Exploring Resilience and Individual Differences

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EXPLORING RESILIENCE AND INDIVIDUAL DIFFERENCES

by

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ABSTRACT

Few studies have investigated the relationships among resilience, optimism, and personality traits with U.S. college students; although some work has been done with Chinese university students. The current study explores the relationship between resilience, optimism and the Big Five personality traits. A sample of 251 undergraduate students completed the *Connor-Davidson Resilience Scale* (CD-RISC), the 9-item version of the *Personal Optimism & Self-Efficacy Optimism Scale* (POSE-E), and the *NEO- Five Factor Inventory* (NEO-FFI). Results indicate a significant positive relationship between resilience and optimism. The results also indicate positive significant relationships between resilience and extraversion, as well as resilience and conscientiousness. A significant negative significant relationship between resilience and neuroticism was found. The results of this study helpful identify characteristics of students who are at-risk following life stressors and traumas.

*Keywords:* Resilience, optimism, openness, conscientiousness, extraversion, agreeableness, neuroticism.
DEDICATIONS

Thank you to my mom, dad, and sister for all the love and support.
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Thank you for all of your guidance!
# TABLE OF CONTENTS

INTRODUCTION .................................................................................................................. 1

METHOD ................................................................................................................................. 6

Participants ............................................................................................................................ 6

Measures ............................................................................................................................... 6

  Connor-Davidson Resilience Scale ..................................................................................... 6

  Personal Optimism and Self-Efficacy Optimism Scale ....................................................... 6

  NEO Five-Factor Inventory ................................................................................................ 7

Procedure ............................................................................................................................. 7

RESULTS ................................................................................................................................ 9

DISCUSSION .......................................................................................................................... 10

  Limitations ........................................................................................................................ 11

Appendix A: Informed Consent ............................................................................................ 14

Appendix A ........................................................................................................................... 15

Appendix B: Connor-Davidson Resilience Scale .................................................................. 17

Appendix B ........................................................................................................................... 18

Appendix C: The 9-item Version of the Personal Optimism & Self-Efficacy Optimism Scale .......................................................................................................................... 19

Appendix C ........................................................................................................................... 20

Appendix D: NEO Five-Factor Inventory .............................................................................. 21

Appendix D ........................................................................................................................... 22

Appendix E: Demographic Survey ....................................................................................... 24

Appendix E ........................................................................................................................... 25

REFERENCES ......................................................................................................................... 28
INTRODUCTION

A single moment can shape a person’s whole future. Sadly, some of these instances are tragic events such as the death of a loved one, a natural disaster, or a debilitating illness. Although some individuals face more severe and life-impacting instances than others, very few live a lifetime without hardship. Often negative events are out of our control; however, how we cope with these hardships is not. In the face of such events, individuals who are resilient are likely to maintain a “baseline homeostasis” or a “stable equilibrium.” They are also able to positively adapt and to ultimately experience a positive change in the aftermath of a trauma (Smith, Tooley, Christopher & Kay, 2010).

Resilience is defined as “the process or outcome of successful adaption despite challenging or threatening circumstances” (Nakaya, Oshio & Kaneko, 2006, p. 927). According to Connor and Davidson (2003) “Resilience embodies the personal qualities that enable one to thrive in the face of adversity” (p. 76). Certain characteristics that have been positively correlated with resilience in the past include viewing a difficult challenge one may face as an opportunity for growth; understanding one’s lack of control over a particular negative event; forming close and supportive relationships with others; and having personal or collective goals for the future. Resilient individuals may also be committed, action-oriented, patient, tolerant, adaptive, and possess a sense of humor.

It is no surprise that almost everyone at some point will experience hardship, loss, sadness, disappointment, and/or frustration. However, not everyone deals with these emotions in the same way. Often, people struggle and are not able to properly function in the aftermath of a challenge, stressor, or traumatic event. Although this is understandable, it is not ideal. By
comparison, resilient individuals are not only able to overcome, but also positively adapt from these negative events (Connor & Davidson, 2003).

