (19.6%)
25 - 35	52	134	186 (29.4%)
36 - 46	34	118	152 (24.1%)
47 - 57	26	82	108 (17.1%)
58 - 68	12	40	52 (8.2%)
69 - 79	2	8	10 (1.6%)
Total	156 (24.7%)	476 (75.3%)	632 (100%)

Table 2: Comparison of the items of the two questionnaires compared (PDM-Q-v2 / DMRS-SR-30).

N	Ego psychological defense mechanisms of PDM-Q-1	N_item_ PDM-Q-1	Correspondence to the Ego psychological defense mechanisms of DMRSSR- 30	N_item_ DMRSSR- 30
1	Condensation	1	No match	No match
2	Inhibition	2	Passive aggression	45, 88, 89, 102, 116
			Acting out	5, 76, 80, 118, 144
3	Fixation	3	Anticipation	43, 46, 62, 65, 78
4	VALIDATION	4	No match	No match
5	IDENTIFICATION	5	Identification	72, 75, 101, 103, 113
6	ISOLATION	6	Isolation	28, 31, 39, 107, 140
7	NEGATION	7	Negation	21, 84, 127, 130, 149
8	Regressive Connection (or Regression)	8	No match	No match
9	Somatization	9	No match	No match
10	Retroactive Annulment	10	Retroactive annulment	48, 67, 70, 81, 83
11	Denial	11	Denial	20, 33, 121, 124, 137
12	Reactive Formation (or Reactive Opposition)	12	a) Sublimation	14, 36, 63, 97, 100
			b) Splitting (himself)	3, 6, 98, 142, 145
			c) Splitting (others)	35, 61, 92, 94, 114
			d) Dissociation	8, 27, 30, 41, 73
			e) Reactive formation	52, 55, 74, 96, 99
			f) Autistic fantasy	2, 24, 106, 110, 148
			g) Displacement	1, 64, 69, 122, 125
13	Omnipotent Distortion (or Omnipotence)	13	Omnipotence	7, 10, 68, 126, 129
14	Projective Distortion (or Projection)	14	Projection	112, 115, 123, 134, 141
15	Removal	15	No match	No match
16	Retreat	16	No match	No match
17	Instinctive access (or instinct)	17	No match	No match
18	Repression	18	a) Suppression	49, 117, 128, 131, 150
			b) Repression	13, 47, 50, 108, 136
19	Devaluation	19	a) Devaluation (himself)	12, 29, 34, 56, 147
			b) Devaluation (others)	54, 82, 85, 111, 143
20	Affiliation	20	Affiliation	22, 25, 44, 66, 93
21	Altruism	21	Altruism	11, 15, 79, 104, 132
22	Idealization	22	a) Idealization (himself)	38, 71, 87, 133, 135
			b) Idealization (others)	16, 17, 95, 138, 139
23	Mentalization	23	a) Intellectualization	4, 26, 53, 57, 60
			b) Rationalization	19, 42, 59, 86, 120
			c) Self-observation (or reflection)	9, 32, 58, 77, 91
			d) Self-affirmation	23, 90, 105, 109, 146
24	Humorism	24	Humorism	18, 37, 40, 51, 119
25	Creativity	25	No match	No match

test aims to identify the functioning or dysfunction of each mechanism identified in the model underlying the test [All. 3].

Court study

The cohort study of the selected population sample shows that the female component accounts for more than 2/3 of the total sample, with a greater preponderance in the 14 - 46 age group, with an increasing trend, and then decreasing in the 47-79 age group; in particular, not being able to have an overall total value of the questionnaire, because it is not provided, we will take as reference the number of times the patient totaled at least 3/25 psychological ego defense mechanisms with a value between 0 and 1, thus obtaining 366/632 (58%) of the total selected population, distributed in the following respective age groups (Table 3):

Validation of the questionnaire (PDM-Q-v2)

Comparison of test structures:

Introduction: Structurally, the Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2) consists of 25 items, with a single item score of L0-5 points (but the answer is not given by the patient based on a purely numerical choice but based on the "conditional" choice of the suggested answer in the list), without the provision of an overall final score, since the purpose of the test is to identify for each psychological ego defense mechanism its degree of functioning or dysfunction. In this sense, scores for individual items between 0 and 1 identify the correct functioning tendency, between 2 and 3 identify the maladaptive dysfunctional tendency, and between 4 and 5 the pathological dysfunctional tendency. The chosen comparison test, the Defense Mechanisms Rating Scales-Self-Report-30 (DMRS-SR-30), consists of 150 items, with an L1-7 scale, on a purely scalar rating. Below is the text of the individual items of the PDM-Q-v2 [All. 4].

