

**From Adversity to Advantage:
An Investigation on the Relationship Between
Adverse and Benevolent Childhood Experiences,
Resilience, and Creativity**

Fatmanur Cifci¹, Selcuk Acar¹, & Jason Chiang¹

¹University of North Texas

Background

- Creativity is influenced by experiences (Batcho et al., 2011; Damian & Simonton, 2015; Setiawan et al., 2017).
- Positive link between creativity and well-being (Acar et al., 2021).
 - Benevolent childhood experiences (BCE) in enhancing creativity.
- Adverse childhood experiences (ACE) may foster creativity by:
 - Disrupting equilibrium and allowing creative adjustment (Runco, 1999).

Background

- Unfavorable childhood events and **post-traumatic growth (PTG)** (Damian & Simonton, 2015; Tedeschi & Calhoun, 2004).
- Struggling to produce original products and creativity (Batcho et al., 2011; Tedeschi & Calhoun, 2004).

- Unexpected events may push people's limits out of "*normality*" (Damian & Simonton, 2015).
- Adversity and openness to new ideas and experiences (McCrae, 1987).

- Expanded openness and creative problem-solving through:
 - "**diversifying experiences**" (Damian & Simonton, 2015).

- Childhood trauma and unique experiences with:
 - Greater cognitive freedom, problem-solving ability, and flexibility (Damian & Simonton, 2015).

- **Orphan effect** (Csikszentmihalyi, 1996; Simonton, 1994)
 - Early parent loss,
 - Premature adult responsibilities,
 - Exceeding expectations, and
 - Exceptional achievements.
 - ❖ Particularly prevalent among authors, 55%.

- **Asynchronicity** (Acar, 2020)
 - Orphan effect,
 - Cognitive development abnormalities,
 - Illness,
 - Family issues,
 - Homosexuality,
 - Early school struggles, and
 - Childhood loneliness.

■ **Resiliency**

- “The process of bending and rebounding to overcome adversity” (Hunter, 2001).
- A specific type of adaptation (Metzl & Morrell, 2008).

■ **High-creativity often come from:** (Damian & Simonton, 2015; Simonton, 1994; Berry, 1981; Berry, 1999; Eisenstadt, 1978; Goertzel et al., 1978; Roe, 1953)

- Non-traditional backgrounds
 - e.g., cultural or religious minorities,
 - morbid tendencies,
 - early orphanhood, or
 - financial difficulties
- Have unconventional education and training experiences
 - e.g., study abroad,
 - multiple mentors,
 - eagerly reading, and
 - various hobbies

- Resilient people with difficult childhoods might be more creative.

Problem Statement Purpose

Research on childhood adversity and creativity is needed

(Forgeard, 2024).

Resilience may operate concurrently with ACE.

Moderator Effect

- Resilient people who have had ACE might be more likely to be creative.

Mediator Effect

- ACE may foster resilience resulting in higher creativity.

The purpose of the present study is to examine:

Relationship between childhood experiences and creativity

If ACE are moderated or mediated by resilience.

Research Questions

- Do positive childhood experiences impact creativity?
- Do negative childhood experiences impact creativity?
- How does resilience moderate or mediate the relationship between adverse childhood experiences and creativity?

Methods

- **352 college students ($M_{age} = 21.2$)**
- **From two Southwestern universities in US.**

- **Measurements**
 - Benevolent Childhood Experience measurement (BCE, $\alpha = .79$),
 - Adverse Childhood Experiences International Questionnaire (ACE-IQ, $\alpha = .80$),
 - Brief Resilience Scale (BRS, $\alpha = .82$),
 - The Inventory of Creative Activities and Achievements (ICAA, $\alpha = 0.79$), and
 - two verbal Alternate Uses Test (AUT) items.

- **Hypotheses were tested by hierarchical multiple regression analysis:**
 - DV was creativity, and IVs were ACE, BCE, and resilience (Step 2),
 - Added into the regression model after the demographic variables of age and gender (Step 1),
 - ACE X resilience was tested to test moderation effect (Step 3),
 - Tested mediating effect of resilience between ACE and creativity (Step 4).

