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The Effects of Psychological Trauma on Psychopathy

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Introduction

This study was undertaken with the intention to explore any potential links between psychological trauma and psychopathy. Current thinking suggests that there is a genetic predisposition present to take on and display psychopathic or neurotic traits, and that the traits themselves are brought out and displayed through environmental influences during their life (Porter, 1996), implying that life events will potentially increase the realisation of these traits which will subsequently influence the way that individuals behave. Van der Kolk, McFarlane and Weisæth (2012) stated that individuals who have experienced traumatic stress may also experience associated features and disorders that have now been linked to Post Traumatic Stress Disorder (PTSD). These associated problems can include affect/emotional regulatory problems, dissociation, somatization and “permanent character changes”. Listing character changes as a possible result of traumatic stress may suggest that there is the potential for a change in personality traits to become present after a traumatic experience. An alternative theory proposes that emotionally traumatic events which happen during childhood can have a negative impact on a person’s emotional functioning as an adult (Glaser, Van Os, Portegijs & Myin-Germeys, 2006). This suggests that individuals who have been traumatised or disillusioned in their past can learn to “turn off” their emotions. Although this initially may be used as a coping method, after a prolonged period of time, the individual may take on the psychopathic personality traits that they were using to cope. This is an alternative theory which Porter (1996) named as “Secondary Psychopathy” and considers a dissociative disorder. Subsequently, there has been further research completed into the

differences between Primary and Secondary Psychopathy, with studies by Newman, MacCoon, Vaughn and Sadeh (2005) and Ross, Molto, Poy, Segarra, Pastor and Montanés (2007) suggesting that a low level of a Behavioural Inhibition System (BIS) (a desire to move away from something unpleasant) is linked to Primary Psychopathy, and that a strong level of Behavioural Approach System (BAS) (the desire to move towards a goal that you want to achieve) is linked to both Primary and Secondary Psychopathy. Although there is a presence of literature which eludes to the potential for personality changes occurring after an individual is exposed to traumatic stress, there is also literature which explores other potential reactions to a traumatic stimulus. Spiegel (2006) explores the other “spontaneous dissociative disorders” which may become present following an exposure to a severely traumatic experience. Spiegel (2006) stated that some of these disorders can present as an individual having difficulties with accessing their memories, such as dissociative amnesia, or problems recognising their own identity, such as being in a dissociative fugue or experiencing a dissociative identity. It is also stated that the sufferer may not be consciously aware of the dissociative disorder that they are experiencing, however this does not mean that it would not be problematic for them.

Evidence that the link between trauma and the development of psychopathic traits associated with offending can be found through publicly available data. Of the 83,842 inmates who made up the prison population of England and Wales in 2013, it is estimated that between 3 and 10% (2500-8500 people) were previously in a job likely to expose them to high levels of trauma, such as first person trauma in the armed forces or frontline emergency/medical/correctional services (Treadwell, 2014), or secondary trauma in jobs where workers were exposed to traumatic material relating to the experiences of others, such as medical, law enforcement or correctional staff (Cieslak, Shoji, Douglas, Melville, Luszczynska & Benight, 2014). It is likely that the level and type of trauma experienced

by those working in these roles will be varied and would depend on individual experiences, however it is likely that people in these jobs would be exposed to an increased number of extreme or emotionally challenging situations in comparison to the general public (although this may also vary depending on members of the public's individual experiences). Research also indicates a veteran population of around 6.20 million ex-forces living in the UK (Royal British Legion, 2014) as well as the most recent data available suggesting approximately 1.02 million people currently employed in law enforcement, medical roles, or as correctional staff (Statista¹, 2019) (Statista², 2019) (Statista³, 2019) (BBC¹, 2019) (BBC², 2019) (BBC³, 2019) (Scottish Prison Service, 2016). Other statistics available suggest up to 50% of people will experience trauma during their lives and that 20% of those will go on to develop Post Traumatic Stress Disorder (PTSD UK, 2016). Using the percentages available it is suggested that if there is 20% of the veteran and emergency service community that is suffering the effects of psychological trauma then there are potentially over 1.44 million people suffering from the effects of psychological trauma in the UK. With the potentially high prevalence of people experiencing the long term effects of psychological trauma in the UK, the ability to identify possible links to how trauma may impact on future personality traits and behaviours is an area of research that needs development.

