Resilience in psychopathology agenda

La resilienza nella psicopatologia

Historical development

According to a stress-diathesis model of illness, subjects must have a biological, psychological, or socio-cultural predisposition towards disorders and be subjected to certain form of stress in order to develop the disorder. Many individuals, however, will never show a disorder, even if presenting predisposition. What protects these subjects from succumbing to stress are psychological, biological and social factors that, in the last 30 years of psycho-clinical research, have been grouped under the concept of 'resilience' [1-3]. Some individuals, even if facing most pernicious adversities, manage to avoiding psychological collapse and maintaining healthy adjustment. Resilience reflects a positive spectrum of adaptation/maladaptation in response to risk exposure.

Although the concept of resilience dates back to the 19th century, clinical studies began only in the 1970s. Researches were initially undertaken to explore high-risk children of parents with mental disorder [4]. Some of these high vulnerability children were able to survive extremely stressful experiences without developing severe mental illnesses [5 6]. Further studies on marginalized children and adolescents living in adverse circumstances showed that they were better able overcome adversity if some specific factors were present [7].

Based on epidemiological data, approximately 60% of men and 50% of women report at least one traumatic event during their lives. The lifetime occurrence of Post-Traumatic Stress Disorder (PTSD) ranges between 6% and 9%: the majority of trauma survivors do not develop PTSD, on the contrary experiencing personal growth after traumatic events. Major depression affects approximately 15% of general population. Important risk factors for depression are childhood abuse, including sexual, physical, or emotional abuse, and trauma exposures such as serious accidents, physical or sexual assaults, and unexpected or sudden death of a loved one. However, not every subject with a personal history of childhood abuse or other trauma exposure experiences psychopathology [8]. Many people are exposed to loss or potentially traumatic events at a certain point during their life, but not everyone deals with these potentially disturbing events in the same way [9 10]. Those and other studies demonstrate that people not only survive extremely tragic events, but are able to manage the consequences or even reach positive psychological or personal changes in the aftermath of trauma, a phenomenon known as post-traumatic growth [11].

The importance of protective psychological factors in the prevention of illness is now well established [12]: resilience reflects the ability to positively adapt to traumas or adversities and maintain a stable equilibrium [2 13].

Resilience: from theory to practice

Resilience is a well-established item for describing and explaining unexpected positive outcomes despite high risk of maladjustment when exposed to psychosocial adversities.

It is a multidimensional concept variously defined as a personal trait protective against mental disorders and a dynamic process of adaptation to challenging life conditions. It expresses psychological flexibility (bounce-back) face to highly stressful events operating relevant changes: it is devoted to obtain new and positive homeostasis, emerging from adversities stronger and more resourceful. Main features describing resilience include: good outcomes regardless of high-risk status, constant competence under stress, recovery from a trauma considered as challenging for growth, which helps making future hardships more tolerable.

Recovery connotes a condition in which normal functioning temporarily gives way to psychopathology. There is a failure in loss and trauma literature to adequately distinguish resilience from recovery, relating to current controversies about the most appropriate clinical intervention for different subjects in different moments. This may help to explain why, in some cases, clinical interventions are ineffective or even harmful [9].

Trauma theories on the absence of PTSD have often ignored or underestimated the role of resilience: bereavement theorists have been highly skeptical about those individuals who do not show pronounced distress reactions or display positive

emotions following loss, thus assuming pathological forms of absent grief. Empirical literature suggests that resilience is not rare but relatively common in cases of unsettling effects of interpersonal loss: it does not appear to indicate pathology but rather healthy adjustment, and does not lead to delayed grief reactions.

As developmental psychologists have asserted for a longtime, there is no single mean of maintaining equilibrium following highly aversive events, but rather multiple pathways to resilience [14 15]. A growing body of evidence suggests that the personality trait of hardiness [16] helps buffering exposure to extreme stress. Hardiness consists of three dimensions: a commitment to finding meaningful purpose in life; the belief that one can influence one's surroundings and the outcome of events; the belief that one can learn and grow from both positive and negative experiences. Hardy individuals have been found to appraise potentially stressful situations as less threatening, thus minimizing the experience of distress.

A number of other factors promoting resilience have been identified: the ability to effectively cope with stress in a healthy manner; good problem-solving skills; seeking help; holding the belief that there is something one can do to manage his feelings and cope; having social support; being connected with others (family or friends); self-disclosure of trauma affecting the loved ones; spirituality; having an identity as survivor as opposed to victim; helping others; finding positive meanings in trauma. These factors can be summarized into three broad categories of resilience factors and protective mechanisms: positive characteristics and resources of the individual; coherent, stable, and supportive family environment and a social network supporting and reinforcing adaptive coping [17].

