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http://dx.doi.org/10.1016/j.avb.2020.101382

The Contributory Role of Psychopathology and Inhibitory Control in the Case of Mass Shooter James Holmes

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Abstract

In this article, the case of Mr Holmes is discussed in detail with a particular focus on the treatment he received when he was at graduate school in the months leading up to the shooting and, primarily, the findings from the sanity evaluation carried out by Dr Metzner. In this chapter the I^3 model is applied to the case of Mr Holmes. His attack can be seen as resulting from an increase in dispositional and situational impelling factors and a decrease in inhibiting factors, based on a detailed review on available information, the instigation, impellance and inhibition factors potentially present during the lead up to the shooting (approximately five months) and present at the time of the shooting. Instigation factors included a breakup with his girlfriend and academic failure at graduate school. Impellance factors included chronic (i.e., persistent) and severe mental illness associated with psychotic features (e.g., delusions, hallucinations and disordered thinking); social anxiety disorder (and trichotillomania); chronic suicidal thinking; chronic homicidal thinking and his perceived biological shortcomings. Inhibition factors included experiencing a "loss of fear" or "overcoming fear" of the consequences of killing people; prescription medication which may have increased his inhibition (specifically, antidepressant medication, sertraline – he was eventually prescribed 150 mg of sertraline) and individuals with ASD may be 'more readier' compared to others to act on psychotic impulses. This may have been what was happening in the case of Mr Holmes why he was potentially more vulnerable to acting on his psychotic ideas and beliefs. Also, inhibition caused by his severe mental illness associated with psychotic features (later diagnosed by the four psychiatrists before the trial as either schizophrenia, schizoaffective disorder and schizotypal personality disorder).

Keywords: Mass shootings, James Holmes; psychosis; schizophrenia spectrum disorders, I^3 model.

"I was fear incarnate. Love gone, motivation directed to hate and obsessions, which didn't disappear for whatever reason with the drugs. No consequence, no fear, alone, isolated, no work for distractions, no reason to seek self-actualization. Embrace the hatred, a dark k/night rises" (Holmes, 2012).

1. Introduction

Public mass shootings, which are sometimes referred to as "active shootings" or "rampage shootings" are considered to be an unusual form of homicide (Lankford, 2015). Surprisinsly, there remains a lack of consistency in the criteria which are used to define an event as a mass shooting or mass murder (Fox & Levin, 2015). There are numerous definitions used to define a 'mass shooting'. The Federal Bureau of Investigation's (FBI's) precise definition (which is on the lower end of the number of victims required to be defined as a mass shooting), is now defined as 'three or more killings in a single incident' (Blair & Schweit, 2014; 2013, pp. 9). The FBI's definition excludes shootings that are motivated by gang- or drug-related violence (Blair & Schweit, 2014, 2013, pp. 5). The FBI definition of a 'single incident' is dependent upon the attack taking place within a 'confined and populated area' (Blair & Schweit, 2014, 2013, pp. 5). Research investigating mass shootings is underdeveloped (e.g., Fox & DeLateur, 2014). There are a variety of explanations for this such as the limited access to data that researchers experience (Huff-Corzine et al., 2014) and that the event under study is a relatively rare occurrence (Fox & DeLateur, 2014).

2. Homicide and schizophrenia spectrum disorders

Schizophrenia and psychotic disorders can be characterized by abnormal behavior, including delusions, hallucinations, disorganized speech and/or motor behavior, and/or negative symptoms including flat emotional expression and avolition (American Psychiatric Association, 2013). Aggressive behavior in individuals with schizophrenia is typically associated with dysregulation of emotion and impaired impulse control (Witt, Van Dorn, & Fazel, 2013; Krakowski, & Czobor, 2013; Krakowski et al., 2016). Research has suggested that a diagnosis of schizophrenia is associated with an increased risk of committing homicide. For instance, Large and colleagues (2009) carried out a systematic review and meta-analysis of population-based studies which were conducted in developed countries of homicide committed by individuals with a diagnosis of schizophrenia. Findings indicated that the rates of homicide carried out by individuals with a diagnosis of schizophrenia were strongly correlated with total homicide rates. Findings from the meta-analysis revealed a pooled proportion of 6.48% of all homicide offenders had a diagnosis of schizophrenia (Large, Smith, & Nielssen, 2009). This may be higher in the United States (e.g., Wilcox, 1985). As highlighted by Engelstad and colleagues (2018) it has been suggested that in jurisdictions with low homicide rates, such as the

Scandinavian countries, the percentage may be higher, probably around 20 per cent (Gottlieb, Gabrielsen, & Kramp, 1987).

3. Case Study of Mass Shooter James Eagan Holmes

After midnight on July 20th, 2012, twenty-four year old James Eagan Holmes, dressed in a ballistic helmet, protective gear for his legs, throat and groin, black gloves and a gas mask walked into a crowded movie theater, threw a canister that released some kind of gas, and opened fire. Twelve people were killed and seventy others were injured. The crowd were there to watch the premier screening of the new Batman film, The Dark Knight Rises (Blum & Jaworski, 2016). Immediately prior to engaging in the shooting, Mr Holmes did not consume any alcohol or street drugs. However, approximately one hour before the shooting he did take a Vicodin for pain relief should he get injured during the attack (Metzner, 2013). When carrying out his attack, he wore wireless headphones and listened to "techno dance music" at full volume in order to avoid hearing anything as he carried out his attack so it would not be personal – he wanted to avoid a connection between himself and the victims. He wanted no personal interaction during the shooting. It was just a crowd, just random strangers. Therefore, it would not be like he was actually killing someone (Metzner, 2013, pp. 6). He did not stop until his shotgun was empty and his rifle jammed. He left the auditorium after unsuccessfully trying to unjam the rifle (Reid, 2014). He used an AR-15 rifle, a 12-gauge shotgun and at least one of two .40-caliber handguns that police recovered at the scene. Mr Holmes was found guilty on all 165 counts against him. Specifically, 24 first-degree murder, 140 attempted murder and one count of possession or control of an explosive or incendiary device. He was sentenced to life in prison without parole.

Psychiatrist, Dr Jeffrey L. Metzner interviewed Mr Holmes for the sanity examination for 25 hours. Dr Metzner's 69-page sanity examination is one of the key sources for this chapter. Psychiatrist, Dr William H. Reid's report examining Mr Holmes's mental responsibility under Colorado statute (C.R.S. $ 16-8. 101.5) was also examined in detail for this chapter. Dr Reid's examination of Mr Holmes consisted primarily of nine evaluation interviews which were carried out over three days (July 30-August l,2Ol4) at the Colorado Mental Health Institute - Pueblo (CMHIP) and two days (August27-28,2014) at the Arapahoe County Sheriffs Detention Facility (ACSDF). Dr Reid noted him to be cooperative at all times, during all sessions. The total interview time was approximately 22 hours and 40 minutes. Dr Metzner and Dr Reid, as mentioned later, were both appointed by the court.

