

## Research Article

# Proposal for Uniform Framing of Psychological Damage in an Occupational Setting

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**Abstract**

The paper endeavors to identify objective criteria for the qualitative and quantitative classification of mental disorders of forensic interest, and in particular to define a method permitting uniform assessment of psychological damage in an occupational setting. Changes in the organisation of work and production, new relations among the components of human resources and exasperation of the pyramidal structure of roles have created new behavioural and emotional risks, laying the foundation for multifactorial pathogenesis of mental disorders. DSM-5 is certainly a useful reference and starting point for forensic diagnosis of complaints of psychiatric interest that can also be assessed using a methodological procedure that observes the primary principles of scientific rigour (objectivity, repeatability, ethics).

**Keywords:** Occupational risk, Psychological damage, Assessment methodology

**Introduction**

Psychological damage is now a category in its own right in the framework of human health impairment. Psychological patterns have progressively consolidated, not only after traumatic events, but also in response to changes in organisation of the occupational environment that have produced pathological conditions related to the stresses of the new and more intense interpersonal relationships that characterise the modern production cycle [1,2], with negative repercussions on working activity [3-6].

In its various editions and revisions, the Diagnostic and Statistical Manual and Mental Disorders (DSM) compiled by the American Psychiatry Association [7] has been the universal synthesis of all the above needs and changes, and a further contributions has also come from the World Health Organisation (WHO) with publication of its International Classification of Diseases (ICD) [8], a taxonomy that repeats the fundamentals of DSM, except for a few insignificant semantic differences. Consolidated clinical experience in the use of these diagnostic tools has also defined a uniform nosographic language in the vast and variegated world of psycho-cognitive science, but it does not meet forensic requirements. Specifically, the need to first identify the disorder, then evaluate the efficacy of the alleged cause, and finally verify correspondence of the effects in order to determine an equitable and reliable assessment of the damage, has not been met. Under these premises, the following steps are required:

- a) A process of analysis of the disorder in its various phenomenological aspects, followed by
- b) Identification of absolutely objective starting points from which to derive a univocal methodology to meet forensic needs.

The shift from production of consumer goods to services, especially in developed countries, has probably substantially modified company risk. New more flexible job contracts can engender anxiety in relation to working relationships and organisation.

Stress, mobbing and organisational constraints are relatively recent terms for situations, not necessarily new, that can cause distress in workers, impairing their possibility to form fruitful and gratifying interpersonal relationships.

In such situations it is fundamental to ascertain the causal relationship between work and psychological disorder, or identify activities that involve psychological distress due to occupational organisation/reorganisation affecting productive performance as well as construction of the management pyramid [9].

The evolution of occupational organisation observed over the years in relation to technological development can be summarised as follows:

- Operativity (manual skill and muscle power)
- Specialisation (operational intelligence)
- Management (outward-directed intelligence)
- Collaboration within the firm (humanisation).

These organisational and productive changes have modified working activity, decreasing physical complaints and increasing stress-related ones. In particular, new risks linked to change and modernisation in the work-place have been identified, with a simultaneous end to the equilibrium between humans and their work [10,11]. Often worker training has not kept up with the speed of organisational change, creating conditions in which work-place requirements exceed worker capacity, leading to consequent occupational stress. Indeed, changes in productive activities have inevitably modified horizontal and vertical relational dynamics in the work-place, revealing hitherto unknown psycho-behavioural risks:

- Repetitive tasks
- Disarticulated functions
- Conflict between management and operational level

