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Operational problems of developmental cognitive resilience in children and targeted counseling solutions: A historical review.

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Abstract

Acquired Resilience (AR) in children and adolescents following an Adverse Childhood Experience (ACE) is a developmental phenomenon that psychologists have faced difficulty in operationalizing within research analyses. The lack of standardization in the scientific literature has prompted efforts to identify and classify physical, psychological, cognitive, and behavioral dimensions of AR, in the effort to streamline future research investigating targeted solutions for improving AR in marginalized communities. This paper aims to explore difficulties of operationalization behind Acquired Resilience (AR) in the literature and propose targeted counseling solutions based on the analysis.

Adopting a historical, retrospective perspective on prominent psychological research in pioneering the field of AR research, it was considered that the multidimensionality of resilience, which varied based on the trauma observed and the cultural group to which the individual belonged, prevented an accurate and concise operationalization of the phenomenon.

Furthermore, it was demonstrated that familial support groups, as well as school systems, contributed to the development of resilience in individuals. Based on these results, a resilience counseling service and a website platform was proposed to raise awareness about best practices of improving resiliency.

It was concluded that psychologists must first use the available evidence on resilience to find a quantifiable operationalization of resilience that does not compromise its multidimensionality. After this task, psychological research on resilience will be less subjective and more standardized. In doing so, the findings may point toward more valuable information that can be disseminated to the public, such as through resilience counseling services and media awareness initiatives.

Keywords: Resilience, Resilience counseling, Cognitive psychology, Operationalization, Behavioral and psychological sciences.

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Introduction

Acquired Resilience (AR) is a developmental phenomenon observed in children and adolescents following Adverse Childhood Experiences (ACEs). The American Psychological Association (APA) currently refers to resilience as "The process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress." Although straightforward at first glance, the definition of AR has sparked controversy in the scientific community [1]. As Dr. Steven Southwick, professor emeritus of psychiatry, PTSD, and resilience at Yale school of medicine, stated in a panel discourse, ". . . it is important to specify whether AR is being viewed as a trait, a process, or an outcome . . ."[2].

A commonly cited understanding of psychologically operationalizing resilience has adopted a binary approach [3]. Simply put, an individual with resilience must meet two conditions: he or she must have endured a traumatic or stressful event coupled with some significant positive adaptation from that experience. In recent literature, this idea of a two-part construct has been embraced by other psychologists who have studied AR in both primary and secondary data analysis [4-6].

Let us consider the first element of consensus understanding of resilience: trauma. The National Child Traumatic Stress Network (NCTSN) has identified a plethora of adverse childhood experiences to categorize childhood trauma. We can use the following list of ACEs to determine if an individual fulfills the first requirement of the binary approach to resilience [7].

- Bullying
- Community violence
- Complex trauma disasters
- Early Childhood Trauma (ECT)
- Intimate Partner Violence (IPV)
- Medical trauma
- Physical abuse
- Refugee trauma
- Sexual abuse
- Traumatic grief

The second element, significant positive adaptations, is more ambiguous and subjective. It is difficult to measure the "bounce back" effect in resiliency, as it varies depending on the observed ACE. In this way, positive adaptations of resilience cannot be measured, but rather reasonably inferred based on compelling evidence. However, research contributions have attempted to expand upon, and even refute, the binary approach in order to clarify a more standardized definition of resilience.

Literature Review

The debate in operationalization of resilience only exacerbates the problem at hand. Without a definitive definition of resilience, research in this aspect of human behavior will not be streamlined and able to be compatible to produce meaningful conclusions on the concept of human resilience. Having a specific and standardized operationalization of resilience will streamline future research and enable cognitive psychologists to develop initiatives to raise awareness on how to induce relevant behavioral characteristics in marginalized communities most prone to ACEs.

This research paper is different from past literature on operationalizing human resilience as this paper aims to provide tangible and actionable initiatives, informed by the evidence put forth in this review, in order to implement in communities to improve resilience in community members [8-9].

Problems in operationalizing resilience

The significance of the positive adaptation in the operationalization of AR has been questioned by some psychologists in the field. Peter Fonagy, psychoanalyst and psychiatrist at the university college London and chief executive of the Anna Freud center, characterized AR as normative development under adverse conditions [10]. Rather than acquiring a newfound and significant adaptation as a result of a difficult situation, Fonagy suggests that perhaps resilience may be simply a sustainment of normal and healthy development under such conditions. Michael Rutter, late professor of developmental psychopathology at the King's College London institute of psychiatry, further expounds upon Fonagy's work by questioning the significance of the positive adaptation element of the two-part construct.

Rutter contends that AR should not be limited to only positive adaptations, but rather any act of resistance to adversity positive or negative [11]. In a meta-analysis on current literature on AR conducted in 2018, it was also argued that "resilience can be viewed as being on a continuum ranging from low (poor bounce-back ability) to high (strong capacity to recover) and extremely high." [12]. However, all three of these psychological studies only open a diverse range of outcomes that could be operationalized as resilient, making the term's definition even more ambiguous and difficult to standardize for psychologists when publishing literature about the topic.