Below is the comparison of the items of the two questionnaires compared (PDM-Q-v2 / DMRS-SR-30) (Table 2).

Comparing the results of the two tests is not an easy task, as the former (the PDM-Q-v2) is parameterized on a linear L0-5 scale with scores thus ranging from 0 to 5, progressive, while the latter (DMRS-SR-30) is parameterized on an L1-7 scale that, however, follows a specific scoring by different formulas, by single defense mechanism (to which 5 items are devoted), by levels of defense (which are 7 in total, plus two sub-levels of 5, for a total of 9), by defensive categories (which are 3 in total, plus two sub-levels of C1, for a total of 5), and by overall defensive functioning, with a specific formula. Let us give an example. In the case of suppression, the formula will be: [(Sum of items 49, 117, 128, 131, and 150) - 5]*100/234. If we then assume that for those 5 items, the patient always answered 1 the final result will be (5 - 5)*100/234 = 0. If we assume that for those 5 items, the patient always gave 7 the final result will instead be (35 - 5)*100/234 = 12.82. The other formulas are not comparable because the PDM-Q-v2 does not take those items into account, as the structure is

different from the DMRS-SR-30. And therefore, to compare the individual results, it is necessary to use a mathematical stratagem of comparison, between the scores of the individual defense mechanisms concerning the tests used, excluding the defensive mechanisms of condensation, avoidance, regression, somatization, removal, retreat, instinct, and creativity, as not present in the comparison test. Below is the summary of the formula (Table 4).

To facilitate the comparison, the diagnostic meaning of the DMRS-SR-30 scores was reversed, so that they had the same interpretation in increasing sense, multiplying the result "*2" and then all "/2". The comparison then took place, for each patient, by adding the individual values (obtained with the formulas indicated above in Table 4) of the items that had a value of 0 - 1 points for the PDM-Q-v2 and 26 - 35 points for the DMRS-SR-30. The results are compared in the following graph (Figure 1):

Coefficient of stability: A binary correlation analysis was conducted between the first administration of the Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2) and the second administration, which occurred after 3 months, to check the stability of the test, obtaining a Pearson's coefficient (R) of 0.999, with $p \leq 0.001$. Statistical analysis: Comparison of meads.

Factorial analysis: An exploratory factor analysis was conducted on the Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2), using the Maximum Verisimilitude method for individual items, and an oblique rotation (Promax).

Table 3: % subjects with mechanism points ≥ 3/25 at 0 - 1 point, concerning the total population sample.

Age	Male	Female	Total
14 - 24	27	33	60 (16.4%)
25 - 35	29	41	70 (19.1%)
36 - 46	26	37	63 (17.2%)
47 - 57	22	30	52 (14.2%)
58 - 68	26	27	53 (14.5%)
69 - 79	29	39	68 (18.6%)
Total	159 (43.4%)	207 (56.6%)	366 (100%)

Table 4: Comparison of the scores for the single comparable mechanism of the two selected questionnaires (PDM-Q-v2 / DMRSSR- 30).

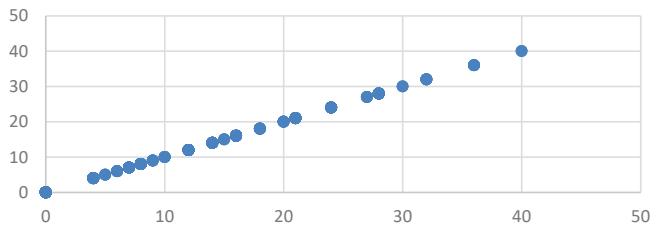| Test	PDM-Q-v2	DMRS-SR-30	DMRS-SR-30
Formula	(ITEM_p*100)/25	(Σ_5-items_p)	Interpretative inversion
Examples	(0*100)/25 = 0 (High functionality)	31 - 35 (High functionality)	5 - 10 (High functionality)
	(1*100)/25 = 4 (Good functionality)	26 - 30 (Good functionality)	11 - 15 (Good functionality)
	(2*100)/25 = 8 (Average functionality)	21 - 25 (Average functionality)	16 - 20 (Average functionality)
	(3*100)/25 = 12 (Modest functionality)	16 - 20 (Modest functionality)	21 - 25 (Modest functionality)
	(4*100)/25 = 16 (Poor functionality)	11 - 15 (Poor functionality)	26 - 30 (Poor functionality)
	(5*100)/25 = 20 (Low functionality)	5 - 10 (Low functionality)	31 - 35 (Low functionality)