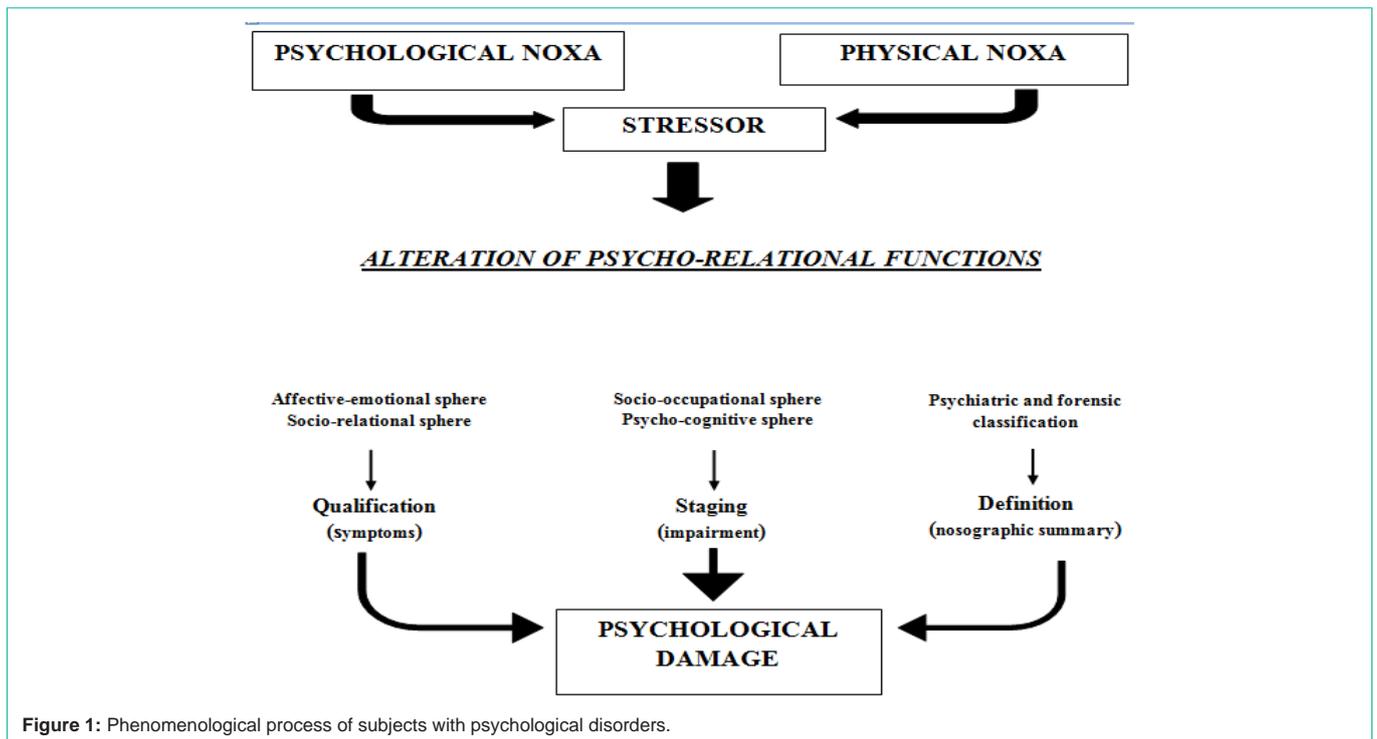


Figure 1: Phenomenological process of subjects with psychological disorders.

- Control panel distance between management and operational level
- Ignorance of operations involved in the production cycle
- Repression of potential
- Extreme role flexibility
- Levelling of skills
- Verticalisation of functions.

The emergence of these new risks [12-14] has inevitably generated psycho-behavioural attitudes (organisational constraints, downgrading, deskilling, marginalisation and educational exclusion) that catalyse work-related psychopathological patterns, such as chronic disadaptation disorder and chronic post-traumatic stress disorder [15,16].

## Methodology

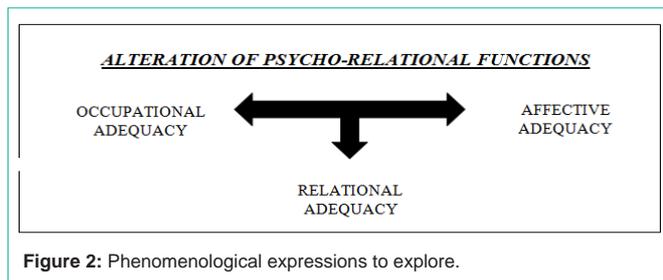
The proposed method prefigures the preparation and implementation of a multicentric protocol for the standardisation of psychiatric tests and assessment protocols exclusively for the forensic classification of psychological damage. Although psychological diagnostics occupy much space, this should not prevent statistical validation of the results with reference to the general population and according to criteria well-tested in neuropsychological practice [17]. Forensic practice requires preventive reference to “normality”, “physiology” and “pre-existing state”, in order to express a correct judgment of causality and entity of damage. Indeed, identification of a model of “psychological normality”, considering the extreme variety of an individual’s psycho-cognitive profile and its variations in time, is essential for any subsequent elaboration.

A first reference for selection of the population must be the anamnestic criterion, with demonstrated absence of any clinically important psychological disorder in the patient’s medical history, and the sample to examine must be recruited in homogeneous socio-geographic contexts, whereas population research can be broadened in a second phase to make it more representative [18]. This procedure will render behaviour, techniques and methods of administration more uniform, and determine a further sample selection filter, both autonomous (patients themselves not willing to participate) and delegated by expert observation (excessive fatigability, arousal of anxiety that interferes with psycho-cognitive performance).