In the present study, the Connor-Davidson Resilience Scale will be used to determine level of resilience. The developers of the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003) gave this measure to 6 different groups of people. The groups included primary care patients, psychiatric outpatients, generalized anxiety disorder patients, posttraumatic stress disorder patients, and the general population. CD-RISC mean scores for each group indicated that individuals with mental illnesses had lower levels of resilience than the general population. However, after a period of short-term pharmacotherapy, the scores of the original group with posttraumatic stress disorder increased, demonstrating that levels of resilience can improve with therapy, and that resilience is in fact modifiable.

Resilience not only plays a part in the physical and emotional well-being of individuals, but also in students’ learning outcomes, educational goals, and motivation (Zhang, 2011). A longitudinal study conducted in Quebec examined high school students who were at risk for dropping out. Of the 140 at-risk students who participated in the study, 80 of those students ultimately dropped out. The 60 students who remained in school and graduated were then classified as resilient students. All of these students were, at one point in time, at risk for failing to graduate from high school. However, despite the challenges they faced, the resilient students were able to adapt, persevere, and graduate (Lessard, Butler-Kisber, Fortin & Marcotte, 2014).

Thus, the idea of teaching and promoting resilience within American students has been promoted in order to increase high school graduation rates (National Center for Education Statistics, 2014). Forming a good relationship with a teacher or counselor may be key. Although
this can be initiated by the student, it is helpful when the teacher shows a genuine interest in the student, is warm and understanding, and seems to enjoy their job (Lessard et al., 2014).

Importantly, resilience may be a teachable skill. Hardiness is defined as “a pattern of attitudes and skills that are a pathway to resilience under stressful circumstances” (Maddi, 2009, p. 566). In a longitudinal study, one group of college students received hardiness training, while a second group did not. At the end of the study, the students who received the hardiness training showed higher levels of hardiness and higher GPAs. These results indicated that hardiness training related to improved academic performance.

A big component of hardiness training with college students is the concept of hardiness as a positive skill set. Students can be taught how to use specific techniques and how to develop attitudes that guide them in turning stressful or traumatic events into opportunities for growth. It is likely that all students would benefit from this type of training in order to positively cope and adapt with disappointing or even traumatic events that may occur in the future. For example, the job market has become increasingly competitive, and often, people graduate from college expecting to find a job right away. However, despite the determination and newly awarded college degree, this can be a disappointing task that ends in no job. If students are trained to be resilient, they may be more likely to persevere and take the situation as a learning experience.

In addition to resilience, optimism is a concept that may be related to overcoming obstacles. Optimism can be defined as having “a positive outlook on life” (Sergeant, 2014). Optimistic people tend to believe that good things will happen to them within their life, and that their goals are attainable. Personal optimism includes the positive expectations one may hold about the future; whereas self-efficacy optimism is the positive expectations one may hold about accomplishing goals. Researchers Gallagher, Lopez, and Pressman (2013) explored the presence
and benefits of optimism using a “representative sample of the world” (p. 429). A total sample of 150,048 individuals were used in this study, from 142 countries that together “represent 95% of the world’s population” (p. 429). Some may argue that optimism promotes false hope, and results in delusory thinking. However, this study counteracts those beliefs by providing the benefits of optimism. The results indicated that, of the sample, the majority of individuals and countries worldwide are optimistic. Furthermore, the results showed that there is a positive, significant relationship between higher levels of optimism and improved subjective well-being, or in other words, the perceived quality of one’s life. Overall, this study attempted to confirm that idea that, worldwide, there is a relationship between optimism and “improved psychological functioning” (Gallagher, Lopez & Pressman, 2013, p. 435).

Although the relationship between resilience and optimism has not directly been explored, one study investigated the relationship between resilience and affect. Specifically, a relationship between resilience, negative affect, and positive affect has also been established (Smith, Tooley, Christopher & Kay, 2010). Resilience was related to less negative affect, and more positive affect. Being resilient means having the ability to “bounce back” from negative situations. It follows that if one has a positive outlook or holds positive expectations, as an optimistic person does, then they are likely to take the negative situation and positively adapt from it.