Coefficients^a

Model		B	SE	β	<i>t</i>	<i>p</i>
1	(Constant)	80.387	10.914		7.366	<.001**
	Year of Birth	.390	.244	.107	1.600	.111
	Gender	-6.224	8.571	-.046	-.726	.468
	University	4.239	2.594	.111	1.634	.103
	Parent Education Level	.045	.442	.006	.101	.920
2	(Constant)	47.473	13.757		3.451	<.001**
	Year of Birth	.314	.236	.086	1.328	.185
	Gender	-14.612	8.761	-.107	-1.668	.097
	University	4.876	2.638	.128	1.848	.066
	Parent Education Level	.127	.431	.018	.294	.769
	ACE	.352	.136	.178	2.585	.010*
	Resilience	1.089	.292	.232	3.730	<.001**
	BCE	.962	.771	.087	1.247	.214
3	(Constant)	55.687	26.243		2.122	.035*
	Year of Birth	.312	.237	.086	1.319	.189
	Gender	-14.646	8.777	-.107	-1.669	.096
	University	4.897	2.643	.128	1.853	.065
	Parent Education Level	.136	.432	.020	.314	.754
	ACE	.133	.609	.068	.219	.827
	Resilience	.656	1.211	.140	.542	.588
	BCE	.933	.776	.085	1.203	.230
	ACE X Resilience	.012	.032	.138	.368	.713

a. Dependent Variable: ICAA

Results

The model in Step 2 was significant

$$F(3, 251) = 6.745, \\ p < .001, R^2 = .07.$$

Both ACE and resilience were significantly and positively associated with creativity (ICAA)

$$\beta = .18, t = 2.585, p = .010, \text{ and} \\ \beta = .232, t = 3.730, p < .001, \text{ respectively}$$

None of them predicted AUT performance.

Correlations

	ICAA	Birth Year	Gender	University	Parent Education Level	ACE	Resilience	BCE	ACE X Resilience
ICAA	1.000	.067	-.032	.070	.012	.089	.222**	.051	.224**
Year of Birth	.067	1.000	.004	-.350**	-.149**	.117*	.054	-.055	.135*
Gender	-.032	.004	1.000	.118*	.027	-.061	.191*	.298**	.085
University	.070	-.350**	.118*	1.000	.203**	-.331**	.080	.244**	-.215**
Parent Education Level	.012	-.149**	.027	.203**	1.000	-.161*	.001	.135*	-.137*
ACE	.089	.117*	-.061	-.331**	-.161*	1.000	-.109*	-.405**	.726**
Resilience	.222**	.054	.191*	.080	.001	-.109*	1.000	.169*	.585**
BCE	.051	-.055	.298**	.244**	.135*	-.405**	.169*	1.000	-.196*
ACE X Resilience	.224**	.135*	.085	-.215**	-.137*	.726**	.585**	-.196*	1.000

Results

ACE was negatively correlated with resilience ($r = -.109, p = .040$).

BCE was positively correlated with resilience ($r = .169, p = .003$) and did not predict creativity.

There was no support for mediating or moderating effect of resilience.

- Creativity is a multifaceted construct.
- We measured two different aspects of creativity:
 - Divergent thinking
 - Creative activity and accomplishment
- Statistically significant association between both resilience and ACE and creative activity and accomplishment, but not with creative ideation.

Discussion

Discussion

This study is limited by its correlational-retrospective design.

Lack of resources or unfavorable circumstances may influence exceptionally creative people, (Benedek, 2024) it may not influence their creative ideation but rather their creative achievements.

Creative conduct is not submission; rather, it entails taking actions that result in a novel product or a resolution to a difficulty (Cabra & Uribe-Larach, 2013).

Creative behavior through practical problem-solving skills from adverse life experiences

Understanding early experiences and resilience may enhance creativity.

With a causal relationship, longitudinal research would expand our comprehension.

