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DISORDERS

Resilience and recovery in the context of psychological disorders

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## Abstract

**Objective:** This study aims to elucidate the similarities and differences between the concept of resilience and of recovery and build an argument for the integration of these two concepts. **Method:** A review of the literature on resilience and recovery was conducted. An electronic search of PsychInfo, Web of Science, and EBSCOhost databases was performed to identify relevant peer-reviewed studies. **Results:** A total of 53 articles on resilience, 29 articles on recovery, and 2 articles which covered both topics were reviewed and analyzed. **Conclusions and Implications for practice:** In the field of mental health, resilience and recovery have several factors in common such as the occurrence of adversity and the use of internal strengths and environmental resources to achieve greater subjective well-being. In view of these similarities, we propose that resilience and recovery are different constructs which converge in the recovery journey. We provide theoretical and empirical evidence to support this proposition. Interventions promoting resilience could help people with a psychological disorder not only adapt positively to adversities but also reduce the impact of life stressors on the clinical and personal recovery process, thereby more effectively improving mental health outcomes.

*Keywords:* resilience, recovery, mental health, mental disorders.

## Introduction

Interest in the concepts of resilience and recovery in mental health has increased substantially since the 1980s. The present article first introduces each concept and then builds on a theoretical comparison of them based on the existing research within the mental health field. Therefore, this review of the literature first aims to clarify the meaning and role of each concept. Next, we will develop an argument for the compatibility of these two concepts, proposing that resilience contributes to clinical and personal recovery and reducing the risk of relapse of psychological disorder symptoms.

Within the mental health context, there are multiple ways to define resilience. For instance, Rutter (1987, p. 316) defined it as “protective factors which modify, ameliorate, or alter a person’s response to some environmental hazard that predisposes to a maladaptive outcome.” Rutter’s definition synthesizes the traditional understanding of resilience, emphasizing that it is comprised of protective factors (where “protective” means preventing a person from developing maladaptive responses such as psychological disorders) and triggered by certain external or, to use his term, “environmental,” hazards. Rutter (1987), Garmezy (1991), and Werner and Smith (1992) explored resilience mainly among children and adolescents who thrived while living in difficult environments such as extreme poverty or dysfunctional families. They found that only a minority of these children developed serious psychological disturbances, and they described the qualities that differentiated these individuals from those who did not thrive. They used the term “invincible” to refer to what was later termed “resilient,” meaning individuals who successfully adapt to life despite adversity. Werner and Smith (1992) highlighted the role of social support, the crucial importance of a lifespan approach, and the finding that protective factors—which varied across

distinct phases of life—seemed to have a more general effect on adaptation than specific risk factors.

More recently, the definition of resilience has changed. Whereas it previously highlighted a set of protective factors in the face of adversity, it now emphasizes a process characterized by the interaction between protective processes (e.g., resources, competencies, talents, and skills) that are within the individual (i.e. individual-level factors), the family and peer network (i.e. social-level factors), and the community. The recent definition provided by Wathen et al. (2012) represents the new approach: “Resilience is a dynamic process in which psychological, social, environmental and biological factors interact to enable an individual at any stage of life to develop, maintain, or regain their mental health despite exposure to adversity” (p. 10). It has also been argued that resilience can be acquired by anyone (Connor & Davidson, 2003) and at any point in life (APA, 2010).

Traditionally, the disease model of mental illness has suggested that resilience is ascribed only to individuals who have overcome adversity and show no signs of maladaptive outcomes (Waugh & Koster, 2015). When a person has developed a psychological disorder in the face of adversity, scholars have referred to him or her as an individual in the process of recovery from adversity but not as resilient (Bonanno, 2004). For this reason, several studies have investigated factors that promote recovery in people with a psychological disorder (Drake & Whitley, 2014), but very few studies have explored resilience in this population (Deegan, 2005; Waugh & Koster, 2015). Nonetheless, other authors have already identified a link between resilience and relapse prevention (Waugh & Koster, 2015) and between resilience and recovery (Davidson, O'Connell, Tondora, Lawless, & Evans, 2005).