For this research trauma is defined as being a deeply distressing or disturbing experience and can also be described as emotional stress. It is well documented in the literature that traumatic experiences may induce or bring on behaviours/thoughts which can be categorised under five sections: intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity (American Psychiatric Association, 2013). The Diagnostic and Statistical Manual of Mental Disorders (DSM) (American Psychiatric Association, 2013) defines a traumatic experience as being “actual

or threatened death, serious injury, or sexual violence”. Generally, psychological trauma can be separated into differing types: Vicarious trauma, when traumatic experiences are transferred on to others such as counsellors or investigators and secondary trauma brought on by the trauma that another individual has been through are sub types often referred to as PTSD (Jenkins & Baird, 2002). In first person trauma; some people are subjected to single-event trauma, i.e. an isolated distressing incident leaving them experiencing negative symptoms. Alternatively, some people are subjected to multiple-event trauma experiencing multiple occurrences of the same stressor, such as soldiers, A&E staff, or sexual abuse victims. With single-model trauma the treatment can be centred around the one event, however when treating a multiple-model trauma the events can be clustered to focus the treatment. Again, these are labelled as PTSD. To date there is little research into psychological trauma’s link to increased levels of psychopathic traits, although some of the small amounts of past literature available indicate potential links between trauma exposure and callous-unemotional traits (Kerig, Bennett, Thompson & Becker, 2012). These traits are often associated with psychopathy indicating a scope to continue research with the hope of identifying any possible relationships between the two areas.

The Impact of Events Scale (IES) (Horowitz, Wilner & Alvarez, 1979) is currently in use in the UK by the NHS as an indicator for Post Traumatic Stress Disorder in both custody and community settings. Although there has subsequently been more recent assessment tools created (Briere, 2001), the fact that the IES is routinely used to assess individuals that are not from a population that are expected to have been predisposed to a high risk of psychological trauma (Creamer, Bell & Falilla, 2002) leads to the conclusion that this scale is suitable for use during a study such as this where a comparison group from the general population makes up a large proportion of the overall sample. Further to this, the IES remains freely available to access and can be completed

and scored in a shorter space of time than an alternative screening tool, such as the Detailed Assessment of Posttraumatic Stress (Briere, 2001), lending itself to undertakings such as this, where there is a need to gain and process data from as many participants as possible. In addition to this the Self – Report Psychopathy test 3 (SRP iii) (Williams, Nathanson & Paulhus, 2003) was used to measure levels of psychopathy.

When attempting to conduct a study such as this it is important to acknowledge potential obstacles as early as possible. From reviewing the literature around the reporting of trauma one of the potential problems identified for researchers would be a “bravado culture” being present in jobs likely to subject them to higher levels of trauma. Previous research suggests that when “bravado culture” is present this will lead to employees to be discouraged from sharing true emotions when they are subjected to negative experiences (Sheikh & Hurwitz, 1999). This becomes relevant to this study as more recent research (Green, 2005) indicates that there is often pressure when working in an environment where bravado is considered a “good” characteristic to have, i.e. in the military or emergency services, to conform with that presentation. This suggests that if bravado culture is/was present in the workplaces of this study’s participants there is a possibility that this could influence the level of honesty in the reporting of the impact that potentially traumatic experiences may have had on them. Additionally, although anonymity would be assured, there is a chance that the traumatic experiences may be under reported as a result of self-preservation, particularly when disclosing information about their work.

The working hypothesis for this piece of research is that those participants working in an environment likely to expose them to high levels of psychological trauma will display higher levels of psychopathy than those not working in those environments. The second hypothesis for this research is that there will be no significant differences in psychopathy levels between those individuals that are likely to have been exposed to high

levels of psychological trauma and those that are not. The rationale for undertaking a study such as this is to explore how traumatic experiences may impact on individuals' traits with a view to influencing the development of veteran/trauma specific behavioural interventions.

Design

This project used an independent measures design with participants allocated to one of two different conditions, 'trauma group' or 'comparison group'. The Dependant Variable in this study was the level of psychopathy of the participants and the Independent Variable was reported level of psychological trauma. A one way ANOVA was used to test for differences in levels of Psychopathy both within and between groups.