References

1. Damian, R. I., & Simonton, D. K. (2015). Psychopathology, adversity, and creativity: Diversifying experiences in the development of eminent African Americans. *Journal of Personality and Social Psychology, 108*(4), 623-636.
2. Setiawan, E., Juliantine, T., & Komarudin, K. (2017). Development creativity students through problem-based learning model in physical education in reviewed of adversity quotient. In *2nd International Conference on Sports Science, Health and Physical Education* (pp. 611-613).
3. Batcho, K. I., Nave, A. M., & DaRin, M. L. (2011). A retrospective survey of childhood experiences. *Journal of Happiness Studies, 12*(4), 531-545.
4. Acar, S., Tadik, H., Myers, D., Van der Sman, C., & Uysal, R. (2021). Creativity and well-being: A meta-analysis. *The Journal of Creative Behavior, 55*(3), 738-751.
5. Benjet, C., Bromet, E., Karam, E. G., Kessler, R. C., McLaughlin, K. A., Ruscio, A. M., ... Koenen, K. C. (2016). The epidemiology of traumatic event exposure worldwide: Results from the World Mental Health Survey Consortium. *Psychological Medicine, 46*(2), 327-343.
6. Sledjeski, E. M., Speisman, B., & Dierker, L. C. (2008). Does number of lifetime traumas explain the relationship between PTSD and chronic medical conditions? Answers from the National Comorbidity Survey-Replication (NCS-R). *Journal of Behavioral Medicine, 31*(4), 341-349.
7. Runco, M. A. (1999). Tension, adaptability, and creativity. In S. W. Russ (Ed.), *Affect, creative experience, and psychological adjustment* (pp. 165-194). Philadelphia, PA: Taylor & Francis.
8. Orkibi, H. & Ram-Vlasov, N. (2019). Linking trauma to posttraumatic growth and mental health through emotional and cognitive creativity. *Psychology of Aesthetics, Creativity, and the Arts, 13*(4), 416-430.
9. Tedeschi, R. G. & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological Inquiry, 15*(1), 1-18.
10. Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York, NY: Harper Collins Publishers.
11. Simonton, D. K. (1994). *Greatness: Who makes history and why*. New York, NY: Guilford Press.
12. Acar, S. (2020). Asynchronicity. In M. A. Runco & S. R. Pritzker (Eds.), *Encyclopedia of creativity* (3rd ed., pp. 83-89). Vol. 1. Elsevier, Academic Press.
13. Berry, C. (1981). The Nobel scientists and the origin of scientific achievement. *British Journal of Sociology, 32*(3), 381-391.
14. Berry, C. (1999). Religious traditions as contexts of historical creativity: Patterns of scientific and artistic achievement and their stability. *Personality and Individual Differences, 26*(6), 1125-1135.
15. Eisenstadt, J. M. (1978). Parental loss and genius. *American Psychologist, 33*(3), 211-223.
16. Goertzel, M. G., Goertzel, V., & Goertzel, T. G. (1978). *300 eminent personalities: A psychosocial analysis of the famous*. San Francisco, CA: Jossey-Bass.
17. Roe, A. (1953). *The making of a scientist*. New York, NY: Dodd, Mead.
18. Root-Bernstein, R., Allen, L., Beach, L., Bhadula, R., Fast, J., Hosey, C., ... Weinlander, S. (2008). Arts foster scientific success: Avocations of Nobel, National Academy, Royal Society, and Sigma Xi members. *Journal of Psychology of Science and Technology, 1*(2), 51-63.
19. Einat S. Metzl & Malissa A. Morrell (2008). The Role of Creativity in Models of Resilience: Theoretical Exploration and Practical Applications. *Journal of Creativity in Mental Health, 3*(3), 303-318.
20. Hunter, A. J. (2001). A cross-cultural comparison of resilience in adolescents. *Journal of Pediatric Nursing, 16*(3), 172-179.
21. McCrae, R. R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology, 52*(6), 1258-1265.
22. Forgeard, M. (2024). Creativity and resilience: Creativity from, or through adversity?. *Creativity Research Journal, 1*-8.
23. Cabra, J. F., & Uribe-Larach, D. (2013). Creative behavior. In E. G. Carayannis (Ed.), *Encyclopedia of creativity, invention, innovation and entrepreneurship* (pp. 266-271). Springer.
24. Benedek, M. (2024). On the relationship between creative potential and creative achievement: Challenges and future directions. *Learning and Individual Differences, 110*, 102424.