The current literature on recovery in mental health defines the term according to two main approaches. One approach is called ‘clinical recovery’ and focuses on the remission of symptoms (Andresen, Oades, & Caputi, 2003; Slade, 2009) and the ability to function in society (Harding, 2005). The second approach is called ‘personal recovery’ and is derived mainly from the consumer movement (Andresen et al., 2003; Slade, Amering, & Oades, 2008). This approach has been defined as “a deeply personal, unique process of changing one’s attitudes, values, feelings, goals, skills and/or roles . . . . a way of living a satisfying, hopeful and contributing life even with the limitations caused by illness” (Anthony, 1993, p. 15). Whitley and Drake (2010) extended the framework of personal recovery to include aspects of clinical recovery as had been suggested by Slade et al. (2008). As a result, they proposed an approach that integrates five dimensions to create a holistic understanding of recovery in mental illness: (1) clinical, (2) existential or personal, (3) functional, (4) physical, and (5) social. Although there is an increasing interest in interventions with a specific focus on personal recovery (Jones et al., 2015), the rate of clinical recovery from mental illness has remained relatively low over the past century (Drake & Whitley, 2014).

The understanding of the role of resilience in the recovery journey of people suffering from a psychological disorder could improve practitioners’ understanding of the process the person may be going through. Psychological disorders are different from somatic disorders in the sense that the origin of the disorder does not reside only within the individual. Psychological disorders are produced by conflicts in the interaction between an individual and his or her social and cultural environment (Joseph & Linley, 2008). Moreover, a better understanding of the role of resilience in people who have a psychological disorder may prompt the development of new interventions aimed at its

promotion so better treatment options may become available to them. These interventions could more effectively augment rates of personal and clinical recovery.

In this report, through a discussion of the relationships and differences between the constructs of resilience and recovery using empirically based arguments, we first aim to clarify their respective meaning and role in mental health. Second, this article supports the notion that resilience and recovery, either clinical or personal, are compatible constructs, but they are not interchangeable (Fletcher & Sarkar, 2013). Based on the relevant literature, we support the claim that resilience is experienced by persons with psychological disorders (Las Hayas et al., 2014) who may or may not recover from them. In this context, resilience acts as a moderator or mediator variable between the severity of the psychological disorder and the level of clinical or personal recovery and thus increases the probability that people with psychological disorders will recover.

## **Method**

An electronic search of the PsychInfo, Web of Science, and EBSCOhost databases was performed to identify relevant peer-reviewed studies published between 1950 and 2014. We searched for the keywords “mental health” and either “resilience” or “recovery” in the title of the article, in either English or in Spanish, and only in humans. More than a thousand articles were identified. We defined relevant studies as those concerned with at least one of the following: primary data from adult populations in a physical or mental health-care setting; systematic reviews and concept analyses of either construct published in journals targeting the subject areas of medicine, psychology, nursing, or health professions; and studies concerned with developing, testing, or

validating resilience or recovery scales. All articles were published in peer-reviewed journals.

To limit our search, we focused on articles dealing with individual and psychological resilience and excluded studies that explored other forms of resilience such as community, family, or biological resilience. We excluded articles that studied concepts related to resilience such as hardiness. We also excluded studies that dealt with physical illness because although physical illness is related to resilience and recovery, the studies diverged from this review's focus on psychological disorders.

## **Results**

Our final sample included a total of 53 articles on resilience, 29 articles on recovery, and 2 articles covering both concepts, but these two articles were not theoretical reviews studying the relationships between the target concepts. Table 1 presents the results of this review. It presents and compares the definitions, antecedents (i.e. criteria that must come before the concept for it to occur), attributes, consequences (i.e. endpoints that result from the antecedents and attributes), and interventions and empirical referents (i.e. questionnaires that measure the construct's defining attributes) of both resilience and recovery. The following lines present the main results regarding the aim of exploring the relationships, similarities, and differences between resilience and recovery.

