

Continuation/Research Progression Projects Form (7)

Required for projects that are a continuation/progression in the same field of study as a previous project.

This form must be accompanied by the previous year's abstract and Research Plan/Project Summary.

Student's Name(s) Dylan Schneider

To be completed by Student Researcher: List all components of the current project that make it new and different from previous research. The information must be on the form; use an additional form for previous year and earlier projects.

Components	Current Research Project	Previous Research Project: Year: <u>18-19</u>
1. Title	An Investigation into September 11th Related Post-Traumatic Stress Disorder and Anhedonic Depression	The Association Between Anhedonia and Post-Traumatic Stress Disorder
2. Change in goal/purpose/objective	The current research project aimed to determine a causation relationship between AD and PTSD. Also, relationships between AD and BMI were to be investigated.	Examine if PTSD and Anhedonia were related.
3. Changes in methodology	New statistical analysis techniques were used, including Odds Ratios and testing regarding model strength. Also, a more extensive literature review period was included. The PHQ-2, an improved version of the PHQ-9, was introduced to measure Anhedonia.	Only ANOVAs and Chi-Squares were conducted during statistical analysis. Much less intensive data cleaning process. The PHQ-9 was used to diagnose Anhedonia.
4. Variable studied	Anhedonia, PTSD, BMI, Alcoholism, traumatic exposures, demographics	PTSD, Anhedonia
5. Additional changes		

Attached are:

☒ Abstract and Research Plan/Project Summary, Year 18-19

I hereby certify that the above information is correct and that the current year Abstract & Certification and project display board properly reflect work done only in the current year.

Dylan Schneider
Student's Printed Name(s)


Signature

01/28/20
Date of Signature (mm/dd/yy)

Abstract 2018-2019

The Association between Anhedonic Depression and Post-Traumatic Stress Disorder

Anhedonic Depression has been largely un-studied for the majority of the 20th and beginning of the 21st century. The events that took place on September 11th in New York City serve as the largest modern day source of Anhedonia in a non-military population and therefore offer a large population that requires mental health services and research tailored towards their specific needs. It was found that PCL-S scores for those affected by Anhedonia averaged at 56.09, while test scores of those who did not show symptoms of Anhedonia averaged a score of 26.64. A score of 56.04 is well above the average test score in a typical unaffected population and therefore poses a great threat to the health of those affected by September 11th.

Work Cited

Bromet, E. J., Hobbs, M. J., Clouston, S. A. P., Gonzalez, A., Kotov, R., & Luft, B. J. (2016). DSM-IV post-traumatic stress disorder among World Trade Center responders 11–13 years after the disaster of 11 September 2001 (9/11). *Psychological medicine*, 46(4), 771-783.

Waszczuk, M. A., Li, K., Ruggero, C. J., Clouston, S. A., Luft, B. J., & Kotov, R. (2018). Maladaptive Personality Traits and 10-Year Course of Psychiatric and Medical Symptoms and Functional Impairment Following Trauma. *Annals of Behavioral Medicine*.

Webber, M. P., Gustave, J., Lee, R., Niles, J. K., Kelly, K., Cohen, H. W., & Prezant, D. J. (2009). Trends in respiratory symptoms of firefighters exposed to the World Trade Center disaster: 2001–2005. *Environmental health perspectives*, 117(6), 975.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993, October). The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility. In *annual convention of the international society for traumatic stress studies, San Antonio, TX* (Vol. 462).

RESEARCH PLAN

A. RATIONAL

Anhedonic Depression is defined as the gradual loss of joy over time and can often be pinpointed to a singular traumatic event. This leads to a large overlap in symptomatology between Anhedonia and other psychiatric disorders related to traumatic events, such as Post-Traumatic Stress Disorder (PTSD). Being that they are so closely related, these two disorders pose an interesting relationship that should be investigated. Additionally, both Anhedonia and PTSD are likely to have not just mental effects, but also physical symptoms such as lethargy and weight gain. These physical characteristics of the disorders also exemplify why more research is needed into these topics. These extremely significant disorders can not only pose a danger to one's mental health, but physical well-being as well.

B. HYPOTHESIS

Individuals with Anhedonia will be at an increased risk for developing disorders related to cognitive impairment. It is commonly accepted that non-inherited psychological disorders, such as anhedonia, are often accompanied by various other disorders of a relatively similar symptomatology. This often leads to difficulties from a treatment perspective because psychiatrists often struggle to determine which symptoms are most destructive, and therefore the most pertinent to their diagnoses and treatment plans

C. METHODS

- **Procedures-** Data was previously collected and compiled into the General Responders Cohort. Statistical analysis will be conducted. The PHQ-9 will be used to test for probable Anhedonic Depression.
- **Risk and Safety-** All data is anonymous and de-identified.
- **Data Analysis-** Data analysis will be conducted using SAS software. ANOVAs and chi squares will be conducted.