Participants

The project used opportunity sampling of 33 participants who were recruited through a mix of reaching out through social media and approaching potential participants in person. The inclusion criteria for the "trauma group" (n=17) was that participants had experience of working in a job more likely to expose them to higher levels of trauma than the general population, i.e. current or former emergency services, armed forces, medical staff or prison officers. The "comparison group" (n=16) was made up of participants that had never been in 'traumatic' occupations. Although some of those selected for the "comparison group" may have previously experienced trauma unrelated to their job role, but this is unknown due to them not being required to make disclosures before taking part and they were not excluded from the study. In order to recruit potential participants, the researchers began by approaching individuals that were known to them to have had experience in one or more of the traumatic jobs previously listed. Following an initial

response from this approach the opportunity to take part in the study was circulated on social media, with all respondents being sifted to ensure that their data was recorded correctly as either the “trauma group” or “comparison group”. Although the potential participant groups were large, a lack of timely responses from participants meant that the data analysis had begun prior to their results being received, leading to a lower than desired number of members for both the “trauma group” and the “comparison group”.

Procedure

Participants were sent out consent forms and the two assessments (IES & SRP iii) which were completed, returned, scored and analysed (Fields, 2014).

Ethical Considerations

Ethical approval was granted from the Research Ethics Committee of Teesside University and a contingency in case scores indicated Post Traumatic Stress Disorder (PTSD) or psychopathy symptoms over the problematic threshold was devised.

Results

The IES trauma scale for the comparison group ($m=23.19$, $SD= 19.18$) was higher than that of the trauma group ($m=18.82$, $SD= 13.95$).

The SRP iii Psychopathy test for the comparison group ($m= 49.49$, $SD= 10.08$) was lower than the trauma group ($m= 50.28$, $SD= 9.72$). ANOVA results indicated no significant main effect for psychopathy ($f=0.05$, $p=0.82$). Similarly, no main effect was found for reported trauma ($f=0.56$, $p=0.46$).

To summarise, participants grouped as subject to occupationally related trauma scored less on average for trauma than those in the comparison group, however they

scored higher than the comparison group for psychopathy. It was found that the results in this study may have been a result of natural differences and not the experimental design.

Discussion

The results showed that the higher mean score for trauma was found in the comparison group. One potential explanation for this may have been due to the “bravado culture” that may have been present in the workplaces of the “trauma group” participants, influencing them to under-report their experiences of psychological trauma (Green, 2005). To counter this potential affect in the future there may be benefits to working with organisations that have staff exposed to increased psychological stress. With employers’ backing there may be less bias in the results collected, so data is more representative and accurate.

Another potential factor that may have impacted on the reliability of the findings would be in the lack of previous knowledge of participants gained by the researchers during the sampling. Being unaware of the potential traumatic experiences that may have been present in the “comparison group” participants may have hindered how effectively the group scores could be compared. It is also important to acknowledge the potential impact of time constraints on the data collection phase of this study, as many of the responses gained were unable to be used due to being after the data collection deadline. In the future it would be beneficial to maintain the data collection phase of any subsequent studies for as long as practicable, to increase the potential participant response, and therefore validity of the findings. It is important in the future to ensure that the sample size being investigated is large enough to provide an adequate power to provide statistical significance in the findings. In this case the study was exploratory and time-bound, therefore it was difficult to increase the sample size beyond those that had already taken

part. Suresh and Chandrashekera (2012) looked into the importance of ensuring an appropriate sample size when conducting research, and the sample size calculation table they developed would be something which may be considered before undertaking another study in this area.

The findings indicated that the lower reported trauma scores on the IES trauma scale actually scored higher on the SRP iii psychopathy test. Although this opposite affect was slight, it goes against the findings of the few pieces of previous research and literature already available in this area (Porter, 1996 & Glaser et al, 2006). This may indicate that the data collected was not representative of the wider population; therefore strengthening the argument that bias was present in participants during this research, however it may just be the case that those that responded in this study had a different response and experiences.

It is well documented that a higher number of participants in research will increase the generalisability of that study (Schmuckler, 2001). Although ecological validity was somewhat compromised by the relatively small number of participants, the results of this project shed light on interesting flaws in current assessment tools and are therefore not intended for generalisation but to provoke discussion and foster further development.