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Both concepts share similarities. With respect to antecedents, both resilience and recovery require that an individual has undergone a traumatic experience before the phenomenon manifests. Another important similarity is related to the attributes of both concepts. The reviewed literature lists several attributes that appear in both studies of

recovery and studies of resilience. For instance, Ridge and Ziebland (2006) interviewed 38 persons who had previously experienced depression and identified authenticity, responsibility, and rewriting depression into the self in a way that re-energized life as the specific components involved in recovery; these factors have also been identified as factors of resilience (see Emlet, Tozay, & Raveis, 2010). Additionally, the Substance Abuse and Mental Health Services Administration (National Consensus Statement on Mental Health Recovery, 2004) listed the following factors among the guiding principles of recovery: hope, self-determination, and the presence and involvement of people who believe in the person's ability to recover and the importance of addressing emotional trauma. Several studies that address resilient qualities have identified the same principles as attributes of resilience: hope (Gillespie, Chaboyer, Wallis, & Grimbeek, 2007; Lloyd & Hastings, 2009), self-determination (Subhan & Ijaz, 2012), the presence and involvement of people who believe in the person's ability to recover (Glymour, Weuve, Fay, Glass, & Berkman, 2008) and the importance of addressing emotional trauma (Zaghout-Hodali, Alissa, & Dodgson, 2008). Another example from the scientific literature is the phenomenon of turning points, which have been proposed as key moments in both resilience and recovery frameworks [see Bennett, (2010), and Kogstad, Ekeland, & Hummelvoll, (2011), respectively].

This match of attributes had already been identified by Mountain and Shah (2008) who noted that when patients in the "movement for recovery" narrated the skills and individual strengths that helped them on their road to recovery, they were naming resilience factors. It follows that there is substantial overlap between the qualities considered facilitators of recovery and those traditionally considered aspects of resilience.

Similarities are also found in the consequences derived from both phenomena. The positive consequences of both resilience and recovery are a better level of health, improved social functioning, and greater well-being (Haase, Heiney, Ruccione, & Stutzer, 1999; Luthar, Cicchetti, & Becker, 2000; Windle, 2011; Davidson et al., 2005; Leamy et al., 2011). Another attribute shared by recovery and resilience is the importance of external resources for overcoming adversity and achieving the already stated consequence of recovering their well-being. However, the role of this attribute is different in recovery and resilience. External resources of resilience include perceived support from family or friends and the availability of health services and economic resources. The availability of external resources such as economic or health-care resources facilitates the development or activation of resilient qualities although these external resources are not essential for the development of intrapersonal resilient qualities (Ungar, Brown, Liebenberg, & Othman, 2007). In contrast, the recovery framework considers the integration of a person into the community (e.g., by having a job) to be evidence of the person's level of recovery, which means an important factor in recovery is the degree to which the person is successfully integrated as an active member of society and has an active role in the community (Leamy et al., 2011). Conversely, resilience is evidenced when individuals report experiencing less stress in the face of the initial adversity (Chmitorz et al., 2017). Therefore, the remission of symptoms or of other deficits is not a requirement for either recovery or resilience. For example, people who have lived through a trauma would prove to be resilient if they experience less stress in the face of a stimulus similar to the trauma than the stress they experienced when the original traumatic incident happened. However, recovery would be manifested if the person resumes a full life after a trauma. Yet another difference between the two concepts is that whereas the final consequence of recovery is improved

emotional, physical, and social functioning, the consequence of resilience is understood strictly in relation to the type of adversity experienced. Theorists (Rutter, 2013; Vanderbilt-Adriance & Shaw, 2008; Windle, 2011) have argued that if the adversity is a psychological disorder, a resilient behavior refers only to overcoming the adversity of its symptoms and does not necessarily entail resilience to other types of adversity (e.g., job loss) that may occur simultaneously.

There are other discrepancies between the terms. For instance, the difference between clinical recovery and the experience of resilience is clear-cut. Whereas resilience involves the development and use of specific cognitive and behavioral skills to adapt positively to adversity, clinical recovery focuses on only two factors: (1) the reduction of physical and psychological symptoms related to the disease and (2) the return of the person to premorbid levels of social functioning (Bellack, 2006; Frank et al., 1991).

Another difference stems from the origins of the concepts. The concept of ‘personal recovery’ was coined by a social movement involving psychiatric patients and their families who were protesting a health-care system that did not help them feel confident that recovery was possible, regain control over their own lives, or be treated as persons with self-control. However, the concept of resilience evolved from the work of scholars in developmental psychology and social work who wanted to understand why certain people develop into well-adjusted adults despite adversity. These scholars sought to explain how certain internal and external factors determine successful adaptation to adverse circumstances.

