Literature Review: Neurodevelopmental and psychosocial risk factors in serial killers

and mass murderers

Priya Sandhu

University of California, Merced

Author Note

This paper was prepared for Writing 101: Writing in the Disciplines, Psychology

taught by Dr. Cindy Chavez.

Abstract

In the research article "Neurodevelopmental and psychosocial risk factors in serial killers and mass murderers" by Allely et. al. (2014), the researchers explored the prevalence of autistic spectrum disorder (ASD), head injuries, and psychosocial stressors in serial killers and mass murderers. They studied a sample size of 239 killers and organized the information in data tables and statistics. Mass and serial killings are rare, which makes it hard to analyse cases and earlier studies as they were not precise and lacked rigor (Allely et al, 2014). This article had limitations such as only having data from places in the United States and having the article available only in English. The strengths of the journal article were including multiple statistics and data tables to support their claims. The information provided in this article can lead to further research on more neurodevelopmental and psychosocial disorders and childhood factors that can influence violent behaviour.

Keywords: serial killer, neurodevelopment, autism spectrum disorder

Neurodevelopmental and psychosocial risk factors in serial killers and mass murderers

Autism spectrum disorder (ASD), head injuries and psychosocial factors increase the chances of becoming a serial killer in the article "Neurodevelopmental and psychosocial risk factors in serial killers and mass murderers" (Alley et. al. 2014). Autism spectrum disorders are known for their key characteristics of abnormal social communication and restricted, repetitive sensory-motor behaviours (Lord et. al. 2018). Early diagnosis can help guide abnormal behaviour; however, letting it go undiagnosed can cause problems in later age. This can cause intellectual disability and lack of social skills, which can contribute to serial killer behaviour. Even though mass and serial killings are rare events, they are researched because they impact societies. By understanding the reasons behind extreme violence, preventative strategies can be made to mitigate them. Multiple factors have been linked to violent criminal behaviour such as ASD, psychosocial stressors, sexual deviancy and fantasy, and neurochemistry of the brain. After conducting research, the outcomes showed that out of 239 killers, 106 had evidence of ASD and/or head injury and 55% of them had experienced psychosocial stressors (Allely et. al. 2014). This means that half of killers experience ASD symptoms and psychological stressors in their life which could be contributors to their actions.

Allely et. al. (2014) included case studies of Jeffrey Dahmer and Richard Ramirez to exemplify how both serial killers had ASD and/or head injuries and psychosocial stressors. The limitations discussed by the research team include the lack of extensive research on mass murderers and serial killers. The research team rarely used standardized tools for diagnostic tools, which means that different scales could present different diagnoses and how different parts of the world had varying reporting strategies. Data tables were provided that recorded killers with diagnosed ASD, killers with possible ASD, killers with definite head injuries, and killers with possible head injuries. Additionally, there were related statistics stated throughout

the article to support their claims (Allely et. al. 2014). However, the article did not state what type of autism spectrum disorder the killer had and neither the severity of it. This article can lead to future research on preventative methods of violence and studies on killers in different countries.

Review of Literature

Study's Methodology

The researchers of "Neurodevelopmental and psychosocial risk factors in serial killers and mass murderers" (Allely et. al. 2014) followed Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines to conduct research that involved serial killers, violent crimes, personality disorders, and ASD. They examined studies, books, and electronic documents that were found in libraries and internationally in the United Kingdom library loan system (Allely et. al. 2014). Allely and others had an inclusion criterion that featured: a study on the human population, the behaviour of mass or serial killers with ASD, the association between mass/serial killers and brain injury, the relationship between criminal behaviour and ASD, the overlap between narcissistic personality disorder and ASD, and the correlation between psychopathy and ASD. They excluded papers that were not in English, dissertations, book reviews, or had conference abstracts/proceedings.

The data included killers who were apprehended after 1985 due to a drastic increase in recognition of ASD and its symptoms. Earlier, people did not understand what ASD was and correlated it to people's behaviour who may have not been diagnosed once its symptoms were being recognized. Also, a killer had to have killed more than three people were included in the study (Allely et. al. 2014). The majority of the literature found did not discuss if an individual was diagnosed with ASD or had a head injury, which led to further research on each of the 239 killers. These killers were split into categories: killers with a definite diagnosis of ASD, killers where ASD was highly suspected, killers where ASD was possible,

killers with a definite head injury, and killers where head injury was possible. Allely and others included case studies on Jeffrey Dahmer and Richard Ramirez to exemplify their research.

Case Study: Jeffrey Dahmer

Jeffrey Dahmer was a case study on a killer who had characteristics that aligned with having ASD and experienced psychological stress through his childhood. Between 1978 to 1991, he killed 17 men and featured patterns of rape, dismemberment, necrophilia, and cannibalism in his murders (Allely et al, 2014). Though Dahmer was not diagnosed with ASD, evidence indicated that he had Asperger syndrome, which is a high functioning ASD psychopathology. Dahmer had social skills deficiency, which included being unattached in childhood, not bonding with people, lacking reciprocal social interaction, not forming close friendships, and being a loner (Allely et. al. 2014). He had nonverbal social deficits by having difficulty with nonverbal communication such as lacking facial expressions, not looking at the person speaking and/or watching their mouth instead, speaking with a flat-monotoned voice, and having bodily awkwardness. All these symptoms aligned with individuals who fall under the broad autism spectrum disorder.