The current study explores the relationship between resilience, optimism and the Big Five personality traits in college students. Previous studies involving Chinese and Japanese students found certain personality traits to positively correlate with resilience including high openness, conscientiousness, extraversion and agreeableness. Resilience, in contrast, was negatively correlated with high neuroticism (Zhang, 2011). Yet resilience and personality as captured by the
five factor model has not been explored using American students. Determining which of the Big
Five personality factors significantly correlate with resilience will give us insight into which
personality types are likely to maintain a baseline homeostasis, while others may struggle with
finding that stable equilibrium. The hypotheses for the current study are as follows:

*Hypothesis 1: There will be a significant positive relationship between levels of
resilience and levels of optimism.*

*Hypothesis 2: The positive personality traits from the Five Factor model (openness,
agreeableness, extraversion, and conscientiousness) will significantly positively correlate
with resilience.*

*Hypothesis 3: Neuroticism will significantly negatively correlate with resilience.*
METHOD

Participants

A sample of 251 undergraduate college students from the University of Central Florida (UCF) were recruited through the UCF Psychology Department’s online participant recruitment system (SONA). These participants may have received extra credit or course credit in certain psychology courses for their participation in the study. All participants were 18 years of age or older. The ages of these 251 participants ranged from 18 to 62. Of the 251 participants, 64.31% were female while 35.69% were male. Overall, the percent of ethnicities were as follows: American Indian/Native American 1.4%, Black/African American 14.39%, Chinese/Japanese/Asian decent 7.02%, Hispanic/Latino 18.95%, Pacific Islander 1.75%, White/Caucasian 60.35%.

Measures

**Connor-Davidson Resilience Scale.** The Connor-Davidson Resilience Scale (*CD-RISC*; Connor, K.M., & Davidson, J.R., 2003) measured college student’s level of resiliency. The CD-RISC is comprised of 25 questions, to which the respondents answer in terms of how they have felt within the last month. Each question is rated on a five-point Likert-style scale, ranging from *not true at all (0)* to *true nearly all the time (4)*. Scores on the CD-RISC can range from 0 to 100. The Cronbach’s alpha values for the Connor-Davidson Resilience Scale range from 0.79 to 0.88.

**Personal Optimism and Self-Efficacy Optimism Scale.** The short version of the Personal Optimism and Self-Efficacy Optimism Scale (*POSO*; Gavrilov-Jerković, et al, 2014) measured
optimism. This 9-item version contains two subscales, the Personal Optimism Scale and Self-Efficacy Optimism Scale. This 9-item version of the Personal Optimism and Self-Efficacy Optimism Scale includes 4 questions that reflect personal optimism and 5 questions that reflect self-efficacy optimism. Scores range from 0 to 27. Three of the questions are reverse-scored, and each question is rated on a four-point Likert-style scale. According to Vesna Gavrilov-Jerković et al. (2014), the Cronbach’s alpha is 0.89.

**NEO Five-Factor Inventory.** The NEO Five-Factor Inventory (NEO-FFI: Costa & McCrae, 1992) measured the five basic personality factors of Extraversion, Neuroticism, Openness, Agreeableness, and Conscientiousness. This 60-item version is a shortened version of the original NEO Personality Inventory with 180 questions. The NEO-FFI yields five subscale scores, each based on 12 questions. This instrument uses a five-point Likert-style scale. Subscale scores range from 0 to 48. The internal consistency ranges from 0.68 to 0.86 (Costa & McCrae, 1992).

**Procedure**

Once the participants selected the present study within the UCF SONA system, they were provided with a short explanation of the study and were informed that participants in this study must be 18 years of age or older. They were also informed of the risks associated with this study and researcher contact information. Finally, they were informed of the compensation received if they decided to participate in the following research study. After being provided with that detailed information, individuals who indicated consent to participate completed both the 25-item version of the Connor-Davidson Resilience Scale and the 9-item version of the Personal Optimism & Self-Efficacy Optimism Scale in random order. Afterwards, they were asked to
complete the 60 item NEO Five Factor Inventory. Finally, they were asked to complete demographic questions to collect basic information such as age, gender, and ethnicity.
RESULTS

Pearson correlation coefficients were computed to establish the positive and negative relationships among the scores of the Connor-Davidson Resilience Scale, the Personal Optimism and Self-Efficacy Optimism Scale, and the subscales of the NEO Five-Factor Inventory. All reported correlations are significant at $p < .001$. The results reveal a significant positive relationship between resilience and personal optimism at $r(250) = .573$, $p < .001$. There is also a significant positive relationship between resilience and self-efficacy optimism at $r(250) = .639$, $p < .001$. Additionally, the results indicate a significant positive relationship between resilience and overall optimism at $r(250) = .720$, $p < .001$. These results support research hypothesis 1.

