



Review of Resilience Conceptual , Assessment and Intervention

Yang Zongsheng^{1, 2*}, Liu Jing³

¹Christine University, Manila, Philippines

²Hunan University of Arts and Science, Chang de City, China.

³Zhangjiaping nine-year consistent school, Yuanling County, Hunan Province, China

Email: Yangzongsheng@live.cn, 843368221@qq.com

Abstract: Resilience is a crucial resource for promoting the development of both mental and physical health. Researchers have divided resilience into three main categories, namely qualitative definition, outcome definition, and process definition, depending on their perspective. Typically, resilience is evaluated using resilience scales and emotional scales, and interventions can be carried out through social movements, community education, school education, individual counseling, and group counseling. Protective factors in resilience facilitate effective coping with negative events and promote healthy physical and mental development. The aim of this study is to review the existing research on the concept, assessment, and intervention of resilience and to identify future research directions. These directions include clarifying the connotation and extension of the concept, constructing the assessment index system, exploring the mechanism of action, expanding the coverage groups and contents, combining the theory and empirical evidence related to resilience and mental health literacy, and conducting in-depth research to improve the overall health and well-being of the public.

Keywords: Resilience; Concept; Assessment; Intervention

Introduction

Introduction

As the development of human history continues to advance, the development of spiritual civilization seems to be relatively lagging, while material civilization is greatly enriched. With the global integration promoted by information technology, the speed and influence of material and information dissemination have increased exponentially, which makes more and more disasters caused by man-made and natural factors bring more heavy impacts and widespread effects on human mental and physical health. Like the "COVID-19 pandemic" that has lasted for three years, this situation has had a profound impact on economic development, lifestyles, and public physical and mental health around the world. Many people's physical and mental systems have suffered during the three years of the pandemic, but many have also adapted and developed well over the three years. What are the differences in the development of individuals? What can individuals do to better respond to adverse events? Psychology researchers in the 1970s and 1980s identified similar phenomena and conducted research on them, then introduced the concept of resilience. That gave the public a new vision of how to respond to adverse events and extreme disasters and proposed a solution to the problem. As theoretical and practical research related to resilience continues to advance, resilience has shown great potential and positive effects in helping people cope with extreme events such as adverse situations and disaster hazards, especially in the field of clinical psychotherapy and caregiving research on coping with traumatic stress disorder and adaptation problems brought about by negative factors, resilience-related theoretical and practical research plays an important role. This paper attempts to review the concept, assessment, and intervention role of resilience, clarify the current status and development of resilience research in China and abroad, and provide some insights for the follow-up research on resilience in China.

The conceptual connotation of resilience

Resilience (also translated as psychological resilience, or mental resilience) refers to the phenomenon that the physical and psychological development of individuals who have experienced or are experiencing severe stress, adversity, dramatic changes, or adverse events in the previous, but the physical and psychological development of the individual is not damaged, but becomes stronger and stronger (Xi Juzhe, Song Lanjun, Zuo zhihong, 2021) ^[1]. The study of resilience is a theoretical and empirical study conducted by researchers who first discovered the phenomenon that individuals in adverse growth environments or facing negative events still develop well in reality. Due to the different viewpoints and research focuses, researchers have different understandings of the concept of resilience. Gemma Aburn, Merryn Gott & Karen Hoare et al. 2016^[2] used a comprehensive review method to analyze and summarize 100 thematic literatures about resilience from 2000-2015, and the most important finding of the study was that resilience still does not have a universally accepted definition as of 2015.