3.1. Medical History

Mr Holmes report no history of any unusual childhood health problems. He also reported that, to the best of his knowledge, he reached early developmental milestones normally. He reported no history of traumatic brain injury or any other neurological conditions (e.g., meningitis, encephalitis, seizures, stroke, or toxic chemical exposure). According to the report of Robert Hanlon, Ph.D., ABPP, Mr Holmes sustained mild closed head injury (with no loss of consciousness) when he was 16 years old after running into a pole on a basketball court. During December 2012, his mother stated he was diagnosed with mononucleosis (Metzner, 2013, pp. 20). Mr Holmes reported that he drank alcohol up to 4 to 5 beers every two weeks. He had no history of alcohol abuse or treatment. He reported only having minimal experience with marijuana. Also, there was no history of street drug or prescription drug abuse (Metzner, 2013, pp. 21).

A long history of trichotillomania (hair-pulling disorder) was reported by Mr Holmes. Trichotillomania is characterized by the persistent and excessive pulling of one's own hair. Hair pulling can occur in any area of the body where hair grows. The most common area affected is the scalp, followed by the eyelashes and eyebrows. Hair loss may not always be clearly visible. He had/has no feelings of embarrassment or shame related to his hair pulling behavior. However, he

would avoid other people knowing as there was no purpose to them knowing about it. Mr Holmes stated that his hair pulling behaviors helped distract him from feelings of stress. When he first started engaging in hair pulling, he would pull the hairs on his head at the bald spot. When he was in 10th grade someone made a comment about this area going bald so he changed the location of where he would pull out hair. In late high school, he would pull hair from his sideburns. In early college, he would pull hair from his widows peak. In late college he pulled hair from under his chin and jaw. More recently, he has been pulling out hairs in his eyebrows and his eyelashes (Metzner, 2013).

Mr Holmes reported that he had been experiencing grandiose thinking since he was at least 10 years of age. He would think that he could do something that would kill everybody in the world and he would have such thoughts once a month and more often if he was feeling stressed. He could not explain why he was having these thoughts (Metzner, 2013, pp. 20). Mr Holmes described having chronic suicidal thinking prior to having chronic homicidal thinking. He stated that he would typically transfer his suicidal thoughts into homicidal thinking. When he was about 10 years of age, he described a suicide attempt where he used cardboard to cut his wrists (along the crease of the skin on the inside of the wrist). He said that this was a cry for help. He said that this was the only time he ever attempted suicide. He has considered a number of ways in which he could kill himself including: strangulation, overdose and jumping in front of a car. He reports that if the opportunity presented itself, he thinks that he would attempt to commit suicide. He stated that his fear of the pain that would occur has prevented him from committing suicide in the past (Metzner, 2013, pp. 19). He continues to experience chronic homicidal thinking (Metzner, 2013). Specifically, he stated in his notebook the following:

"This obsession to kill. Since I was a kid. With age became more and more realistic. Started as the entire world with nuclear bombs. Then shifted to the biological agent that destroys the mind. Most recently serial murder via a cell phone stun gun & folding knife in national forests. And finally, the last escape, mass murder at the moves. First obsession onset > 10 years ago. So anyways, that's my mind. It is broken. I tried to fix it. I made it my sole conviction but using something that's broken to fix itself proved insurmountable. Neurosciences seem like the way to go but it didn't pan out. In order to rehabilitate the broken mind my soul must be eviscerated. I could not sacrifice my soul to have a "normal" mind. Despite my biological shortcoming I have fought and fought. Always defending against pre-determination and the fallibility of man. There is one more battle to fight with life. To face death, embrace a long-standing hatred of mankind and overcome all fear in certain death" (Holmes, 2012, pp. 31).

Since the age of 10 years, Mr Holmes reported that he struggled with the meaning of life and death. He said that this struggle was related to "finding a purpose", a purpose which is meaningful. He did not believe that other people experienced the same struggles because he believed his mind was different (Metzner, 2013, pp. 15). Dr Metzner also highlights a part of Mr Holmes's notebook (Page 30) where he outlines a summary of the options that he felt he had in dealing with the "problem" (i.e., the meaning of life and not having a purpose). Specifically, he makes the following list in the notebook:

Alternatives to death.

1. Ignore the problem.
   If the problem or question doesn't exist then the solution is irrelevant. Didn't work. Forms of expression tried included reading, television and alcohol.

2. Delay the problem. Live in the moment without concern for answering the problem at present. Didn't work. Pursued knowledge to increase the capacity for answering the question with improved cognitive function.

3. Pawn the problem. If one can't answer the question themselves, get someone else to answer it. Didn't work. Everyone else didn't know the solution either.

4. Love. Hate. Despite knowing death is false and suboptimal response, I can't find a working alternative. If all of Life is dead, then the question -

   Why should life exist?
   What is the purpose of living?
   Are then 0, irrelevant. (Metzner, 2013, pp. 16).

Lastly, it is important to note that there is a history of significant mental illness on both sides of Mr. Holmes's family (testimony of Dr. Jonathan Woodcock).

3.2. Biological, or body-related, issues

In his childhood and in adulthood, Mr Holmes experienced a number of concerns regarding various aspects of himself such as his ears. For instance, he would frequently look in the mirror in order to look at his appearance and would pay particular attention to his hair style. He would do this more than 10 times a day. This behavior started more than a year prior to Dr Metzner's sanity evaluation of him in 2013. When he was a child, he had concerns over his teeth and would only chew using the left sides of his jaw in order to preserve his teeth on the right side of his jaw. Such concern was not present after he got braces. Additionally, when he was a child he was occasionally concerned with his nose. It was frequently drippy, requiring continuous wiping. He reported that when nose interferes with quality of living, [pores] are squished to the point of skin peeling. He was also concerned with his eyes and believed he had imperfect biology as he had to wear glasses. He was concerned with his penis. In childhood he suffered some accidents to his penis. He had an allergic reaction to soap which resulted in scarring. He had engaged in excessive stimulation in response to the "most beautiful woman in world" he found in a book. The other accident to his penis involved a slab of skin which tore away and did not heal. These accidents were not prevalent to absent in appearance when erect. Lastly, he describes having an odd sense of self and that he viewed himself as divided. There is a biological James Holmes who is drawn by biological needs. The other James Holmes he believes is the real him and this real part of him is fighting the biological him. He stated that the real him does things because he wants to not because he is programmed to, biologically. He talked about how the real him lost the battle (the battle being against evolutionary biology) and succumbed to love (Metzner, 2013). Interestingly, Dr Reid found no reliable evidence for any dissociative disorder (e.g., depersonalization/derealization disorder, dissociative identity disorder) in any of the records, interviews or psychological tests relating to Mr Holmes (Reid, 2014).