Partially supporting hypothesis 2, there was a significant relationship between 2 of the positive subscales on the NEO Five-Factor Inventory and resilience. A significant positive relationship was found between resilience and extraversion at $r(250) = .364$, $p < .001$, and between resilience and conscientiousness at $r(250) = .462$, $p < .001$. However, there were no significant relationships between resilience and openness or resilience and agreeableness. Finally, significant negative relationship emerged between resilience and neuroticism at $r(250) = -.555$, $p < .001$, supporting hypothesis 3.
DISCUSSION

The results of this study provide insight into the personality and individual difference variables that correlate with resilience in college students. The results indicate that individuals who display high levels of resilience are also likely to display high levels of optimism. The results also indicate a relationship between high levels of extraversion and conscientiousness and high levels of resilience. It is very likely that those who are extraverted are more likely to seek social support in the aftermath of a trauma or life stressor, which is an important factor of positively adapting and being overall resilient. Furthermore, those who are conscientious are likely to seek and follow through with treatment in order to maintain a stable equilibrium. The results of the present study are beneficial in determining which students with certain personality types would be more likely and less likely to be resilient in the wake of a trauma or serious life stressor. This information helps to determine which individuals may struggle emotionally after facing life obstacles, as well as individuals who may benefit the most from hardiness/resilience training.

The results of this study suggest that individuals who are optimistic, extraverted, and conscientious are more likely to maintain a stable equilibrium or positively adapt after a dismaying event or grim circumstances. In contrast, those who are neurotic, introverted, less optimistic, and less conscientious would be less likely to maintain a stable equilibrium or positively adapt. These individuals are considered at-risk, and may benefit the most from intervention and support.
Limitations

More than 50% of the individuals who participated in this study were from the ages 18 to 20, and the sample consisted solely of college students. Future studies could explore resilience within multiple age groups and among those of different education levels. Additional research could also focus on resilience in children. It may be just as beneficial to promote resilience strengthening and training at the elementary school level.
Table 1
Correlations among Resilience, Optimism (Self-Efficacy Optimism and Personal Optimism), and the five personality factors from the NEO-FFI (neuroticism, extraversion, openness, agreeableness, and conscientiousness)

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**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Appendix A: Informed Consent
Appendix A

Informed Consent Form

Title of Project: Exploring Resilience and Individual Differences

Principal Investigator: Karen Mottarella, Psy.D.

Other Investigators: Robin Thorne, Shannon Whitten, Ph.D.

You are being invited to take part in a research study. Whether you take part is up to you.

- The purpose of this research is to explore individual differences and how they relate to resiliency and coping.

- Individuals participating in this study will be asked to complete a survey about themselves.

- Please be advised that you do not have to answer every question. You are free to skip questions or tasks. However, if you decide to withdraw your participation or do not complete the study, you will not receive SONA credit for your participation and your responses will not be included for analysis.

- The study is administered entirely online and can be completed from any location that provides you with internet access.

- We expect your participation in this study to take no more than 60 minutes.

You must be 18 years of age or older to take part in this research study.

Risks: Some of the questions in the following study may bring up past events or emotional discomfort.