Subsequent statistical analysis will endeavour to identify a “delta” of variability sufficient to make examination and its result reliable; in particular, a statistical model of analysis of variables will be established according to overall linearity criteria with analysis of covariance and multiple regression. Once the model has been defined, correction tables for age, gender and education will be applied to single tests and the limits of tolerance of the scores obtained will be established so that the scores can be defined as “corrected”, a necessary condition for subsequent parametric comparisons. A last but fundamental statistical criterion will be the reliability of the test, a question that can be solved by the “test-retest reliability” method, then applying the well-known and consolidated procedure of Huber [17].

## Discussion

The emergence of new psychopathologies linked to changes in work-place organisation and changes in interpersonal relations in occupational settings, especially on production lines due to rigorously pyramidal organisation of human resources, has led to the need to obtain an accurate occupational history to complete the classical clinical report with express characterisations and qualifications of



**Figure 2:** Phenomenological expressions to explore.

so-called “new risks” in the pathogenesis of psychological disorders.

The systematic and methodological work conducted in Italy [19] is in this sense remarkable. It regards the definition and evaluation of psychological damage, with a complete and lucid response to the requirements of proportional causal link between event and psychological lesion, reasoned clarification of well-established circular causality and identification of a scientifically acceptable method for the necessary modulation of the lesional quantum. The attempt to identify a coefficient of risk to satisfy causal efficiency (scale of importance of stressful events) is also interesting and innovative. The scale, a modification of that of Rahe and Holmes [20], adds a major contribution for etiopathogenetic assessment of psychological impairment but does not fully meet the need for a quantitative, objective and experimentally reproducible description for forensic quantification of the damage. The critical element is still a precise nosographic classification, identification of the consequent disorder and phenomenological expression in the sense of relational interference with the individual’s psychological equilibrium. A further obstacle to objective quantification of damage comes from pre-existing psycho-behavioural patterns, which are difficult to assess and quantify on the basis of an interview; the need for objective measurable data of anterior state is a necessary condition for establishing causality and correct consequentiality.

Figure 1 represents an attempt at a graphic summary of the phenomenological process involving subjects with psychological disorders.

The figure indicates a process of detection and sequential acts (flow chart) that endeavours to respond to the need for assessment through:

- Necessary correlation between event and consequences [21,22];
- Specification and identification of anterior state;
- Nosographic classification with precise grading of the disorder;
- Summary assessment of impairment.

Assessment of psychological damage is recognised and characterised in Italy also for compensation of accidents in the workplace and occupational diseases [23]. Also in this case, moreover, the initial work of the legislator [24] and the subsequent work of the authors of the volume of commentary on the law [25] do not fill the inevitable nosographic gaps, nor those of quantification and qualification, encountered daily in forensic practice.

## Qualification

Qualification is still the weak point of forensic psychiatric examination, since it obtains its data from an “interview” and from impressions gleaned by “exploration” with an evident dose of subjectivity that offers its flank to interpretation, thus frustrating the assessment method’s intention of objective accreditation. Only data obtained from neuropsychological examination is a valid clinical substrate for nosographic classification.

In psychiatric practice, three types of doctor-patient relationship, originating from different doctrines and scientific foundations, are recognised:

1. The structured or semi-structured interview;
2. The free interview;
3. The structural interview.

The structured or semi-structured interview originates in biological psychiatry and therefore in a line of thought that tends to recognise an organicist construct of the phenomenon in behavioural and ideational disorders. Preconstituted generic (1<sup>st</sup> approach) and specific schemes (2<sup>nd</sup> approach oriented by pathological area) are established and administered in succession with “rigid” observance of acquisition modalities. This protocol enables acquisition of repeatable data, expressed as a score, but presupposes active collaboration of the patient for information about the person and the symptoms [26]; it also has the limits of a technicistic method that may not capture various behavioural nuances.

A “freer” approach (semi-structured interview) in which the patient tells his clinical story and the doctor enters the data under the appropriate items is also possible. Further information can be obtained in this way but with the inevitable risk of excessive subjectivity of the final score. The free interview aims to collect more information and has the notable advantage of responding to a need of the patient that may vary and above all change during the course of the interview. The absence of a rigid frame of reference also allows the doctor to easily adapt to the patient’s expectations. The limit lies in classifying the excessive number of variables of the data reported and collected, also linked to the inclinations of the examiner and the examinee.

The structural interview [27] is the solution offered by the psychoanalytic movement and aims to identify the psychological structure underlying the pattern of symptoms. It is based on the assumption of an intrapsychic structure (neurosis, psychosis or borderline) to characterise by means of three psychodynamic indicators (identity diffusion, reality check, defence mechanisms) and their simultaneous evaluation makes it possible to identify the subject’s intrapsychic structure.