During his sanity evaluation, Dr Metzner outlines how Mr Holmes described some of the biological shortcomings which he had including difficulty communicating, depression, anxiety and obsessive-compulsive disorder (OCD). How he thought homicide would solve these biological shortcomings was not explained by Mr Holmes (Metzner, 2013, pp. 22). As highlighted by Langman (2017) a large number of mass shooters have experienced biological challenges to their identities. As most mass shooters are male, these biological issues may have presented as a challenge to their sense of masculinity (Langman, 2017). Some of the types of biological issues are medical problems (such as birth defects or significant illnesses), appearance-related factors (such as shortness, obesity, severe acne) and also functional matters (such as lack of athletic ability, poor coordination). (For an extensive list of body-related issues, see Langman, 2017a). Langman (2017) describes some cases of mass shooters who experienced biological or body-related issues. For instance, Eric Harris, one of the Columbine High School Massacre shooters, had two birth defects. One of them was a deformity of his chest (pectus excavatum) which required two surgeries. When he was 12 years old, he received surgery for his pectus excavatum. Surgeons implanted a steel strut in his chest which they removed six months later. His chest still failed to develop well despite the surgery he received. In his autopsy report, evidence of the pectus excavatum is noted (see - www.acolumbinesite.com/autopsies/eric3.gif). As well as his chest deformity, Harris also had an

unknown birth defect in his legs that resulted, when he was an infant, in numerous visits to physicians. Harris hated how he looked. He was also teased because he had a big head on a skinny body. Harris has never written anything regarding the impact of his sunken chest. However, he did write about the negative feelings he had about his physique in his journal. For example, "I have always hated how I looked… That's where a lot of my hate grows from. The fact that I have practically no self-esteem, especially concerning girls and looks and such" (Harris, 1998, pp. 8).

3.3. Decrease in functioning (including academic) in the lead-up to the shooting

There is strong evidence that in the months leading up to the shooting, Mr Holmes began to experience a decrease in his level of functioning as well as in his academic performance (Nelson, Brady, & King, 2015). In June 2011, he began the neuroscience program at University of Colorado at Denver. On June 7, 2012, he had his preliminary oral exams. During the preliminary oral exams, a panel of three professors asked Mr Holmes a series of questions. They rated his responses to the questions based on his understanding of the concepts and verbal answers. He failed to pass his preliminary oral exams. The Professors who examined him said that there was a lack of organization in his answers to the questions and they had concerns that his knowledge of the material was superficial only or that he knew the words to use with no understanding the concepts. He performed poorly across all topics not just in a particular area. Dr Vijayaraghavan stated that the professors who carried out the oral examination came to him for his advice as no one had failed preliminary oral exam before. Dr Vijayaraghavan gave Mr Holmes the option to take an easier version of the exam. However, Mr Holmes sent an email on June 11 stating that he wanted to resign from the program. Dr Vijayaraghavan did not think that Mr Holmes was mad or defensive following being found out that he had failed his oral examination. Mr Holmes realized during his preliminary oral examination that he would not pass. He felt morose because he had lost his career path (Metzner, 2013).

Mr Holmes reported that he was becoming increasingly depressed around March 2012. This was related to his relationship difficulties with his former girlfriend and difficulties he was experiencing in graduate school. Some of the depressive symptoms included depressed mood (which Mr Holmes rated as a 9 on a scale of 0 to 10, with 0 being the least severe depression), a sleep disturbance (difficulties in going to sleep), decreased energy level, decreased sexual drive, feelings of helplessness, hopelessness and worthlessness and loss of interest in activities which previously were important to him (e.g., schoolwork) (Metzner, 2013, pp. 15). Around April 2012, Mr Holmes realized that the knowledge he was acquiring in graduate school was not going to help him improve his communication skills or decrease his chronic homicidal thinking (Metzner, 2013, pp. 17).

3.3.1. Treatment Received at the Student Health Center at the University of Colorado

Mr Holmes sought mental health treatment through the Student Health Center at the University of Colorado (Anschutz Campus) during March 2012 due to a lifelong problem with public speaking. He received psychiatric treatment through this Student Health Center from March 21 to June 11, 2012. Mr Holmes reported having difficulties in being able to explain his symptoms to his psychiatrist, Lynne Fenton, M.D., for a variety of reasons (Metzner, 2013, pp. 14). In the months leading up to the shooting, Mr Holmes had been writing and drawing in a notebook which he mailed to Dr Fenton (with a number of $20 bills which he deliberately burned round the edges) shortly before carrying out his attack (https://www.documentcloud.org/documents/2089833-james-holmes-notebook.html). According to Mr Holmes, the notebook was an attempt to put into writing what Dr Fenton failed to ask about and what he felt he was unable to share with her. On the evening of July 19, 2013, Mr Holmes mailed the notebook to Dr Fenton, knowing she would not get it until after he carried out his attack. He said that he did not think about her reaction to receiving the notebook when asked about this (Metzner, 2013, pp. 15).

On March 21, 2012, Dr Fenton saw Mr Holmes for intake evaluation. One of the notes refers to Mr Holmes solution to "biological problem" or biological shortcomings which was to eliminate the problem through "homicide" but he said he could not kill everyone so it would not be an effective solution. Dr Fenton discussed Mr Holmes homicidal thinking with him during this first appointment. She made a note that his homicidal thinking did not appear to be entirely ego dystonic, that he denies having any plan or target and also denies any suicidal ideation. He did not appear to be dangerous but further understanding and follow-up is needed. From this intake evaluation, Dr Fenton's assessment included the possibility of social phobia, psychotic level thinking and schizoid personality disorder. On March 21, 2012, Sertraline (50 mg/day with a plan to increase to 100-200), was prescribed by Dr Fenton for symptoms of obsessive-compulsive disorder and social phobia (i.e., anxiety) rather than for symptoms of depression because Mr Holmes had not reported any symptoms of depression. Klonopin (0.25 mg po b.i.d) was prescribed for anxiety. Dr Fenton made a note after her appointment with Mr Holmes on March 21, 2012 to consider antipsychotic, specifically Seroquel for its anxiolytic properties (Metzner, 2013).