Resources for Students: The following resources are available to all UCF students

UCF Counseling Center
(407) 823-2811
Email: councntr@ucf.edu
Website: http://counseling.sdes.ucf.edu

Compensation or payment: There is no direct compensation for taking part in this study. However, participation may provide you with the opportunity to earn SONA points which can be applied to your psychology courses that are utilizing SONA points as an extra credit option. Refer to your course syllabi or speak to your instructor for information regarding their extra credit policy. Also check your syllabi or speak to your instructor for information regarding alternatives to research participation. Extra credit will be awarded through SONA system used by the UCF Psychology Department.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, or think the research has hurt you, talk to Dr. Karen Mottarella, Building 3 Room 317, Psychology
Department, and University of Central Florida Palm Bay Campus. Dr. Mottarella can be reached by phone at 321-433-7987 or by email at Karen.mottarella@ucf.edu

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.
Appendix B: Connor-Davidson Resilience Scale
Appendix B

Connor-Davidson Resilience Scale

Select the answer that best indicates how much you agree with the following statements as they apply to you over the last month. If a particular situation has not occurred recently, answer according to how you think you would have felt.

The rating scale:

Not true at all (0), Rarely true (1), Sometimes true (2), Often true (3), True nearly all the time (4)

1. I am able to adapt when changes occur.
2. I have at least one close and secure relationship that helps me when I’m stressed.
3. When there are no clear solutions to my problems, sometimes fate or God can help.
4. I can deal with whatever comes my way.
5. Past successes give me confidence in dealing with new challenges and difficulties.
6. I try to see the humorous side of things when I am faced with problems.
7. Having to cope with stress makes me stronger.
8. I tend to bounce back after illness, injury, or other hardships.
9. Good or bad, I believe that most things happen for a reason.
10. I give my best effort no matter what the outcome may be.
11. I believe I can achieve my goals, even if there are obstacles.
12. Even when things look hopeless, I don’t give up.
13. During times of stress/crisis, I know where to turn for help.
15. I prefer to take the lead in solving problems rather than letting others make all the decisions.
16. I am not easily discouraged by failure.
17. I think of myself as a strong person when dealing with life’s challenges and difficulties.
18. I can make unpopular or difficult decisions that affect other people, if it is necessary.
19. I am able to handle unpleasant or painful feelings sadness, fear, and anger.
20. In dealing with life’s problems, sometimes you have to act on a hunch without knowing why.
21. I have a strong sense of purpose in life.
22. I feel in control of my life.
23. I like challenges.
24. I work to attain my goals no matter what roadblocks I encounter along the way.
25. I take pride in my achievements.
Appendix C: The 9-item Version of the Personal Optimism & Self-Efficacy Optimism Scale
Appendix C

The 9-item Version of the Personal Optimism & Self-Efficacy Optimism Scale

Select the answer that best indicates how much you agree with the following statements.

The rating scale:
Not true at all (0), Rarely true (1), Sometimes true (2), Often true (3), True nearly all the time (4)

1. For each problem I will find a solution.
2. In difficult situations I will find a way.
3. I master difficult problems.
4. I am facing my future in an optimistic way.
5. I can hardly think of something positive in the future.
6. I can master difficulties.
7. I worry about my future.
8. I always find a solution to a problem.
9. It often seems to me that everything is gloomy.
Appendix D: NEO Five-Factor Inventory
Appendix D

NEO Five-Factor Inventory

Please rate how accurately each of the following statements describes you.

The rating scale:

Strongly Disagree (0), Disagree (1), Neutral (2), Agree (3), Strongly Agree (4)