Two final differences between the concepts are that in resilience, the degree of positive adaptation necessary to be considered resilient depends on the magnitude of

adversity and that resilience works in an accumulative fashion, but these are not true in recovery. As for the former, Windle (2011) proposed that given the context of adversity, successful adaptation to a chronic illness can occur despite the continued presence of impaired functioning. An adaptation is also considered a sign of resilience (Windle, 2011) if the person maintains an average level of performance given the circumstances, for example, after a natural disaster, which is an adversity of considerable magnitude. The accumulative nature of resilience implies that exposure and positive adaptation to different risk factors increase an individual's level of resilience, so more resilience is accumulated as more adverse experiences are overcome (Rutter, 2013). Nonetheless, there is evidence that a person can overcome only a limited number of adverse experiences with resilience. There is no counterpart of this attribute in the recovery field.

## **Discussion**

The aim of this report is not to provide a comprehensive theoretical review of each concept since this is already established, although separately for each concept, in the literature. For comprehensive reviews of resilience, we refer the reader to excellent reports by Zautra, Hall, Murray, and the Resilience Solutions Group (2008); Davydov, Stewart, Ritchie, and Chaudieu (2010); and Richardson (2002). For reviews of recovery, we refer the reader to Davidson, O'Connell, Tondora, Lawless, and Evans (2005); Leamy, Bird, Le Boutillier, Williams, and Slade (2011); and Anthony (1993). This paper aimed to describe the similarities and differences between the concepts of resilience and recovery. By comparing the concepts, the meaning of each term and their respective role in the mental health field have been clarified. Our second aim was to

propose the inclusion of the resilience concept in the recovery framework in mental health.

One of the conclusions of this review is that there is a strong relationship between resilience and recovery in the field of mental health. Although scarce, there are studies that show the importance of resilience in recovering from various psychological disorders. For example, recent studies on resilience and recovery in people with symptoms of schizophrenia (Torgalsbøen, 2012) and eating disorders (Las Hayas et al., 2014) showed that most of those who recovered exhibited higher levels of resilience.

Further, in a qualitative study, Edward, Welch, and Chater (2009) interviewed eight people who recovered from a psychological disorder, including symptoms of depression, bipolar disorder, anxiety, postnatal depression, a sexual identity crisis, or a personality disorder, and identified the following factors of resilience that helped them recover: realizing the world is not a perfect place, realizing there are more people like them who are passing through the same experience, accepting the disease, accepting oneself, accepting the world as it is, having the necessary information about the disease to understand and control it, increased innocence and hope for a better life, self-regulation and taking time to get better, taking a more active role in the direction and content of one's life, understanding one's life as meaningful in itself and for others, doing things for their own sake, and doing things because they are good for oneself despite the limitations of the disease. A limitation of the latter study (Edward et al., 2009) was its small sample size and the heterogeneity of the participants' mental disorders.

Similarly, Dowrick, Kokanovic, Hegarty, Griffiths, and Gunn (2008) interviewed 100 people who had recovered from depression about the attitudes and

skills they had implemented and found useful in overcoming their disorder. The authors reported that resilience was among the reported attitudes. In terms of understanding resilience as 'a common magic,' resilience is described as a personal medicine that consists of making use of social and emotional support, creating new personal strengths, and increasing and expanding positive emotions.

In line with the above studies demonstrating the relevance of resilience when recovering from psychological disorders, several authors (Robertson & Cooper, 2013; Youssef & Luthans, 2007) and health campaigns have considered resilience an *asset* of the recovery process. For example, the recent 2010 campaign by the Royal College of Psychiatrists (UK) entitled "Recovery and Resilience" stated that "central to the theme of recovery is resilience, which allows for individual strengths and coping skills to surface in spite of adversity" (Bhui & Dinos, 2011). The American Psychological Association (2010) maintained that the challenges of life associated with recovery are common human experiences that require resilience. Accordingly, the classification of resilience as an asset in the recovery process is consistent with our understanding of both terms. When a person experiences the adversity of a psychological disorder, there eventually comes a time when the person wants to recover (i.e. the person does not want to be merely resilient but to recover fully); in general terms, recovery (i.e. resuming his or her full life) becomes the goal of the person who has the psychological disorder as well as the person's community and mental health providers. In contrast, the experience of resilience is desirable, but it is not the main goal. It is desirable because it empowers the person to achieve recovery.