At the next appointment on March 27, 2012, Klonopin was discontinued (because it was not helping with his anxiety) and he was prescribed propranolol 10 mg twice a day (prn) instead. Sertraline 100 mg/day was continued. Dr Fenton discussed with Mr Holmes the use of an antipsychotic, Seroquel. However, it was not prescribed because Mr Holmes had concerns about the sedative effect of taking Seroquel. Dr Fenton described that her appointments, despite her attempts to engage with Mr Holmes, became medication management sessions. Dr Fenton's appointments were scheduled for one hour, however they were always much shorter because of Mr Holmes lack of engagement in the sessions (Metzner, 2013). In the next appointment on April 3, 2012, Mr Holmes said that the propranolol was having a negative impact on his memory during lab meeting presentation, so Dr Fenton made the decision to reduce the dose of propranolol to 5 mg twice a day.

At his appointment on April 17th, 2012, Dr Fenton increased Mr Holmes's prescription of Sertraline to 150 mg daily as there appeared to be no changes. Propranolol was increased to 10mg 2x day. An increase in his obsessive thoughts was noted by Dr Fenton following his relationship break down with his girlfriend. Some of the diagnostic formulations which Dr Fenton considered included: Schizotypal personality disorder with or without frank psychotic disorder. She also made a note to rule out OCD-obsessive thoughts - but notes that the obsessive thoughts he does have do not appear to be ego-dystonic in nature. He is noted to have no apparent rituals. The following note was also made: Social phobia versus a manifestation of his psychotic level thinking. In terms of safety, Dr Fenton's opinion was that there was no evidence of any imminent threat. However, she noted being worried about his homicidal ideation and suicidal ideation and further notes that Mr Holmes does not reveal much regarding these particular aspects. Her plan was to try and maintain alliance to enable further evaluation. She also notes in her diagnostic formulation that she will continue to try an antipsychotic. She would prescribe risperidone as this is more potent and less sedating compared to Seroquel.

At his follow-up appointment with Dr Fenton on May 1, 2012, Mr Holmes said that he was feeling calmer and that he was finding it easier to talk with other people. He did not report having experienced any manic-like symptoms to Dr Fenton, nor did she ever observe any manic-like symptoms during her sessions with him. He also never told Dr Feinstein (who was another University of Colorado psychiatrist who treated Mr Holmes) or Dr Fenton about how bad he felt about himself. Dr Feinstein stated that "we [Dr Fenton and Dr Feinstein] got the arrogant [presentation of] him." Additionally, Dr Fenton observed that Mr Holmes got angry when she did not directly answer his question about her philosophy of life in her April 17, 2012 progress note (Metzner, 2013, pp. 28).

Dr Fenton also had a session with Mr Holmes on May 31, 2012. Dr Feinstein joined in this evaluation. In this session he told both psychiatrists that the majority of people are "sheeple" (an amalgamation of the words sheep and people) and have no meaning. Dr Fenton and Dr Feinstein also has a session with Mr Holmes on June 11, 2012. In this session, Mr Holmes reported that he had failed his oral examination and said that he thinks he will leave the programme and get a job. Dr

Fenton and Dr Feinstein opinioned that Mr Holmes did not not appear to have any feelings of anger towards the graduate school and actually appear to be somewhat relieved. He also did not appear to be depressed or suicidal. Dr Fenton and Dr Feinstein discussed with Mr Holmes that they thought that a medication such as risperidone and ongoing psychotherapy would be very beneficial for him. However, his response was that his health insurance was going to terminate. However, both Dr Fenton and Dr Feinstein made it very clear to him that this would not be a barrier. Despite this, Mr Holmes saw no point in getting treatment if he was going to resign from the graduate programme. Dr Fenton remained significantly concerned regarding the potential dangerousness of Mr Holmes, particularly the potential for violence against other people given the following aspects:

- His long history of having fantasies about killing as many people as possible.
- His caginess in talking about any details regarding methods, targets, timing.
- His refusal to give permission to contact anyone who would be able to provide them with collateral information or speak on his behalf.
- The unclear timeline of his mental health status and past history. Dr Fenton wondered if he had always been odd and angry or whether this presentation was new - which may suggest the possibility of a psychotic break, substance-related psychosis or medical illness.

Because of these concerns, Dr Fenton made the decision, after her final meeting with Mr Holmes, to activate the Behavioral Evaluation and Threat Assessment (BETA) team to investigate further and help formulate a plan. Her assessment included the following: “At this point, it appears that James has schizoid personality disorder and is intermittently functioning at a psychotic level. His ability to mentalize about others’ states of mind is very impaired and he may be on the autism spectrum. He may be shifting insidiously into a frank psychotic disorder such as schizophrenia, though he does not have the more rapid worsening of functioning typical of most psychotic breaks. His fear/hatred of humans has markedly impaired him…”. Dr Fenton also stated that she had insufficient evidence of imminent dangerousness to be able to have him involuntarily hospitalized (Nelson et al., 2015; Singular & Singular, 2015). He did not meet the criteria for a mental health hold. He was not gravely disabled and there did not appear to be any indications of suicidal ideation. Additionally, although he had a long history of having homicidal ideations, he denied having any specific targets. There was also no indication, following his failure at graduate school, that he had any anger towards the graduate school or any other person. Dr Fenton and Dr Feinstein note that Mr Holmes never threatened them but he did make a number of hostile remarks to them. There is no previous history of any violence. Dr Fenton noted the following diagnoses and symptoms:

- Schizoid Personality Disorder
- Rule out Asperger’s Disorder
- Rule out Schizophreniform Disorder

Dr Fenton and Dr Feinstein considered a psychotic disorder in their differential diagnosis. This was due to, for instance, his intermittent odd answers and comments. For example, during one of the earlier sessions, Dr Fenton asked about his childhood and he recalled getting eyeglasses when he was in fifth grade. He stated his desire to overcome biology, which Dr Fenton considered to be suggestive of illogical thinking. He also reported having compulsive behaviors. For instance, he would have a compulsive need to wash dishes shortly after eating. He also talked to Dr Fenton about his long history of having an angry and hateful perception of humanity. All attempts to get more information about these perceptions were unsuccessful. On one occasion, there was some evidence of paranoid thinking related to a box that Mr Holmes had seen in Dr Fenton’s office (Metzner, 2013, pp. 29). Moreover, in an appointment with Dr Feinstein and Dr Fenton, he suspected that a cast or brace that Dr Feinstein had on his arm was a "test" to see if he would be empathic, or that he might have a weapon hidden inside it (this was not the case) (Reid, 2014). When he was preparing for the attack, he also reported that he kept his curtains closed in order to avoid anyone seeing him preparing for the shootings. However, he did not take any unusual or extraordinary measures in order to not be detected. For example, he purchased his weapons and equipment using his own name and credit card

and even had a number of these purchases delivered to his apartment. He also did not use a proxy server and did not delete his browser history after he visited "mission"-related websites (Reid, 2014).