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Initial research on resilience focused on finding the characteristics and capacities that help individuals overcome adversity and develop positively (Wildavsky, 1991; Horne and Orr, 1998); and on the positive outcomes of individual development after experiencing an adverse crisis (Best, Garmezy, 1990; Marten A S, 2001); As research progresses, researchers gradually find that resilience is a synthesis of social, family, and individual physical and mental characteristics factors, and research also finds that resilience can provide or be enhanced as the individual faces, overcomes, or even encounters the adversities (Grotberg, Edith H, 1996), so more attention has been paid to the dynamic and processual characteristics of resilience (Paton, Smith and Violanti, 2000)^{[3][4][5]}. Therefore, from the different viewpoints of mental resilience research, the conceptual definition of resilience is divided into three main types: the trait definition, the outcome definition, and the process definition. The development of definitions of resilience, from results focus to more process focus, reflects the researchers' deepening understanding and research on the concept of resilience itself, especially the process definition, which is of great significance for intervention research on resilience. Some of the defining elements of the three types of resilience are shown below for details in Table 1.

Since this century, resilience researchers have become more and more likely to combine research with studies related to positive psychology, arguing that resilience is fundamentally a positive force that comes from the continuous growth and development of individuals (Liu Dan, Shi Guoxing, and ZhengXinhong, 2010)^[6].

Combined with previous studies, the author believes that resilience is a multidimensional structure concept, which refers to an individual's ability to cope with stress, frustration, trauma, and other adverse life events and extreme crises based on their original psychological traits, and to continuously reorganize and improve with the coping process, which is more stable over a period of time and develops with the influence of the individual's experience, family and social environment. Resilience is a continuum of traits, outcomes, and processes that are a continuum of adaptation or successful adaptation.

Table 1 Definition and classification of resilience

| Category | Concept proposed person (time) | Definition of resilience |
|----------------------|--------------------------------|---|
| Trait Definition | Wildavsky,1991 | Resilience is the ability that an individual acquires after experiencing unexpected risks and responding effectively to them. |
| | Werner E E,1995 | Resilience is the ability of an individual to cope with stressful, high-destructive adversity positively and to perform less undesirable behaviors. |
| | Horne and Orr, 1998 | Resilience is an essential quality for individuals, groups, and organizations, as well as for the system as a whole, able to cope effectively with significant changes that disrupt the expected pattern of events without engaging in prolonged regressive behavior. |
| | Mallak, 1998 | Resilience is the ability of an individual or organization to quickly conceive and implement positive adaptive behaviors that match the situation at hand while under minimal stress. |
| | Davidson RJ,2000 | Resilience is the ability of an individual to maintain a better sense of positive emotions and well-being in the face of significant challenging, highly destructive difficulties. |
| Resulting Definition | Best, Garmezy,1990 | Resilience is the result of an individual's ability to adapt well even in the face of significant challenges and highly destructive difficulties. |
| | Marten A S,2001 | Resilience is the phenomenon and result of an individual's ability to adapt and successful development even in the face of disadvantage or difficult challenges. |
| Process Definition | Luthar S,2000 | Resilience is a dynamic process by which individuals can adapt better to the external environment in adverse situations. |
| | Rutter ,2002 | Resilience is the process by which risk factors and protective factors confront each other. |
| | Paton,Smith& Violanti,2000 | Resilience describes a positive process of self-correction, learned wisdom, and growth - the ability to function mentally far beyond expectations based on an individual's ability and past experiences. |

Assessment of resilience

Because the definition of the concept of resilience has not been standardized, the scales related to the assessment of resilience are different and vary to some extent. The instruments for assessing resilience can be divided into two main categories according to the way of measurement: self-reported scales that directly measure the mental resilience of individuals, which are based on relevant theoretical models and are administered. The other kind of instrument is the indirect observation and recording questionnaires and scales, which are used to indirectly measure or investigate the resilience of individuals (especially for children) through observation and recording. Resilience assessment instruments can be divided into three main categories depending on the target population: instruments for adults, instruments for adolescents, and finally, instruments for children.