Thus, we propose that resilience is an integral part of each person's experience with a psychological disorder; it is an asset in the recovery process and counterbalances

the impact of risk factors to facilitate the recovery process. That is, during the recovery process, the person experiences a certain level of psychological distress (a risk factor). It is here that factors of resilience counterbalance the impact of this risk factor in the larger context of the recovery journey, so the association between the severity of the psychological disorder and the clinical and personal experience of recovery is inverse and strong when the level of resilience is low and inverse and weak when it is high. Resilience, which can be understood as a “self-righting force” (Richardson & Waite, 2001, p. 66-67) or a “sort of character strength” (Peterson & Seligman, 2004, p. 77), varies in intensity during the recovery journey.

Our argument that increasing resilience predicts recovery is supported by theoretical research (Godwin & Kreutzer, 2013) and recent empirical evidence from pilot clinical trials of the efficacy of resilience-based psychological interventions in reducing symptomatology and improving someone’s quality of life (Loprinzi, Prasad, Schroeder, & Sood, 2011; Steinhardt & Dolbier, 2008; Tenhula et al., 2014). For instance, a systematic review and meta-analysis of randomized trials centering on the efficacy of resilience-training programs (Leppin et al., 2014) reported that trauma-focused resilience-training programs showed a moderate effect in reducing stress symptoms (pooled standardized mean difference (SMD) 20.53 [21.04 to 20.03]  $p = .04$ ) and a moderate effect in reducing depression (pooled SMD 20.51 [20.92 to 20.10]  $p = .02$ ). Las Hayas, Calvete, and Gomez del Barrio (2018) examined the longitudinal reciprocal associations between resilience factors, quality of life domains, and symptoms of eating disorders in 184 individuals reporting eating disorders symptoms. Results evidenced the reciprocal influence of these variables through time. Resilience factors predicted improvements in psychological and social domains of quality of life

and a reduction in eating disorders symptoms over time. Likewise, quality of life increased resilience consistently over time. Thus, the resilience process does not occur in a vacuum but within a cultural and social context that responds to it positively. This positive reception feeds back the resilient process by reducing the perceived stress burden in the resilient individual. Thus, the resilience process involves a spiral of interactions between the resilience responses and the external reactions that contribute to recovery.

Another longitudinal study of resilience in people diagnosed with bipolar disorder carried out by Echezarraga, Calvete, González-Pinto, and Las Hayas (2018) found that the self-confidence domain of resilience at baseline directly predicted an increase in personal recovery at follow-up, and self-confidence improvement mediated the relationship between the domains of resilience of interpersonal support and self-care at baseline and personal recovery at follow-up. Other studies have also shown that resilience is related to improved outcomes in symptoms and functioning in affective disorders (Choi et al., 2015; Griffiths et al., 2014; Min, Lee, Lee, & Chae, 2012; Wartelsteiner et al., 2016), schizophrenia (Torgalsbøen, 2012), and eating disorders (Las Hayas et al., 2014).

Wingo et al. (2010) found that resilience plays a decisive moderating role between having been a victim of a traumatic experience in the past (e.g., child sexual abuse) and developing depression in adulthood. Using a sample of 77 people with schizophrenia spectrum disorders, another study conducted by Johnson et al. (2010) explored the moderating role of resilience factors in preventing suicide. It was observed that positive affirmations about oneself, which is a component of resilience, moderated the relationship between hopelessness and suicidal ideation. Additionally, Hjemdal,

Friborg, Stiles, Rosenvinge, and Martinussen (2006) reported that the baseline presence of resilience factors interacted with stressful life events and protected healthy individuals from developing a psychiatric disorder at a six-month follow-up. A final example is the study by Boardman et al. (2011) who interviewed people experiencing depressive symptoms and concluded that it would be therapeutically effective to clarify for these people that they are not expected to have high pre-existing resilience levels and affirm that they can develop resilience by drawing on support networks and expanding positive emotions and inner strengths. Nonetheless, a large-scale trial focusing on the efficacy and effectiveness of resilience-based psychological interventions has yet to be conducted, so we should interpret these preliminary results with caution.

Despite the commonalities between resilience and recovery, few of the reviewed articles on resilience or mental health recovery have investigated the relationship between the concepts; they are usually treated independently. We also noted the paucity of empirical studies assessing the role of resilience in the journey to recovery. For example, a recent study by Chang, Heller, Pickett, and Chen (2013) which examined the recovery process and related factors in people with a psychological disorder did not use the word resilience. The same is true of two recent articles on the application of evidence-based practices to the study of recovery (Gordon & Ellis, 2013; Mueser, 2012).