In his notebook under the section titled, “Self Diagnosis of Broken Mind” he detailed disorders he suspected he may have which included dysphoric mania. Other symptoms included racing thoughts, high energy level and decreased need for sleep (e.g., six hours). He said that these episodes would last one or two days with approximately one week between episodes. He reported having had three of four of these episodes. These all took place after he started taking sertraline in March 2012 (Metzner, 2013, pp.17).

4. Sanity Evaluation Findings Prior to the Trial

Before his trial, Mr Holmes underwent a number of sanity examinations which were carried out by four different psychiatrists. Specifically, he was forensically examined by Dr Jeffrey Metzner and Dr William Reid who were both appointed by the court. He was also forensically examined by Dr Raquel Gur and Dr Jonathan Woodcock who were both hired by the defense. He was psychiatrically evaluated to address the legal issues of sanity, competency to proceed, and mitigating factors, if any, related to a mental disease or defect (Metzner, 2013). Regarding whether Mr Holmes met the technical legal definition of insanity, there was disagreement between the court-appointed doctors and the defense experts**.** In the state of Colorado, a person is insane if the person is (a) "so diseased or defective in mind at the time of the commission of the act as to be incapable of distinguishing right from wrong with respect to that act," or (b) if the person "suffer[s] from a condition of mind caused by mental disease or defect that prevented the person from forming a culpable mental state that is an essential element of a crime charged." (COLO. REv. STAT. § 16-8-101.5 (2016)).

All four psychiatrists each concluded that Mr Holmes suffers from a serious and chronic mental illness which is on the schizophrenia spectrum of disorders. Dr Metzner testified that in his opinion, Mr Holmes's most likely diagnoses included schizoaffective disorder, social anxiety disorder and trichotillomania (Transcript of Record at 83, People v. Holmes, No. 12CR 1522 (Arapahoe Dist. Ct. June 8, 2015). Dr. Woodcock also opined that Mr Holmes had schizoaffective disorder (Transcript of Record at 142, People v. Holmes, No. 12CR1522 (Arapahoe Dist. Ct. June 25, 2015)). Mr Holmes was diagnosed with schizotypal personality disorder by Dr Reid who also testified that he "may well meet the criteria for . . . delusional disorder." (Transcript of Record at 63, People v. Holmes, No. 12CR1522 (Arapahoe Dist. Ct. June 4, 2015)). Mr Holmes was diagnosed with schizophrenia by Dr Gur, an expert on schizophrenia at the University of Pennsylvania (Transcript of Record at 160, People v. Holmes, 12CRI 522 (Arapahoe Dist. Ct. July 7, 2012)). As highlighted by Dr Reid the diagnoses may differ to some degree but all the diagnostic conclusions reached by all four psychiatrists are within the same ballpark. All four psychiatrist were also in agreement that there was no evidence that Mr Holmes was in any way malingering or faking his mental illness (Nelson et al., 2015). The most marked symptoms that Mr Holmes was experiencing at the time of the shooting, according to the experts, were delusions and significant negative symptoms. According to the Diagnostic and Statistical Manual of Mental Disorders (DSM–5), a delusion is a "fixed belief" that [is] not amenable to change in light of conflicting evidence." (American Psychiatric Association, 2013). The primary delusional belief that Mr Holmes exhibited was his concept of “human capital” – that he could increase his worth by killing people (Nelson et al., 2015).

During his examinations of Mr Holmes, Dr Metzner was able to obtain further detail from Mr Holmes about his concept of “human capital”. The concept of “human capital” refers to how much a particular person’s time is worth. He believed his life would be more meaningful if he had human capital. He went on to describe how it is important for a killer to kill more than just one person because it increases the worth of the killer in a mathematical way. When asked to give further clarification regarding his method of measuring a person’s worth, he described it as comprising of the following:

1. Number of people killed.
2. Your own perceptions of what a life is worth
3. Your contribution to society (e.g., in a meaningful way and positive way) (Metzner, 2013, pp. 10).

Mr Holmes also believed that children have a greater worth when compared to adults because children have more life left to live. Despite his belief that children were worth more than adults, he believed that killing children was wrong (12 years of age or younger according to him) (Metzner, 2013). Mr Holmes stated to Dr Reid during his evaluation that since the shooting he has regrets over killing and wounding children. Nevertheless, he still includes the six-year-old victim that he killed as one of the "points" he accumulated (Reid, 2014).

He said that he had not previously killed people (despite the belief that it would have increased his worth) because of fear, specifically fear of the consequences of such actions (e.g., incarceration, the death penalty). He stated that he lost his fear during his time in treatment with Dr Fenton. Despite his difficulty in being able to give an accurate timeline, it appears that he had "lost the fear" by at least early May 2012. This was the same time that he was experiencing what he referred to as "dysphoric mania". He stated that he felt indifferent about losing his fear. He did not describe this change to Dr Fenton because he thought she would have him locked up which would have made him unable to carry out the shooting and therefore prevent him increasing his worth (Metzner, 2013, pp. 12). Approximately a week following the shooting, it was believed by Mr Holmes that by carrying out the shooting he had increased his worth – a belief which he still held during his sanity evaluation with Dr Metzner in 2013. He was aware that other people think that his worth has not increased but decreased because of the shooting he had carried out. He believed that society's norms did not impact his perception of his worth as "there is no right or wrong." (Metzner, 2013, pp. 16). During his examination with Dr Metzner, Mr Holmes was surprised when he learned that sertraline was prescribed for anxiety and not depression and that both Dr Fenton and Dr Feinstein were unaware of his symptoms of depression. He reported that there was one time where, in response to a question, he told one or both of them that he was receiving treatment for depression (Metzner, 2013).