D. BIBLIOGRAPHY

Babor et al., (2001). *AUDIT: The Alcohol Use Disorders Identification Test Guidelines for Use in Primary Care (second Edition)*.

Bromet, E. J., Hobbs, M. J., Clouston, S. A. P., Gonzalez, A., Kotov, R., & Luft, B. J. (2016). DSM-IV post-traumatic stress disorder among World Trade Center responders 11–13 years after the disaster of 11 September 2001 (9/11). *Psychological medicine*, 46(4), 771-783.

Brown, P. J., Recupero, P. R., & Stout, R. (1995). PTSD substance abuse comorbidity and treatment utilization. *Addictive behaviors*, 20(2), 251-254.

Brown, P. J., Stout, R. L., & Mueller, T. (1999). Substance use disorder and posttraumatic stress disorder comorbidity: Addiction and psychiatric treatment rates. *Psychology of Addictive Behaviors*, 13(2), 115.

Franken, I. H., Rassin, E., & Muris, P. (2007). The assessment of anhedonia in clinical and non-clinical populations: further validation of the Snaith–Hamilton Pleasure Scale (SHAPS). *Journal of affective disorders*, 99(1-3), 83-89.

Heinz, A., Ragan, P., Jones, D. W., Hommer, D., Williams, W., Knable, M. B., ... & Coppola, R. (1998). Reduced central serotonin transporters in alcoholism. *American Journal of Psychiatry*, 155(11), 1544-1549.

Herrera-Pérez, J. J., Martínez-Mota, L., & Fernández-Guasti, A. (2008). Aging increases the susceptibility to develop anhedonia in male rats. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 32(8), 1798-1803.

Hofmann, S. G., Litz, B. T., & Weathers, F. W. (2003). Social anxiety, depression, and PTSD in Vietnam veterans. *Journal of Anxiety Disorders*, 17(5), 573-582.

Kashdan, T. B., Elhai, J. D., & Frueh, B. C. (2006). Anhedonia and emotional numbing in combat veterans with PTSD. *Behaviour research and therapy*, 44(3), 457-467.

Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: a new depression diagnostic and severity measure. *Psychiatric annals*, 32(9), 509-515.

Lampe, I. K., Kahn, R. S., & Heeren, T. J. (2001). Apathy, anhedonia, and psychomotor retardation in elderly psychiatric patients and healthy elderly individuals. *Journal of geriatric psychiatry and neurology*, 14(1), 11-16.

Reinert, D. F., & Allen, J. P. (2002). The alcohol use disorders identification test (AUDIT): a review of recent research. *Alcoholism: Clinical and Experimental Research*, 26(2), 272-279.

Suliman, S., Mkabile, S. G., Fincham, D. S., Ahmed, R., Stein, D. J., & Seedat, S. (2009). Cumulative effect of multiple trauma on symptoms of posttraumatic stress disorder, anxiety, and depression in adolescents. *Comprehensive psychiatry*, 50(2), 121-127.

Turner, A. D., Capuano, A. W., Wilson, R. S., & Barnes, L. L. (2015). Depressive symptoms and cognitive decline in older African Americans: two scales and their factors. *The American Journal of Geriatric Psychiatry*, 23(6), 568-578

Vahia, Ipsit V., et al. "Subthreshold depression and successful aging in older women." *The American Journal of Geriatric Psychiatry* 18.3 (2010): 212-220..

Waszczuk, M. A., Li, K., Ruggero, C. J., Clouston, S. A., Luft, B. J., & Kotov, R. (2018). Maladaptive Personality Traits and 10-Year Course of Psychiatric and Medical Symptoms and Functional Impairment Following Trauma. *Annals of Behavioral Medicine*.

Webber, M. P., Gustave, J., Lee, R., Niles, J. K., Kelly, K., Cohen, H. W., & Prezant, D. J. (2009). Trends in respiratory symptoms of firefighters exposed to the World Trade Center disaster: 2001–2005. *Environmental health perspectives*, 117(6), 975.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993, October). The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility. In *annual convention of the international society for traumatic stress studies, San Antonio, TX* (Vol. 462).