Neurobiology of resilience

An emerging field in the study of resilience is the search for its neurobiological basis aiming to identifying a putative neurochemical profile characterizing psychobiological resilience with predictive value regarding successful adaptation. A number of neurotransmitters, neuropeptides, and hormones have been linked to acute psychobiological response to stress and to long-term psychiatric outcome [18].

Roles of those neurotransmitters, neuropeptides, and hormones that have been shown to be significantly altered by psychological stress, are important in functional interactions, mediating neural mechanisms circuits relevant to regulation of reward, fear conditioning, and social behavior. For example, neuropeptide Y (NPY) and 5-Dehydroepiandrosterone (5-DHEA) are likely to limit the stress response by reducing sympathetic nervous system activation and protecting the brain from potentially harmful effects of chronically elevated cortisol levels. In addition, relationship between social support and stress resilience is likely to be mediated by oxytocin system impact on the hypothalamic-pituitary-adrenal axis [19].

Although the range of complex mechanisms leading to resilient phenotypes is far from being fully determined, a model of resilience has begun to emerge from the study of adaptive stress responses at multiple phenotypic levels. Beginning during development, an individual's genes and their interaction with environmental factors (and perhaps with stochastic epigenetic events) shape neural circuitry and neurochemical functions that are expressed in an observable range of psychological strengths and behaviors characteristic of resilient subjects [20]. Various genetic polymorphisms affect a person's limbic reactivity and prefrontal-limbic connectivity, influencing one's initial responses to negative or traumatic events, as well one's capacity of cognitive reappraisal of those events [10].

Resilience and psychopathology

In the last decades, researchers and clinicians have been providing valuable information on the effect of resilience on general psychiatric symptoms and syndromes. Within an integrative approach focusing on the subject, based on a bio-psycho-sociocultural framework, the evaluation of resilient elements could offer a chance of proper and individualized prevention, diagnosis and care [21]. However, a focus on the effects of resilience, on depression in particular, considering trauma exposures other than childhood maltreatment, is still debated [3 22].

Apart from trauma, resilience perspective has been used in literature to explore risks and protective mechanisms in substance abuse [23], bipolar disorders [24], personality [25] and psychosis [26 27].

Moreover, measuring resilience scales can be useful not only to identify resilient characteristics in clinical samples but also to assess response to ther-

apy, since an individual tends to become engaged in more adaptive pursuits and problems tend to diminish whilst focusing strength and positive attributes [28].

Is resilience modifiable?

Can individuals become more resilient? What can we do to help developing resilience? What protective mechanisms can be learnt through life experiences, counseling, or therapy? Protective factors may be amenable to external manipulation and could present a potential focus for future treatments and interventions. A comprehensive biopsychosocial understanding of resilience could aid in promoting mental health and developing treatments emphasizing the building of psychological strength rather than simple symptom remediation. Results suggest that developing task-oriented coping skills and increasing access to experiences that elicit positive emotions and/or social support may help to promote resilience face to stress and adversity.

Psychological factors, such as low self-esteem, high neuroticism and negative beliefs about the self, may confer vulnerability to psychosis in high risk subjects [29 30]. Combination of pessimistic thinking, i.e. low self-esteem, pessimistic explanatory style and negative emotions, are involved in paranoid delusions [31]. All these are risk factors for psychosis and are related to resilience.

Studies have shown that certain forms of psychotherapy can enhance psychological attributes associated with resilience. For example, cognitive behavioral therapy can enhance optimism and facilitate reappraisal of traumatic events in a more positive light. Early interventions are likely to maximize stress resistance [32].

Other forms of interventions, such as cognitive remediation, can help the subject preserving his own sense of purpose face traumas or other psychopathological conditions. As a matter of fact, cognitive remediation is useful in neuropsychological functions improvement, providing positive learning experiences and opportunities to increase intrinsic motivation, and promoting awareness about learning style, optimal cognitive functioning, independent learning skills and awareness of social-emotional context, confidence and competence.

It is likely that these interventions can help building resilience which can be applied and developed amongst individuals in order to produce significant sustained enhancement over time [33 34].

It is time to put these issues in the agenda of translational psychopathological research, aiming at exploring how resilience interacts with vulnerability/risk factors to develop positive or negative adjustment.

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