Added to having an autism spectrum disorder, Dahmer experienced psychological stressors because of his parents. He witnessed his parents quarrel, his mother had suicidal ideologies where she spoke about committing, and his father was absorbed by his career (Allely et. al. 2014). After Dahmer recuperated from his traumatic double hernia, he believed that he caused his mother's suffering when she was struggling with her mental disorders. Dahmer was frustrated by his struggle with his homosexual tendency, which some researchers believe led to his sadistic behaviour and his crimes against men (Allely et. al. 2014). His overall case is related to an evolutionary psychological account because his aggression may have evolved over time to deal with his early childhood-onset

neuropsychiatric disorder. Jeffrey Dahmer was an example of a serial killer who was not clinically diagnosed with ASD who exemplified multiple symptoms of high functioning Asperger's Syndrome and went through psychological stressors.

Case Study: Richard Ramirez - "Night Stalker"

Richard Ramirez was a case study on a killer who had experienced multiple head injuries and psychological stressors (Allely et. al. 2014). He killed a total of 13 people within 13 months. He used several tactics with knives and guns to kill and rape women and would even break into their homes. Throughout Ramirez's childhood, he experienced psychological stressors of having an abusive great-grandfather and father, was exposed to sexual sadism through his cousin, and saw a relative kill another relative (Allely et. al. 2014). Allely and the other research team members noted that Ramirez experienced head injuries when a dresser fell on him at the age of two, where he was left unconscious and had a deep gash. At the age of five, he was knocked unconscious and got a head laceration from a swing. Years later, Ramirez was diagnosed with temporal lobe epilepsy, which is linked to having altered sexuality, excessive aggressiveness, and having hyper-religious feelings where his religious beliefs were "better" than others. Through the literature discovered on Ramirez, it was found that he had ASD traits leading to isolation and not being able to make lasting attachments to people (Allely et. al. 2014). Due to multiple incidents of head injuries that led to temporal lobe epilepsy, Ramirez may have had a change in his neurochemistry that led to his potential increase in violent behaviour. He is a prime example of a killer who experienced definite head injuries that may have led to the development of ASD and had psychological stressors.

Richard Ramirez became known for being the "Night Stalker" because he would break into women's houses in the night-time. He began by stalking the women through the night and later break in to rape them. At first, he would kill any male that was in the house and then proceeded to rape and ransack the home for valuables. His killing tactics included

guns, knives, and fist fighting. Ramirez's psychological stressors and ASD traits may have been contributing factors in becoming the night stalker.

Article Critique

Weaknesses (Limitations)

Despite the article being Eurocentric, most of the information provided on mass murderers and serial killers were based in the United States. Data was not provided from other geographical locations, or it was not stated if the researchers had gathered data from places other than the U.S. This makes the study less applicable to the entire world because there could be U.S.-specific factors that could have influenced the data about U.S. killers. Since this article is in one language, English, it has a limited reading audience. By printing the article in multiple languages, it can reach a larger audience throughout the world and educate more people on different neurodevelopmental and psychosocial risk factors on serial and mass killers.

Strengths

In the article "Neurodevelopmental and psychosocial risk factors in serial killers and mass murderers" (Allely et. al. 2014), the research team included statistics and data tables to support their claims. All the tables had precise information, which allows the audience to follow what the authors explained. The organization of the tables related to the statistics provided about which killers were diagnosed with ASD, who aligned with symptoms of ASD but were not diagnosed, who had definite head injuries, and who had possible head injuries. The names of all the killers who were researched were included in the data table, which allowed the audience to do further research on them if they desired. It increased the accuracy of the data provided. The discussion portion served to describe the limitations of the article which shows what could be done to improve the accuracy of the data. Their limitations were using articles that were not peer-reviewed and not testing the literature for its quality. The

authors knew the limitations of the study and they increased the reliability of their article by stating the limitations explicitly.

Conclusion

Summary

The focus of this article was to see if serial/ mass killers had ASD, head injuries, psychosocial stressors, or a combination of these factors. The authors conducted research on 239 killers to understand how these factors may have contributed to their killing behaviour. The researchers began with the hypothesis that "both neurodevelopmental and psychosocial interact in the development of these rare but extremely negative outcomes" (Allely et. al. 2014). After gathering and reviewing data, it was found that 106 of 239 killers had one or more of the neurodevelopmental or psychosocial factors contributing to their violent behaviour (Allely et. al. 2014). Case studies of Dahmer and Ramirez were discussed in depth to provide examples of killers who exhibited ASD-like symptoms, such as lacking social skills, having a challenging time communicating, experiencing head injuries, and having psychosocial stressors. However, there were limitations to this study which were discussed in the discussion portion of the article. This leads to opportunities for future research.

Future Research

Due to the rarity of serial/mass killings, more research needs to be conducted to understand the trends in the development of violent behaviour. Even though ASD is more known due to the media, there could be other disorders that are more prevalent. More disorders such as attention deficit hyperactivity disorder (ADHD) can be researched to see if they are linked to killers. Research on killers in different countries would be effective because this could lead to a comparison of why certain countries may have a higher or lower rate of killers. This could lead to preventative strategies for violence and decrease the likelihood of people developing killing behaviour. More research on how childhood factors

play a role in violence can be beneficial in developing ways to aid children before the onset of violent behaviour. These prospects of future research can help with lowering the number of people becoming killers.

References

Allely, Clare S. & Gillberg, Christopher & Minnis, Helen & Thompson, Lucy & Wilson,

Philip. (2014). Neurodevelopmental and psychosocial risk factors in serial killers and

mass murderers. *Aggression and Violent Behavior*, 19, 288-301.

http://dx.doi.org/10.1016/j.avb.2014.04.004

Keppel, R. D, & Brines, W. J. (2003), The psychology of serial killer investigations: the

grisly business unit. *Elsevier*, 2003.

Lord, C, Elsabbagh, M, Baird, G, & Veenstra-Vanderweele, J. (2018). Autism spectrum

disorder. *The Lancet*, 392(101146), 508-520.