A further potential reason for inconclusivity is that people suffering psychological trauma are expected to present symptoms relating to intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal and reactivity (APA, 2013). Categorizing symptoms generally is beneficial as manualisation can avoid misdiagnosis (Rosenhan, 1973), but in the case of traumatic stress there is an abundance of ambiguity in definitions which should be addressed.

Traumatic stress is when an individual experiences something distressing or disturbing, so there are several specific types of trauma which may be experienced that

can be labelled as PTSD. Vicarious trauma, first person trauma, single/multiple-event trauma and even the anticipation of injury may constitute a traumatic experience but again, these stressors would be labelled simply as PTSD, meaning PTSD becomes a condition that has been generalised, as opposed to a specific type of trauma suffered by an individual, leading to potentially negative implications on the effectiveness of treatments (Foa, Keane, Friedman & Cohen, 2008).

The term PTSD is not likely to encompass the symptoms that only occur in one subtype of traumatic stress, i.e. the levels of compassion fatigue that are associated with secondary traumatic stress, are not associated with a single-event, first person experience of trauma (Falrity, Gentry, Mesnikoff, 2013). These difficulties will automatically transfer into the assessment tools used for trauma. The IES trauma scale is routinely used by the NHS in the UK to look for indications of PTSD, however with the definition of PTSD having already been recognised as problematic there is potential for the IES trauma scale to overlook symptoms specific to subtypes of trauma. Relating these issues back to this piece of research it is likely that the difficulties faced when carrying out research into PTSD, traumatic stress or the implications of exposure to trauma have had an effect on the findings reported in this study and may have played a large part in this study's lack of significance. Due to the generic nature of assessment tools currently available to measure trauma there would likely be similar difficulties in carrying out further proof of concept studies in this area.

The first recommendation to be made is that there should be specific assessment tools for each subtype of trauma. This recommendation should be of primary importance, not only to increase good practice in a clinical setting but also because the concept of this study cannot be reliably investigated.

Secondly the definition given to PTSD is one which is impractical to use in the assessment and treatment of individuals, as it is ambiguous. More specific definitions of trauma will help in the formulation of treatment plans and allow for more focused research in the future.

Linking to the original rationale for the research we must ask ourselves: How can we develop and provide effective veteran/trauma specific behavioural interventions while we still use inadequate assessment tools?

This study has been unable to prove the concept of a link between psychological trauma and increased levels of psychopathy. However this study has indicated a deficit in quality trauma assessment tools, as well as blanket terminology of traumatic stress having a negative impact on the way it is assessed. There is scope to continue research into this area and there is still a need for more understanding, however, until the issues raised by this study have been resolved any similar studies would be likely to be problematic.

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References

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*. Amer Psychiatric Pub Incorporated. 5.
- BBC¹. (2018). *Prisons: Why are they in such a state?*. Retrieved 02/03/2019, from <https://www.bbc.co.uk/news/uk-45247719>.
- BBC². (2018). *Reality Check: What has happened to police numbers?*. Retrieved 02/03/2019, from <https://www.bbc.co.uk/news/uk-42977661>.
- BBC³. (2018). *Scottish police numbers fall to nine-year low*. Retrieved 02/03/2019, from <https://www.bbc.co.uk/news/uk-scotland-scotland-politics-43963228>.
- Briere, J. (2001). *Detailed Assessment of Posttraumatic Stress: DAPS: Professional Manual*. Lutz, FL: Psychological Assessment Resources.
- Cieslak, R., Shoji, K., Douglas, A., Melville, E., Luszczynska, A., & Benight, C. C. (2014). A meta-analysis of the relationship between job burnout and secondary traumatic stress among workers with indirect exposure to trauma. *Psychological Services, 11*(1), 75-86.
- Creamer, M., Bell, R., Falilla, S. (2002). *Psychometric properties of the Impact of Event Scale-. Revised*. Behaviour Research and Therapy. 41, 1489-1496. 8.
- Flarity, K., Gentry, J. E., & Mesnikoff, N. (2013). The effectiveness of an educational program on preventing and treating compassion fatigue in emergency nurses. *Advanced emergency nursing journal, 35*(3), 247-258.
- Fields, A. (2014). *Discovering Statistics using IBM SPSS Statistics*. Sage. London. (4). 430 – 466.
- Foa, E. B., Keane, T. M., Friedman, M. J., & Cohen, J. A. (Eds.). (2008). *Effective treatments for PTSD: practice guidelines from the International Society for Traumatic Stress Studies*. Guilford Press.