5. Evidence of Psychotic Behaviour Following his Arrest

Around four months following his arrest, Mr Holmes started to become floridly psychotic in the Arapahoe County Jail. The behavior he began exhibiting in the jail was considered both bizarre and disorganized behavior. For instance, he would lie naked on his stomach in a frozen position (catatonic) on the floor with his arms twisted up and his legs bent up in the air. Other behaviors included smearing feces, defecating on the floor, licking the walls, speaking gibberish, eating paper cups. On the 13th November 2012 he was transported from the Arapahoe County Detention Facility (ACDF) to Denver Health Medical Center (DHMC) after engaging in behaviors which were potentially self-injurious. For instance, he attempted to do a backwards summersault off his bed with a cup on his penis and landed on his back, hitting his head on the floor. It was this particular incident which led him to be referred to the DHMC to have a CT scan of his brain to see if there was any indication of injury (this scan did not reveal any injury was sustained following this incident). Other self-injurious behaviors he had been doing in the jail included banging his head against the wall and ramming towards the wall and head butting it. Additionally, he was observed talking to himself and it was also noted that he told people he was not sure whether they were real or not (Metzner, 2013, pp. 35). Mr Holmes said that the incident where he jumped off his bed in the jail was due to visual hallucinations he was experiencing at the time and not a suicide attempt (Metzner, 2013, pp. 19).

On the 15th November 2012, he was transferred back again to DHMC because of an escalation in his odd and potentially self-injurious behaviors. Following evaluation, Mr Holmes was

diagnosed with an unspecified psychotic disorder and a delirium (the delirium being due to not eating or drinking as a result of paranoid thinking). On the 18th November 2012, he received a follow-up CT scan of his brain which, as before, indicated no evidence of acute intracranial abnormality. During his hospitalization he was prescribed antipsychotic and antidepressant medications and he continued being prescribed this medication after he was transferred back to the ACDF. At the time of his sanity evaluation with Dr Metzner, he was taking risperidone for psychotic symptoms, escitalopram for acne and acetaminophen on an as required basis for pain (Metzner, 2013).

He also experienced his first visual hallucinations during November 2012. As a result, he was hospitalzsed at the DHMC. The delirium he displayed was suggested to have been the result of a metabolic abnormality caused by dehydration and electrolyte abnormalities. At this point, Mr Holmes was then prescribed Risperidone, an anti-psychotic medication and also Lexapro and Cogentin for helping to manage side effects which are caused by Risperidone (Metzner, 2013, pp. 32). Mr Holmes indicated that he has found risperidone to be helpful. The visual hallucinations that he started to experience during November 2012 ended shortly after his hospitalization at the DHMC on the 15th November 2012. He denied having any history of auditory hallucinations, which was inconsistent with records from the DHMC (Metzner, 2013, pp.20). All the physicians and psychiatrists who treated Mr Holmes during his hospitalization at the DHMC were in agreement that he was experiencing psychosis and delirium and was not malingering or feigning his symptoms. It is important to highlight here that this floridly psychotic episode was introduced during the trial which provided additional confirmation of the four forensic experts' diagnostic conclusions that Mr Holmes has a serious and chronic mental health disorder on the schizophrenia spectrum of disorders (Nelson et al., 2015). While he was being treated at the DHMC, Mr Holmes was reported to have made bizarre comments about pulling away from people and drinking their blood. He could not recall having made such comments following his return to the Arapahoe County Jail. However, he did recall having these thoughts (Metzner, 2013, pp. 33).

In sum, Mr Holmes was unable to recall having a history of auditory hallucinations. However, records from DHMC note that he experienced auditory hallucinations. Visual hallucinations were experienced during November 2012. These visual hallucinations took the form of shadows (two-dimensional) on the wall which were in the shape of silhouettes of swords, axes, guns fighting each other. He first experienced these visual hallucinations infrequently when he was in his third laboratory rotation at graduate school (before he was in jail they would occur once a week. When he was in jail they occurred three or four times a week). The visual hallucinations he had before jail were similar to those he had after he was in jail. He felt “apathetic” towards these hallucinations and “went with the flow”. He was neither curious, distressed nor frightened of them. When he was in jail, they appear only on flat surfaces but before jail, they could appear on any surface. On one of the earlier occasions that he experienced a visual hallucination it looked a bit like someone who was juggling heads. This was also not frightening to him because they were only shadows and therefore could not hurt him (Interview with Psychiatrist - https://www.youtube.com/watch?v=j-jrum10ttc). During this time, thought withdrawal (the perception that other people can take thoughts or feelings from one’s mind) was also present. However, there was no indication that Mr Holmes was experiencing thought insertion (the perception that thoughts or feelings can be inserting into one’s mind by other people) or thought broadcasting (the perception that one’s thoughts or feelings are being broadcast on the radio or TV). During Dr Metzner’s examination of Mr Holmes, there was no presence of thought withdrawal. There was evidence of a history of paranoid thinking. An example of his paranoid thinking can be observed when he reported that he thought that the Federal Bureau of Investigation (the FBI) was following him at the time when his homicidal thinking became “more realistic”. He also exhibited evidence of paranoid thinking during November 2012, believing that his food was being poisoned and he stopped eating as a result (Metzner, 2013, pp. 49).

It is useful to highlight here one of the potential explanations suggested by Dr Reid regarding Mr Holmes’s acute symptoms in jail during November,20l2. Specifically, his symptoms may not have been the result of schizophrenia per se. Rather they may have been associated to post-shooting stressors in an individual who was already anxious and paranoid schizotypal. Post-shootings stressors

would include, for example, the memory of killing and injuring numerous people, his marked isolation in jail [his isolation would have been most extraordinary in the "hole"], anticipating trial and sentencing [including a possible death sentence], and the metabolic effects of his lack of eating and drinking which was apparently related to his feelings of paranoia. Lastly, Dr Reid's notes in APPENDIX 4: Mental Status Findings as of July.2014 and August.2014 in his report (Reid, 2014) that Mr Holmes's eyes were generally widely-opened and were almost - but not quite - "buggy." Dr Reid also noted that his pupils were somewhat enlarged most of the time and markedly dilated (Reid, 2014).