The self-reported scales

Most of the instruments used to assess resilience in adults and adolescents in foreign research are self-reported scales with direct measurements, such as the Resilience Scale (Connor-Davidson Resilience Scale, CD-RISC) developed by Catherine M. Connor and Jonathan R.T. Davidson (Connor & Davidson, 2003)^[7], which has been influential and frequently used in the field of resilience research in China and abroad. The CD-RISC (Connor & Davidson Resilience Scale), which has 25 items and scored on the Likert 5 scale, focuses on an individual's subjective feelings in the last month and measures five dimensions of resilience, including personal competence, tolerance of negative emotions, acceptance of change, control, and mental influence. The higher the score, the higher the degree of resilience and the internal consistency reliability of the CD-RISC Resilience Scale is 0.89, and the retest reliability is 0.87. Yu XiaoNan and Zhang JianXin (2005) revised the CD-RISC Resilience Scale based on cross-cultural consistency research. The result of the study demonstrated that the CD-RISC Resilience Scale is suitable for Chinese people (Yu XiaoNan and Zhang JianXin, 2007)^[8]. Therefore widely used in domestic research. Similar to the study of Yu XiaoNan and Zhang JianXin, it has found that the 25 items of the CD-RISC can measure the resilience level of the subjects, But the scale's internal structure is influenced by the cultural background and personality traits of different countries and regions, which affects the number of extracted factors and factor naming. The CD-RISC-10 is a 10-item scale with a 5-point Likert scale that is unidimensional and measures the individual's ability to tolerate change, personal problems, illness, stress, failure, and feelings of distress. The test results show that the scale is reliable and valid. (Chen Wei, Yang Tao, Gao Rongfen; 2021)^[9].

More widely used is the Ego-Resiliency Scale (also translated as the Ego-Resiliency Scale, ER89), developed by Block and Kremen in 1996 based on the definition of "Ego-Resiliency" It is an inventory that reflects the resilience of the self and is suitable for use in a non-psychiatric context, focusing on the subject's ability to regulate emotions and behaviors in the face of frustration and stressful situations. The scale consists of 14 questions and scored on a 4-point scale, with an internal consistency coefficient of 0.76 (Jack Block and Adam M. Kremen, 1996)^[10] for the English version and an internal consistency coefficient of 0.77 and a split-half reliability of 0.80 (Yu XiaoNan and Zhang JianXin, 2007) for the Chinese version of the Self-Resilience Scale. This instrument has been used in many resilience-related studies in China and abroad because of its appropriate number of questions and easy-to-understand content. However, the Chinese version of the Self-Resilience Scale has a slightly lower reliability than the CD-RISC due to cross-cultural differences. Therefore, this scale has rarely been used in Chinese resilience research.

In addition, the Resilience Scale for Adults (RSA) was developed by Norwegian scholars Hjemdal, Friborg, Martinussen, and Rosenvinge in 2001^[11] to measure the protective components of individual resilience. The scale includes a 16-item "personal competence" dimension, a 12-item "social competence" dimension, a 9-item "social support" dimension, a 5-item "family Oddgeir Friborg, Odin Hjemdal and their The scale was revised in 2003, and the revised scale still has 33 items in 5 dimensions. The scale is widely used in clinical and health psychology because it can measure the protective components of resilience and can prevent maladjustment and psychological disorders to a certain extent.

For instance, the Resiliency Scale of University Students, developed by Yang Yi, Huang Fang, & Jiang Nongjuan (2009)^[12], includes three items on the "self-acceptance" dimension, three items on the "problem-solving" dimension, five items on the "self-efficacy" dimension, five items on the "family support" dimension, and seven items on the "family support" dimension. problem-solving" dimension, "self-efficacy" dimension of 5 items, "family support" dimension of 5 items, "stability" dimension of 7 items, and The scale has 31 questions in 6 dimensions, including the "stability" dimension in 7 items and the "friend support" dimension in 8 items. The overall α coefficient of the scale was 0.8594, and his test results suggest that the scale is reliable and valid. In the last decade, the scale has been widely used in studies of stress resilience among Chinese college students, but studies have shown that the scale focuses on subjects' attitudes and that subjects' scores do not improve with traits or abilities, so its applicability is somewhat limited in post-intervention controlled studies.