Figure 1: *Comparison of the scores of the 2 psychometric tests (PDM-Q-v2/ DMRS-SR-30)*, with balancing of results. X axis: PDM-Q-v2; Y axis: DMRS-SR-30. Statistical analysis: Comparison of meads.

The results obtained showed the exact coincidence of the partial results, referring to the individual comparable elements. The correlation matrix with oblique rotation (Promax) is 0.999, with $p \leq 0.001$.

Validity indexes: The criterion validity index (for efficiency and accuracy), of the Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2), taking into account the comparison items, is 0.999, while the construct validity index is 0.818. The convergent validity between the PDM-Q-v2 and DMRS-SR-30 is 0.766 and $p \leq 0.001$.

Discussion

The Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2) is a psychometric instrument designed to answer the assessment of the functionality of psychological ego defense mechanisms, regardless of the etiology of psychological dysfunction and the subject's psychopathological personality characteristics. The questionnaire is structured to focus on individual defense mechanisms to assess their impact on the personological profile and human behavior. For this reason, comparison with the DMRS-SR-30 was only possible for individual scores and not for all mechanisms, as the structure of the two tests is substantially different; however, statistical analysis confirmed what was hoped for, namely, that the PDM-Q-v2 has a well-defined and stable construct ($r = 0.999$; $p \leq 0.001$), the variables are well represented ($r = 0.818$; $p \leq 0.001$), and it is positively correlated with another construct that has already been validated ($r = 0.766$; $p \leq 0.001$).

Limitations, implications for Clinical Practice, and prospects

In this validation analysis, the main limitation found concerns the co-items, which cannot be compared with the whole DMRS-SR-30, not even with the final total score, as the basic models are different and identify items comparable by the partial outcome but not by their total; however, this limitation did not prevent the statistical analysis carried out from giving good results in terms of stability, effectiveness, and efficiency, thus validating the psychometric instrument. Through the use of the Perrotta Defense Mechanisms Model (PDM-M-v2), it was, therefore, possible to construct a questionnaire that concretely realizes the need to investigate, in terms of functioning/dysfunction, the capacity of the ego's psychological defense mechanisms. Perspectives will be directed toward administering the PDM-Q-v2 to a wider population to refine the assessment at the diagnostic stage, with emphasis on psychopathological clinical correlations.

Conclusion

The Perrotta Human Defense Mechanisms Questionnaire (PDM-Q-v2) is a psychometric test with a well-defined and stable construct ($r = 0.999$; $p = p \leq 0.001$), with the variables well represented ($r = 0.818$; $p = p \leq 0.001$) and positively correlated with another already validated construct ($r = 0.766$; $p \leq 0.001$), to identify the functioning or dysfunction of psychological ego defense mechanisms, useful for assessing the degree of functional impairment of the patient during psychotherapy, but also for monitoring improvements following the therapies undertaken and evaluating targeted intervention on the specific mechanisms that have demonstrated partial or insufficient tightness, and therefore worthy of clinical investigation.

Institutional review board statement

All participants were assured of compliance with the ethical requirements of the Charter of Human Rights, the Declaration of Helsinki in its most up-to-date version, the Oviedo Convention, the guidelines of the National Bioethics Committee, the standards of "Good Clinical Practice" (GCP) in the most recent version, the national and international codes of ethics of reference, as well as the fundamental principles of state law and international laws according to the updated guidelines on observation studies and clinical trial studies.

Informed consent statement

Subjects who gave regular informed consent agreements were recruited; moreover, these subjects requested and obtained from GP, as the sole examiner and project manager, not to meet the other study collaborators, thus remaining completely anonymous.

Data availability statement

The subjects who participated in the study requested and obtained that GP be the sole examiner during the therapeutic sessions and that all other authors be aware of the participant's data in an exclusively anonymous form.

Acknowledgments

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