6. Summary and opinion

According to Dr Metzner, there is strong evidence that Mr Holmes suffers from a chronic (i.e., persistent) and severe mental illness associated with psychotic features (e.g., delusions, hallucinations and disordered thinking). The list below outlines the symptoms of his mental illness:

1. Delusions (a false belief based on incorrect inference about external reality that is firmly held despite what almost everyone else believes and despite what constitutes incontrovertible and obvious proof or evidence to the contrary).
2. Hallucinations (perception-like experiences with the clarity and impact of a true perception but without the external stimulation of the relevant sensory organ),
3. Catatonic behavior (a marked decrease in reactivity to the environment) by history,
4. Negative symptoms which include the following:
    a. Diminished emotional expression,
    b. Avolition (decrease in motivated, self-initiated purposeful activities),
    c. Alogia (diminished speech output),
    d. Anhedonia (depressed ability to experience pleasure from positive stimuli)
    e. Asociality (lack of interest in social interactions),
5. A marked decreased in his level of functioning occurred (e.g., as evidenced by his failure to achieve expected level of academic performance in graduate school),
6. Depressive symptomology that includes feelings of worthlessness, helplessness, and hopelessness,
7. Manic-like symptoms by history,
8. Obsessive-compulsive behaviors that include hair pulling (trichotillomania) and a number of somatic concerns,
9. Chronic anxiety, especially when around other people and during public speaking,
10. Chronic suicidal thinking, and
11. Chronic homicidal thinking.

Dr Metzner stated that Mr Holmes's clinical presentation was consistent with the differential diagnosis of schizophrenia, schizoaffective disorder, bipolar disorder, social anxiety disorder, trichotillomania and obsessive-compulsive disorder. It should also be noted that Mr Holmes was successfully treated from the delirium secondary to starvation resulting in metabolic abnormalities at the DHMC during November 2012. He did not fulfill the diagnostic criteria for a dissociative disorder. However, depersonalization has been experienced by Mr Holmes. Depersonalization refers to the perception of an unreal self and emotional numbing. Dr Metzner had suggested that it is possible that prior to the onset of his severe mental illness, Mr Holmes would have met the diagnostic criteria for a schizotypal personality disorder (premorbid) (Metzner, 2013). At the point of his assessment of Mr Holmes in 2013, Dr Metzner's expert opinion is that his diagnoses are the following:

1. Schizoaffective disorder, first episode, currently in acute episode, bipolar type, with a history of catatonia
2. Trichotillomania
3. Social Anxiety disorder

4. Status-post delirium secondary to metabolic problems due to starvation.

According to Dr Metzner, Mr. Holmes's breakup with his girlfriend and his academic difficulties were not causal factors leading him to carrying out his attack in 2012. He suggested that the breakup with his girlfriend and academic struggles and subsequent failure were not causes of (nor were they motives for) the shooting. Instead, these were 'potential triggers that precipitated his first psychotic break'. However, Dr Metzner does point out that it is possible that Mr Holmes would have become psychotic at the time irrespective of these possible stressful triggers (particularly given that early to mid-twenties is when such disorders typically have an onset) (Nelson et al., 2015). Based on his expertise and evaluation of Mr Holmes, Dr Metzner has stated that there are clear mitigating factors that are directly related to Mr Holmes's serious mental health disorders. Dr Metzner further stated that "I think it is very clear, but for the presence of his mental illness associated with psychotic features, the shooting would not have occurred. Although it is my opinion that he does not meet the criteria for legal insanity, it is also very clear that his appreciation of the wrongfulness of his actions were significantly impaired (from a clinical perspective) as a result of his psychotic thinking. His depression and psychosis was a cause of substantial distress to him, which contributed to decision to implement the planned shooting" (Metzner, 2013, pp. 57).

7. The co-occurrence and symptom overlap between ASD and schizophrenia spectrum disorders

In this section, the association between autism spectrum disorder (ASD) and psychosis is briefly reviewed. ASD is discussed here in relation to psychosis given that Dr Fenton suspected that Mr Holmes was on the autism spectrum and made a note to rule out ASD. Crucially, this was not ruled out. No autism diagnostic instruments were performed with Mr Holmes to the author's knowledge.

The estimated prevalence of schizophrenia in the general population is 1% (Bradley et al., 2011). Research has indicated that autism spectrum disorder (ASD) may be one of the potential risk factors for schizophrenia or psychosis. However, this is currently an area where there is relatively little research and much more is needed before any firm conclusions can be drawn (e.g., Nylander, Lugnegard, & Hallerback, 2008). There have been numerous researchers who have highlighted the significant degree of symptom overlap between ASD and schizophrenia (Kurita, 1999; King & Lord, 2011). It has been suggested by Kincaid, Doris, Shannon and Mulholland (2017) that evidence showing there is symptomatic overlap is increasing as well as the recognition of the clinically significant rate of comorbidity between ASD and psychotic disorders (e.g., schizophrenia) (e.g., Solomon et al., 2011; Vannucchi et al., 2013). However, the exact nature of this relationship is currently unknown highlighting the need for further research.

Studies have shown evidence of a shared or common neurobiology between ASD and psychosis (e.g., Sporn, Addington, Gogtay et al., 2004). It has recently been suggested that the negative symptoms (e.g., decline in social functioning, passivity, withdrawn behavior) in psychosis may be the common ground or overlapping symptomology between ASD and psychosis (Eussen et al., 2015). Some have even postulated that the diagnostic distinction between these two disorders may be based on the clinician's specific experience and preference (Bejerot, 2007; Nylander, Lugnegard, & Hallerback, 2008). As previously emphasized by Kincaid, Doris, Shannon and Mulholland (2017) although there has been only a modest number of studies which have shown a high degree of comorbidity between schizophrenia and ASD, there has been relatively little systematic research investigating this (Chisholm et al., 2015; Davidson et al., 2014; Del Real et al., 2010). It is important to consider the co-occurrence of ASD and psychosis in an individual given some of the findings from

the literature. By itself, ASD is not an intrinsically violent disorder. The presence of psychotic illness may increase the risk that an individual will engage in violent behavior (Wachtel & Shorter, 2013, see also Newman & Ghaziuddin, 2008). Wachtel and Shorter (2013) have suggested that "there may be a kind of one-two 'vulnerability punch,' giving individuals with ASD a baseline higher risk of comorbid psychiatric illness, not infrequently including psychosis" (Wachtel & Shorter, 2013, pp. 404). Crucially, Wachtel and Shooter (2013) have suggested that individuals with ASD may be 'more readier' compared to others to act on psychotic impulses.

8. Application of the I^3 model to attempt to explain the transition from planning the action to criminal behavior

I^3 ("I-cubed") model (Denson, DeWall, & Finkel, 2012; DeWall, Finkel, & Denson, 2011) offers an integrative framework for linking the academic peer reviewed literatures on self-control and aggression. The I^3 model is described "at its core, as a framework for understanding the "push" and "pull" factors that influence how people behave with regard to a given target object in their immediate environment" (Finkel, 2014, pp. 14). The I^3 model, when applied to violence, explores the processes which can promote or thwart aggression (Elbogen, Dennis, & Johnson, 2016). According to the I^3 theory, there are three processes which interact with each other and underlie aggression, namely, instigation, impellance, and inhibition. According to this model, aggression is most likely to occur when instigation and impellance are strong and inhibition is weak. The majority of inhibitory factors involve self-control (Denson et al., 2012; Finkel, 2007; Finkel et al., 2012; Watkins et al., 2015).