- Glaser, J. P., Van Os, J., Portegijs, P. J., & Myin-Germeys, I. (2006). Childhood trauma and emotional reactivity to daily life stress in adult frequent attenders of general practitioners. *Journal of psychosomatic research*, *61*(2), 229-236.
- Green, T. K. (2005). Work culture and discrimination. *Calif. L. Rev.*, *93*, 623.
- Horowitz, M., Wilner, N., Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. *Psychosomatic Medicine*, *41*, 209-218.
- Jenkins, S. R., & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: A validation study. *Journal of traumatic stress*, *15*(5), 423-432.
- Kerig, P., Bennett, D., Thompson, M., Becker, S. (2012). “Nothing really matters”: Emotional numbing as a link between trauma exposure and callousness in delinquent youth. *Journal of Traumatic Stress*. *25*(3). 272 – 279.
- Newman, J. P., MacCoon, D. G., Vaughn, L. J., & Sadeh, N. (2005). Validating a distinction between primary and secondary psychopathy with measures of Gray's BIS and BAS constructs. *Journal of abnormal psychology*, *114*(2), 319.
- Oxford Dictionaries. (2016). *Oxford Dictionaries Language Matters*. Retrieved 06/07/2016, from <http://www.oxforddictionaries.com/definition/english/trauma>.
- Porter, S. (1996). Without conscience or without active conscience? The etiology of psychopathy revisited. *Aggression and Violent Behavior*, *1*(2), 179-189.
- PTSD UK. (2016). *What is PTSD?*. Retrieved 17/07/16, from <http://www.ptsduk.org/what-is-ptsd/>.
- Rosenhan, D. L. (1973). On being sane in insane places. *Science*, *179*(4070), 250-258.
- Ross, S. R., Molto, J., Poy, R., Segarra, P., Pastor, M. C., & Montanés, S. (2007). Gray's model and psychopathy: BIS but not BAS differentiates primary from secondary psychopathy in noninstitutionalized young adults. *Personality and Individual Differences*, *43*(7), 1644-1655.

Royal British Legion. (2014). *The UK Ex-Service Community: A Household Survey*. Retrieved 17/07/2016, from <http://www.britishlegion.org.uk/get-involved/campaign/public-policy-and-research/the-uk-ex-service-community-a-household-survey/>.

Schmuckler, M. A. (2001). What is ecological validity? A dimensional analysis. *Infancy*, 2(4), 419-436.

Scottish Prison Service. (2016). Annual Reports and Accounts 2015 – 2016. *Staff Report*, 39.

Sheikh, A., & Hurwitz, B. (1999). A national database of medical error. *Journal of the Royal Society of Medicine*, 92(11), 554.

Statista¹. (2019). *Annual number of paramedics in the United Kingdom (UK) from 2010 to 2018 (in 1,000)*. Retrieved 02/03/2019, from <https://www.statista.com/statistics/318931/number-of-paramedics-in-the-uk/>.

Statista². (2019). *Annual number of nurses in the United Kingdom (UK) from 2010 to 2018 (in 1,000)*. Retrieved 02/03/2019, from <https://www.statista.com/statistics/318922/number-of-nurses-in-the-uk/>.

Statista³. (2019). *Number of healthcare physicians employed in the United Kingdom (UK) from 2000 to 2017*. Retrieved 02/03/2019, from <https://www.statista.com/statistics/462116/physicians-employment-in-the-united-kingdom-uk/>.

Suresh, K. P., & Chandrashekara, S. (2012). Sample size estimation and power analysis for clinical research studies. *Journal of human reproductive sciences*, 5(1), 7.

Treadwell, J. (2014) *Ex-soldiers in Prison*. University of Leicester. <http://www2.le.ac.uk/departments/criminology/research/current-projects/jt146soldiers>
Retrieved 17/07/2016.

Van der Kolk, B. A., McFarlane, A. C., & Weisæth, L. (Eds.). (2012). *Traumatic stress: The effects of overwhelming experience on mind, body, and society*. Guilford Press.

Williams, k., Nathanson, C., Paulhus, D. (2003). *Structure and Validity of the Self-Report Psychopathy Scale-III in Normal Populations*. Toronto Canada.