## Staging

Staging is the key moment in forensic classification, when symptoms and signs must find a psycho-physical-relational correspondence with reference to the present and the anterior state of the patient. The principle of objective measurement becomes a necessity and certainly cannot be based on DSM-5 adjectives (slight, moderate, severe) [5], useful in the clinical field but clearly too generic and lacking in specificity in a forensic assessment. Recent

collations of modern psychiatry [28-31] recognise evident limits to the nosographic classification of DSM-5, which in expectation of the now consolidated multidisciplinary and multifactorial classification of psychological disorders becomes a mere listing or cataloguing tool without the characteristic of diagnostic proof. The intervention of extrabiological factors (social, occupational, economic) in the determinism of psychological disorders clearly makes the system of axes used to describe symptoms reductive for defining increasingly complex and polymorphic psychopathological patterns.

A tool that could enable aseptic analysis of psychological disturbance, while observing the criteria of scientific research, is the test [17], namely the possibility of “measuring” and transforming the entity of a sign or symptom into a numerical-statistical value by means of a precise administration and acquisition protocol, followed by parameterisation to standardised values of the general population. This offers all the guarantees required of a diagnostic method with scientific forensic value (reproducibility and confirmation of the data). However, tests must be associated with socio-relational assessment scales that highlight the “non biological” components of the mental etiology.

Figure 2 summarises the principal phenomenological expressions of psychological disorders that must be explored for a complete forensic assessment.

This is not an exemplification of clinical psychopathology subordinated to forensic interest, but rather a reference phenomenological synthesis useful for assessment of impairment of an individual's state of mental health. Indeed, the individual's relational manifestations and obstacles to a satisfactory quality of life are what configure alterations to the psycho-physical-relational “well-being” guaranteed to all citizen-workers, underlined and confirmed by WHO.

On the other hand, reference to occupational efficiency is immediate. It may be the only expression of psychological distress or may accompany, induce or follow relational impairment.

Finally, affectivity is the most elementary and least specialised human expression but the most sensitive indicator of psychological alterations by virtue of its automatic nature. In fact, psycho-behavioural dysfunction acts “biologically and psychodynamically” on the control mechanisms of mood, which characterises an individual's affective expression.

The natural consequence is that the fields of psychological exploration must necessarily involve these three aspects of human expression in order to understand the effective limitation caused by a psychological disorder.

### Definition

The nosographic summary is the final stage of the analysis and finds a truly satisfactory solution in the definitions contained in DSM-5 and ICD-10. The two systems, which are substantially similar, are a well-established list of psychiatric nosography based on symptoms and have above all been widely tested in clinical practice with the well-known DSM axes that constitute a system of nosological identification rooted in the set of signs involving the principal manifestations of human behaviour. The limits of both manuals depend on the acquisition of symptoms by means of psychiatric examination, a

technique which is certainly valid in clinical practice, but which suffers insurmountable obstacles with regard to the reproducibility and objectivity required by forensic science. A symbiotic interaction between the two systems by integration with objective data is therefore to be hoped for, in order to favour a univocal psychiatric and forensic classification that observes scientific semiology. This is a categorical necessity for a discipline, the maximum professional expression of which lies in the written and oral report.

### Conclusion

The present proposal, both in terms of etiopathogenetic classification and diagnostic-evaluative methodology, does not presume to fully meet the constant demand for objectivity in the assessment of psychological damage, among other reasons due to the intrinsic nature of the disorder, but it certainly offers the possibility of “instrumental” monitoring of the continuous evolution and modification of psycho-cognitive manifestations. However, a project articulated in two structural components, namely:

- Identification of precise fields of clinical exploration detected by forensic assessment, and

- Adequate analysis of the principal psycho-behavioural manifestations affecting the individual's ability to relate seems to be a decisively objective method to solve the problems surrounding the need to reach an effective recognition of the disorder, so as to better evaluate the efficacy of the cause invoked, and finally verify correspondence of the effects. For that purpose, the fields and spheres of analysis should naturally be investigated by tests and scales standardised with respect to a healthy population, with particular reference to the occupational environment [32]. Only in this way will it be possible to obtain a range of reference for assessment, which must always be in line with and objectively sustain the nosographic diagnosis formulated by psychiatric specialists by classical clinical methods (case history, objective examination, DSM). Above all, the use of standardised protocols will enable the most complete methodological procedure for forensic purposes, namely that of qualification, staging and uniform assessment of psychological disorders.

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