Hu Yueqin and Gan Yiqun (2008)^[13] developed the "Adolescent Resiliency Scale" based on a process model of resiliency through an interview method, which is suitable for Chinese adolescents. "Emotional control", "Positive cognition", "Family support", and "Interpersonal assistance". The scale has good reliability and validity and is widely used in the field of group resilience research in Chinese primary and secondary schools.

Indirect observation record scales

Indirect observation assessment instruments for children's resilience mainly come from abroad, the most widely used ones are the California Children's Collection Questionnaire (CCQ-Set) developed by Block, J., & Block, J. H. (1980)^[14], which is based on the California Adult Questionnaire (CAQ; J. Block, 1978) for The questionnaire consists of 100 broadly stated items about the child's psychological characteristics that are observed and assessed by the child's kindergarten teacher, who is required to undergo a rigorous training before the formal administration of the test.

In conclusion, the assessment instruments of resilience at China and abroad are relatively abundant, especially the relevant foreign assessment instruments, which have developed numerous scales or questionnaires based on different conceptual definitions and theoretical models of resilience and from different research paradigms, and the development of these assessment instruments has provided inexhaustible impetus for the in-depth development of theoretical and practical research on resilience. It remains to be noted that resilience measurement tools are influenced to some extent by regional and cultural differences. Because of the contents measured by different assessment instruments are also different. Therefore, when using different assessment instruments, it is necessary to select appropriate scales according to the research subjects and research objectives, and further verify the reliability and cross-cultural consistency of the assessment instruments, and never directly transfer them for use.

Interventions for resilience

The research on resilience intervention is mainly based on two main dimensions: prevention and clinical intervention, and theoretical perspectives on resilience are constantly tested and improved in the process of prevention and intervention. In the study of resilience interventions, four levels can be distinguished according to the subject of intervention: individual, family, school, and society (country). At all levels of resilience intervention, the development and implementation of programs focus on the cultivation and evocation of protective resources and positive strengths in individual resilience. In particular, in individual and group counseling and psychotherapy, the technical approach of researchers and clinical psychologists focuses on discovering the positive qualities and resources that individuals possess, and using them to promote positive interactions between individuals and their environment, thus further enhancing the psychological resilience of individuals and groups and promoting their development.

The role of and psychological counseling has received increasing attention at the level of individual interventions for resilience. The International Resilience Project (IRP), developed by Grotberg, E. H. (1996)^[15], is a well-known research project whose main goal is to develop protective factors in the resilience traits of individuals. "I have, I am, I can" strategy, through which individuals can build and enhance protective factors, in which "I have" is to help individuals to explore their own external (family, school and social) support the "I have" strategy help individuals to explore their external (family, school, and social) support resources to help them feel safe and supported; the "I am" strategy help individuals to explore their internal support resources to help them develop positive self-perceptions and positive attitudes and beliefs, including autonomy, self-esteem, and hope; the "I can" strategy help individuals to develop and enhance their protective factors. And to help individuals develop and enhance social skills, including interpersonal skills, problem solving and impulse control. The research program was conducted in more than 10 countries and regions at the same time at the last 20 years, with promising achievements, and it was also verified to be able to help individuals enhance their resilience to deal effectively with adversity.

At the school intervention level, a more established case is Henderson and Milstein's (1992) model of six strategies for promoting students' resilience in school settings: (1) providing opportunities for students to participate in activities that are meaningful for resilience enhancement; (2) setting high expectations for students, which is goal-oriented; (3) providing students with unconditional positive attention and support (4) increasing students' pro-social tendencies and building positive social relationships; (5) setting clear and consistent behavioral norms for students; and (6) teaching students necessary life skills. These strategies are effective in enhancing students' resilience in many subsequent studies (Kris Bosworth & Erik Earthman, 2002)^[16].