1. I am not a worrier.
2. I like to have a lot of people around me.
3. I don’t like to waste my time daydreaming.
4. I try to be courteous to everyone I meet.
5. I keep my belongings neat and clean.
6. I often feel inferior to others.
7. I laugh easily.
8. Once I find the right way to do something, I stick to it.
9. I often get into arguments with my family and co-workers.
10. I’m pretty good about pacing myself so as to get things done on time.
11. When I’m under a great deal of stress, sometimes I feel like I’m going to pieces.
12. I don’t consider myself especially “light-hearted.”
13. I am intrigued by the patterns I find in art and nature.
14. Some people think I’m selfish and egotistical.
15. I am not a very methodical person.
16. I rarely feel lonely or blue.
17. I really enjoy talking to people.
18. I believe letting students hear controversial speakers can only confuse and mislead them.
19. I would rather cooperate with others than compete with them.
20. I try to perform all the tasks assigned to me conscientiously.
21. I often feel tense and jittery.
22. I like to be where the action is.
23. Poetry has little or no effect on me.
24. I tend to be cynical or skeptical of others’ intentions.
25. I have a clear set of goals and work toward them in an orderly fashion.
26. Sometimes I feel completely worthless.
27. I usually prefer to do things alone.
28. I often try new and foreign foods.
29. I believe that most people will take advantage of you if you let them.
30. I waste a lot of time before settling down to work.
31. I rarely feel fearful or anxious.
32. I often feel as if I’m bursting with energy.
33. I seldom notice the moods or feelings that different environments produce.
34. Most people I know like me.
35. I work hard to accomplish my goals.
36. I often get angry at the way people treat me.
37. I am a cheerful, high-spirited person.
38. I believe we should look to our religious authorities for decisions on moral issues.
39. Some people think of me as cold and calculating.
40. When I make a commitment, I can always be counted on to follow through.
41. Too often, when things go wrong, I get discouraged and feel like giving up.
42. I am not a cheerful optimist.
43. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave or excitement.
44. I’m hard-headed and tough-minded in my attitudes.
45. Sometimes I’m not as dependable or reliable as I should be.
46. I am seldom sad or depressed.
47. My life is fast-paced.
48. I have little interest in speculating on the nature of the universe or the human condition.
49. I generally try to be thoughtful and considerate.
50. I am a productive person who always gets the job done.
51. I often feel helpless and want someone else to solve my problems.
52. I am a very active person.
53. I have a lot of intellectual curiosity.
54. If I don’t like people, I let them know it.
55. I never seem to be able to get organized.
56. At times I have been so ashamed I just wanted to hide.
57. I would rather go on my way than be a leader of others.
58. I often enjoy playing with theories or abstract ideas.
59. If necessary, I am willing to manipulate people to get what I want.
60. I strive for excellence in everything I do.
Appendix E: Demographic Survey
Appendix E

Demographic Survey

Please answer the following questions about yourself.

1. What is your age? _____

2. What is your gender?
   ___ Male
   ___ Female

3. What is your race/ethnicity?
   ___ American Indian / Native American
   ___ Black / African American
   ___ Chinese / Japanese / Asian decent
   ___ Hispanic / Latino
   ___ Arabic / Middle Eastern
   ___ Pacific Islander
   ___ White / Caucasian
   ___ Other

4. What is your major?
   ___ Biology
   ___ Business
   ___ Communication
   ___ Communicative Disorders
   ___ Computer Science
   ___ English
   ___ Engineering
   ___ History
   ___ Legal Studies
   ___ Political Science
5. What year in college are you?
   ___ Freshman
   ___ Sophomore
   ___ Junior
   ___ Senior
   ___ Graduate Student
   ___ Other

6. What is your marital status?
   ___ Single now and never married
   ___ Living with a significant other
   ___ Married
   ___ Separated / Divorced
   ___ Widowed

7. Is this your first semester at UCF?
   ___ Yes
   ___ No

8. If no, what is your GPA? _____

9. Resilience is described as “the personal qualities that enable one to thrive in the face of adversity” and includes a “positive change that can emerge from the experience of trauma.” Given this definition, please rate how resilient you believe you are.
   ___ Not at all resilient
   ___ Slightly resilient
   ___ Somewhat resilient
   ___ Very resilient
10. Have you experienced a major trauma in your life? Check all that apply.

___ Loss of a parent/caregiver
___ Loss of a sibling
___ Loss of a child
___ Loss of a spouse
___ Loss of a significant other
___ Loss of a very close family member
___ Loss of a very close friend
___ Life threatening illness or injury
___ Natural disaster
___ Long term, severe poverty
___ Homelessness
___ Physical, sexual, and/or emotional abuse
___ Serious, repetitive domestic violence
___ Witnessing serious, repetitive physical and/or sexual abuse of loved one(s) as a child
___ Combat, dangerous military employment
___ Life threatening illness or injury to spouse
___ Life threatening illness or injury to child
___ Life threatening illness or injury to parent or primary caregiver while growing up
___ Other
REFERENCES


Sergeant, S., & Mongrain, M. (2014). An online optimism intervention reduces depression in