In considering these studies and other related research in the literature, the primary challenge of operationalizing resilience can be ascertained. Resilience can be viewed as an "umbrella term" that takes a different form based on the observed ACE. As there are several etiological factors contributing to the development of resilience, it is difficult to pinpoint one cause. As a result, no operationalization of AR can fully capture the term's meaning in a concise manner without compromising its multidimensionality.

Consider the following hypothetical scenario. Suppose a child lost their parents at four years old due to a car crash, an example of ECT on NCTSN's list of ACEs. The child continues to work hard in school and receives exceptional grades. In this view, we may consider the child resilient, as he or she is able to positively adapt academically despite the lingering grief.

However, if the child was actually hiding his emotions from others and crying himself to sleep every day, would he or she still be considered resilient? Some may still answer "yes" as the child is able to contain his or her emotions and maintain normative development, whereas others may argue that the child's unrestricted emotional expression compromises a significant positive adaptation. Here, we reach a crossroad in regards to the definition of resilience.

Problems in cross-cultural applicability of resilience

The difficulty of understanding resilience extends beyond its operationalization; its applicability to a diverse range of groups remains challenging as well. It has been empirically demonstrated that the applicability of resilience varies based on culture [13]. Some cultural groups may dismiss the ACE element of the resiliency two-part construct and focus solely on an individual's ability to thrive in a particular environment. Perhaps in other cultures, stoicism, emotional expression, or a combination of both may be considered resilient.

Multiple psychological studies and literature have attempted to expound upon the nuances in the applicability of resilience to diverse groups. For instance, it was found that African American groups defined resilience as resisting racial segregation-related experiences, Asian groups associated resilience with immigration and adapting to new cultures, Latinos and Mexican groups perceived resilience as correlated with families and the community.

American Indian and Alaskan Native groups linked resilience with assimilation, relocation, spirituality, and socioeconomic change [14-17]. Evidently, different groups have slight variations in their understanding of resilience and its applicability to their cultures. Even if psychologists are successful in pinpointing a universal definition of resilience that does not compromise its multidimensionality, it will certainly be difficult to apply this understanding to diverse populations.

Improving resilience through family systems

Harvard's Center on the Developing Child (HCDC) has identified some factors on how AR can be developed [18].

- Supportive adult and child relationships

- A growing sense of self-control and efficacy (even if in reality, it does not exist)
- Opportunities to develop skill sets without a fear of failure
- Coping with challenges and hardships
- A sense of culture, hope, faith, and community with the environment

Intuitively, it makes sense that resilience can be better developed at younger ages, due to "a high degree of maternal care and protection *i.e.* resilience-enhancing during infancy," but slower in development at older ages, as it "may interfere with individuation during adolescence or young adulthood" [2]. In this analysis, the development of resilience in children, which may carry over to older ages, will be intensely studied. Psychological research has narrowed down specific factors beyond simply developmental stages in life that may have an equally significant impact on AR development.

A prominent pioneering study in 1972 examined how AR development occurred. The subjects were two monozygotic Czech twin boys aged seven years old who were discovered living in a dark cellar, where they had been kept prisoner for over five years by their psychopathic parents. The twins were subject to frequent beatings and malnourishment. As a result, the boys suffered several psychological and physical problems, were unable to speak, and were constantly afraid. Here, we can affirm that the boys fulfill the first element of the two-part construct of resilience adversity as the identifiable ACEs are ECT and physical abuse [19].

The boys were taken away from their parents by authorities and rehabilitated until two women adopted them. It was observed that the twins were able to speak properly, socialize, and exceed expectations in academics before turning 14 years old. At this point, we witness the "bounce back" effect typical in resilience. The researchers were able to attribute the twins' resilience not only within themselves, but also by the fact that they were together, dealing with their hardships every day. It was noted that the boys adopted a more positive view of their trauma, perceiving themselves as resilient survivors rather than victims of adversity. The warmth and care given by the two women empowered the twins to positively adapt to their new environment.

From the case study, the researchers concluded that familial support and a perceived sense of self-control in a particular situation played a key role in AR [19]. Consider another prominent study of research on AR in children. In 1951, a psychological study examined six German-Jewish children who were raised in a Nazi deportation camp. During three years of living in these camps, the children witnessed horrific and traumatic crimes committed by the Nazi regime, not to mention having little food or energy to properly live. Again, we witness a combination of ECT, refugee trauma, and terrorism ACEs in the children, fulfilling the first condition of resilience [9].

Once the children were rescued, it was noticed that they developed an impenetrable bond for each other, unlike anything the researchers had seen before. Similar to what was discovered in the previous case study; the children used each other as emotional support to endure adversity and attempt to maintain normative development. In fact, it was noted that the children were attached to each other so much; they likened the adult researchers to the Nazi terrorists. This notion made the children in constant fear of the research environment. Following their horrific childhoods, the children were taken to England, where five out of six children were adopted.