Community is one of the important places where people live their daily lives, and therefore, community service is an important element in promoting the development of resilience among members of society. The community from a resilience perspective is part of a social support system where individuals can build strong relationships and gain strength to cope with adversity, both within and outside the community. One of the better known community intervention programs is the Employee Assistance Program (EAP) in the United States, a workplace-based service designed to provide employees and their family members with the emotional and material support necessary and available to help them to adapt well in stressful situations (Taranowski, C. J., & Mahieu, K. M., 2013.)^[17]. The program mainly involves psychological professionals and provides professional psychological assessment and advice to the employees of the company, as well as free, confidential, short-term counseling and referral if psychological problems are identified. The program requires a lot of manpower, time, and funding due to its professionalism and complexity, and although it cannot be fully replicated and scaled up, it does provide a good idea and solution to a certain extent for intervention research on resilience.

In conclusion, resilience intervention is the starting point and ultimate goal of resilience theory research, and resilience theory and practice interventions are promoting each other, and with the continuous deepening of resilience research and expansion of research perspectives, more meaningful research results will be produced.

Conclusion and Prospects

Theoretical and practical research on resilience has been relatively brief in the history of psychology, but in the short time it has been available, its findings have been more fruitful. As an effective way for the public to cope with negative events and extreme events such as disasters, it plays a vital role in maintaining healthy human development. Currently, the research on resilience has been expanded from the purely psychological level to ecology, sociology and even economics, which has also played a positive role in enriching the theoretical and practical research in related fields. However, there are still some shortcomings and shortcomings in the research on resilience, especially the research on resilience in China started late, and the research foundation and research results are still very weak compared with other psychological research topics, and we still need to further solve many problems.

Research to clarify the concept of resilience

Over the past decades of resilience research, there have been numerous empirical to theoretical results, but there is still no unified concept, and the connotation and extension of the concept remain vague. Although this has to a certain extent promoted the development of resilience research, so that the research paradigm and research methods are not stagnant, on the other hand, it also highlights that researchers have a different grasp of the connotation and extension of the concept of resilience and cannot reach a consensus. Therefore, in the future, the definition of the connotation and extension of the concept can be combined with relevant research on natural science methodology and ontology, and based on the synthesis of existing empirical and theoretical research, a quantitative and qualitative scientific analysis method can be used to further define resilience scientifically.

Research on constructing assessment indicator systems

The existing research on resilience has compiled and used a wide range of assessment instruments, but their validity and applicability are limited, and their generalizability needs to be verified. Most of them are developed for foreign research groups and have not been validated for cross-cultural consistency; the development of localized assessment instruments for resilience research in China still needs to be strengthened. Therefore, in the future, there is a need to further develop a more comprehensive and scientific assessment instrument to meet the needs of large-scale and different groups of researchers in terms of the content of resilience assessment in conjunction with the research on the concept of resilience. With the emergence of AI technology, it is also possible to combine multimedia, computer networks, artificial intelligence, virtual reality, and other technologies to develop assessment instruments that are vivid, more accurate, and more effective.

Expansion of research objects and contents

Although current research confirms the effectiveness of resilience on individual and community health development, there are many influencing factors and mechanisms of action between resilience and health development that need to be studied in depth. For example, which protective factors positively influence stress, which are core factors throughout lifelong development, what are the specific mechanisms by which different factors influence healthy development, and so on. These issues are not yet clear and need to be further explored and studied. The current study groups of resilience in China mainly focus on community residents and students, while the sample size of groups such as the elderly and special occupational groups still needs to be increased. In future studies, we need to take into account the differences in the mechanisms of different populations and different influencing factors to conduct more targeted assessments and interventions. While there are many cross-sectional studies on resilience, there is a lack of follow-up studies that explore the causal relationship between resilience and health development. Compared with other countries, there are few studies on resilience interventions in China, and there is a lack of empirical evaluation of intervention effects.

In conclusion, resilience research in China should not simply copy the models of other countries, but serve the current needs of China's national mental health promotion and be appropriate to China's society, economy, and culture. The ultimate goal is to establish an effective mental health service system in society to actively prevent mental illness, overcome adversity, and enhance well-being.

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