### **Implications for Clinical Practice, Local Authorities, Social Inequalities and Public Health Teams**

Resilience and personal recovery are two positive constructs that are far from the current biopsychiatric disease model which is commonly focused on the deficits of

the person and not on his or her strengths and potential. An implication that the present review holds for the counseling field is described next. Eradicating symptoms must not be the primary focus of therapy; instead, therapy should be focused on helping people to resume a full life and help them realize and promote their positive emotions, internal strengths, and external resources that are present despite the stressor. As the evidence suggests, both induced positive emotions and individual differences in positive emotions predict improved recovery from stressors (Fredrickson, 1998).

Interventions focused on resilience and personal recovery should be personalized, meaning they should include a detailed assessment of the vulnerabilities present in the individual and their strengths. Once the vulnerabilities have been identified, an intervention plan is designed based on the promotion of their strengths to generate positive emotions and other positive attributes that characterize resilience and personal recovery. To assess the effectiveness of the intervention, measuring changes in resilience before and after therapy is recommended.

Resilience is an innate mechanism of self-righting (Masten, 2001; Werner & Smith, 1992) and is enhanced by individual traits such as high optimism, a tendency towards extroversion, and a high intellectual quotient. However, it also includes qualities that can be acquired through training during therapy. An intervention aimed at building resilience offers knowledge and skills that help participants adapt positively to future adversity (Haglund, Nestadt, Cooper, Southwick, & Charney, 2007). Resilience itself is, therefore, a target for treatment because it may moderate the impact of life stressors on the clinical and personal recovery process. In fact, Leppin et al. (2014) conducted the first systematic review and meta-analysis of resilience-training programs in adults, and they concluded that these programs generally improved several mental

health outcomes such as resilience, quality of life, stress, and depression or anxiety at a three-month follow-up. Among the moderating attributes of resilience commonly addressed in these programs are the encouragement of positive emotions, cognitive flexibility, social support, life meaning, and active coping (Leppin et al., 2014; Sturgeon & Zautra, 2010). Finally, Rutter (2013) argued that resilience does not require superior performance; rather, it means continuing a normal life course despite adversity. Therefore, clinicians should not expect positive posttraumatic growth, which refers to perceived positive self-changes in the aftermath of stressful events (Tedeschi & Calhoun, 1996), as a result of treatment even if patients demonstrate resilience factors in adapting to adversity.

Nonetheless, the onus of resilience and recovery should not be placed only on the individual person. There are also implications for social action and policy to eliminate some of these adversities and promote the protective factors, apart from individual interventions. Local authorities and public health teams are encouraged to delineate public health strategies for making communities more resilient (Mind, Mental Health Foundation, 2013). Resilient communities are prepared to detect, prevent, withstand and recover from adversities (Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008). Resilient communities provide social services, infrastructures and a common social response to prevent and promote better mental health for all, reducing health inequalities and improving physical health outcomes

### **Limitations of the present study**

A methodological limitation of the present manuscript is that we only selected articles with certain key terms in the title and did not search keywords or abstracts. This method probably missed relevant literature. Nonetheless, even with this limited

selection, the search retrieved more than a thousand articles. Although research on resilience has grown exponentially in recent years, there are still gaps in knowledge in this area that prevent us from being able to interpret results from the literature and draw conclusions accurately. For instance, the following areas in the field of resilience require further research on how resilience is affected by (a) the stressor characteristics such as number of stressors, their duration, and their intensity; (b) the context in which the stressor occurs such as the age of the subject, personality traits, genetics, culture, and socioeconomic context, and (c) the interaction between the stressor, the personal resources of the individual, and the context in which it occurs. Further research on resilience should also strive to provide a definition of resilient outcomes and determine how to measure them to empirically assess the relationship between predictors of resilience and resilient outcomes. For example, future research should describe the temporal relationship between the onset of resilience and the positive adaptive response. A final suggestion is to continue research on the way in which resilient factors interact with each other and the environment. Future studies on these topics will yield new data that will allow the creation of future theoretical models that more precisely define how resilience contributes to recovery in people who have a psychological disorder.

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