Within a year, it was documented that the children began to embrace adult relationships, although reluctantly. They performed well linguistically, academically, and socially, which enabled them to positively adapt to their new environment. The researchers were able to affirm that adult and child relationships played a significant role in not only acclimating the children to their new British environment, but also allowing them to endure and "bounce back" from the ECT they had experienced at the Nazi deportation camps [9]. The case study ultimately reveals the importance of building a sense of support and community towards developing resilience.

Improving resilience through school systems

Let us consider a unique example of research considering the role of school systems in AR development. A psychological study aimed to examine the role of after-school programs in disadvantaged US children on building AR. 599 disadvantaged children, boys and girls aged from six to ten years old, from an unspecified urban American city participated in a longitudinal study. The researchers operationalized strong academic performance as high scores in school grades, reading achievement assessment scores, and teacher ratings of student performance and motivation over one school year [20].

The sample was divided into four groups, and one "pattern of care" that was identified as contributing to the "positive adaptation" element of the two-part construct of AR was assigned per cohort:

- Specialized after-school programs
- Parent support
- Sibling support
- Teacher support

The researchers found that, after a year, the children in the after-school program group scored the highest on academic performance assessments and were observed to have higher motivation and excellence in the classroom compared to children in the other three groups. Here, the positive adaptation element of AR is satisfied; the children were able to achieve academic success despite their socioeconomic status [20].

The study was able to conclude that school systems, or at least an environment that promotes academic excellence, contributed to the children's success in the classroom. The children in the after-school programs were able to adapt to stressful situations and new environments due to a school intervention that created the after-school program in order to maintain their level of success. It can be implicitly argued that the development of AR in these children contributed to their exceptional academic performances, demonstrating how

perhaps a school system may facilitate a particular environment that promotes resilience. Despite potential confounding variables including demographics and intellectual capacity, the study presents promising results in leveraging school-based programs as a tool to induce AR.

Targeted counseling solutions for AR development

Based on the preceding historical review of pioneering psychological literature in the field, solutions to improve AR and general mental health of humans through appropriate institutions can be developed. For instance, the National Institute of Mental Health (NIMH) can offer a specialized resilience counseling service within its current crisis counseling service. This opportunity will allow individuals who have experienced traumatic and stressful events including ACEs for younger clients to share their stories and receive advice on how to cope with their situation. The goal of resilience counseling is, in short, to initiate the "bounce back" effect: to facilitate the client transition from the first element of resilience, trauma, to the second one, positive adaptations. The NIMH could develop a special website platform for this service in order to streamline client appointment bookings and follow-up meetings from mental health physicians.

Moreover, the general public should be aware of the current understanding of AR. Through the proposed website platform, virtual health information products can be created, such as posters, info graphics, and videos, in order to raise awareness about best practices to improve resilience outlined in the previous section. School institutions can localize these products to younger students who may be more vulnerable to ACEs. Using this newfound information, schools can form support groups, student families, coaching, and after-school programs in order to facilitate resilience development in the children.

Discussion

A study was conducted to assess the effectiveness of one-month resilience training, an intervention similar to the proposed initiative in this section, in health services staff, which are subject to stressful situations on a daily basis. 50 to 60 clinical and non-clinical staff was selected and was given a positive mental health assessment pre and post-resilience training.

Using IBM SPSS 25, the researchers were able to measure the well-being, resilience, depression, anxiety, and stress of the participants. Most notably, the results showed statistically significant improvements in AR and wellbeing, along with significant decreases in mean depression, anxiety, and stress were also observed in the participants after the training. The researchers also noted that participants who started with relatively lower resilience and wellbeing scores generally received greater results from the intervention [21]. The study ultimately provides compelling evidence for the effectiveness of our proposed resilience intervention initiative.

In effort to concentrate AR training, it must also be noted that certain populations may require more counseling and resources than others. The NCTSN has identified several groups who experience trauma and stress more regularly than the average population [22].

- Trauma and substance abuse
- Economic stress
- Military and veteran families
- Intellectual and developmental disabilities
- Homeless youth
- LGBTQ+ youth

It is necessary that future efforts, as well as the proposed initiative stated above, should be concentrated towards these specific groups, as they experience more severe trauma and stress than the average individual [23-25].

Before psychologists and public health advocates attempt to disseminate specialized resilience counseling services through the NIMH organization, however, we must return to our original problem: operationalizing AR. When identified, psychologists have a consistent way of measuring that variable in their studies, which will prevent any inconsistencies in research and thus increase reliability. As AR varies in form based on the observed ACE in our particular case, psychologists need to identify a concise and appropriate method of measuring resilience in all cases.

Conclusions

Furthermore, it is necessary for psychologists to develop a way to quantify AR, which, again, must be consistent with the definition and operationalization of resilience itself. These dimensions include physical, psychological, cognitive, and behavioral that must be considered when proposing a numerical value system for AR. In addition, this quantification must account for different cultures having distinct understandings of AR as well as demographic factors.

AR is still an evolving concept in psychology that will require in-depth critical thinking and creativity in order to develop a concise definition that does not compromise the phenomenon's multidimensionality. More research towards this end must be conducted in order to achieve these results and develop an effective definition. However, once this task is accomplished, psychologists will have greater success in developing and raising awareness about methods to improve AR in diverse populations.

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