Instigation

Instigation is defined as provocation or rejection that increases the likelihood of violence in an immediate and specific situation (e.g., getting into a verbal argument, being insulted by one's partner) (Finkel et al., 2012; Watkins et al., 2015).

Impellance

For "push" factors, the I^3 model suggests that aggression is more likely to take place in the presence of strong "impelling factors" (Finkel et al., 2012; Li, Nie, Boardley, Dou, & Situ, 2015). Impellance refers to dispositional or situational factors that psychologically prepare the individual to experience a strong urge to aggress when encountering specific instigators in specific contexts (e.g., trait aggressiveness)" (Denson et al., 2012, pp. 20). There are dispositional impelling factors (e.g., anger, personality disorder, neuroticism, and rumination-induced vengeance motivation) and there are situational impelling factors (e.g., environmental irritants, aggression cues, pain, and other contextual variables) that increase the likelihood of violence (Denson et al., 2012; Finkel, 2007; Finkel et al., 2012).

Inhibition

For "pull" factors, the I^3 model argues that violence is less likely to occur when there are "inhibiting factors" or more likely to occur when there are strong disinhibiting factors (Finkel et al., 2012; Li et al., 2015). Inhibition refers to dispositional or situational factors which can increase the likelihood that an individual will override an urge to be violent.

Instigation, Impellance and Inhibition factors in the case of James Holmes

As highlighted earlier, the I^3 model posits that a "perfect storm" takes place when instigation and impellance are strong and inhibition is weak (Finkel, 2014). Applying the I^3 model to the case of Mr Holmes, his attack can be seen as resulting from an increase in dispositional and situational impelling factors and a decrease in inhibiting factors. Based on a detailed review on available information (such as the approximately 25 hours of video interview with the psychiatrist two years following the shooting; academic peer reviewed literature, books and Dr Metzner's sanity evaluation document), the instigation, impellance and inhibition factors potentially present during the lead up to the shooting (approximately five months) and present at the time of the shooting are detailed below.

Instigation Factors

- Breakup with his girlfriend
- Academic failure at graduate school

Impellance Factors

- Chronic (i.e., persistent) and severe mental illness associated with psychotic features (e.g., delusions, hallucinations and disordered thinking). Particular, his concept of "human capital".
- Social Anxiety disorder (and trichotillomania)
- Chronic suicidal thinking
- Chronic homicidal thinking
- His perceived biological shortcomings

Inhibition Factors

- Experiencing a "loss of fear" or ""overcoming fear" of the consequences of killing people (Interview with Psychiatrist - https://www.youtube.com/watch?v=j-jrum10ttc – see 1:03:26).
- Prescription medication which may have increased his inhibition (specifically, antidepressant medication, sertraline – he was eventually prescribed 150 mg of sertraline). This was stated as a possibility by Mr Holmes (Interview with Psychiatrist - https://www.youtube.com/watch?v=j-jrum10ttc – see 1:04:10).
- Wachtel and Shooter (2013) have suggested that individuals with ASD may be 'more readier' compared to others to act on psychotic impulses. This may have been what was happening in the case of Mr Holmes why he was potentially more vulnerable to acting on his psychotic ideas and beliefs. ASD was suspected by Dr Fenton but not ruled out (or in).
- His severe mental illness associated with psychotic features (later diagnosed by the four psychiatrists before the trial as either schizophrenia, Schizoaffective disorder and schizotypal personality disorder) was a strong disinhibiting factor. However, it is important to note here that the nature of inhibition in schizophrenia is controversial (e.g., Bellgrove et al., 2005; Rubia et al., 2001, see Enticott et al., 2008a).

Conclusion

Based on the I^3 framework, individuals with a severe or serious mental illness may be violent not because of their diagnosis *per se* but because they are potentially more vulnerable to stressful situations/triggers and other co-occurring factors that may increase their likelihood of being violent (Elbogen et al., 2016). In this chapter, the case of Mr Holmes is discussed in detail with a particular focus on the treatment he received when he was at graduate school in the months leading up to the shooting and the findings from the sanity evaluation carried out by Dr Metzner. In this chapter the I^3 model is applied to the case of Mr Holmes. His attack can be seen as resulting from an increase in dispositional and situational impelling factors and a decrease in inhibiting factors. Based on a detailed review on available information the instigation, impellance and inhibition factors potentially present during the lead up to the shooting (approximately five months) and present at the time of the shooting. Instigation factors included a breakup with his girlfriend and academic failure at graduate school. Impellance factors included chronic (i.e., persistent) and severe mental illness associated with psychotic features (e.g., delusions, hallucinations and disordered thinking); social anxiety disorder (and trichotillomania); chronic suicidal thinking; chronic homicidal thinking and his perceived biological shortcomings. Inhibition factors included experiencing a "loss of fear" or "overcoming fear" of the consequences of killing people; prescription medication which may have increased his inhibition (specifically, antidepressant medication, sertraline – he was eventually prescribed 150 mg of sertraline) and individuals with ASD may be 'more readier' compared to others to act on psychotic impulses. This may have been what was happening in the case of Mr Holmes why he was potentially more vulnerable to acting on his psychotic ideas and beliefs. Also, inhibition caused by his severe mental illness associated with psychotic features (later diagnosed by the four psychiatrists before the trial as either schizophrenia, schizoaffective disorder and schizotypal personality disorder). As previously argued by Shiffman and colleagues (2008) identifying the instigators and situational factors (impelling or disinhibiting) would help to increase understanding of potential points in the pathway to violence where intervention can disrupt the process (the pathway to violence) (Shiffman, Stone, & Hufford, 2008). In particular, there is a need for research to explore and clarify the direction and strength of risk and protective factors for violence in individuals with psychosis. Such research may help inform violence prediction and management (Witt, Van Dorn, & Fazel, 2013).

Acknowledgments

I would like to thank Dr Jeffrey L. Metzner for reviewing and commenting on the chapter. I would also like to thank Mr Bob Allely, my father, for reviewing and proof reading this chapter.

Conflict of Interest

The author declares no conflict of interest.

Funding

This paper was unfunded.

Recommended Text

Reid, W. H. (2018). A Dark Night in Aurora: Inside James Holmes and the Colorado Mass Shootings. Skyhorse Publishing.

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