Predicting Domestic Violence: Risk Factors and Clinical Assessments

by

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Abstract

Due to the high prevalence of domestic violence (DV) in the United States and across the world, as well as the significant psychological and mental health issues that arise in both victims and perpetrators, it is essential for there to be both clinical and risk assessment for DV. The ability to identify individuals who are at greater risk for DV perpetration, in addition to the ability to accurately predict the risk of an offender to commit a violent act again, would serve numerous purposes in the criminal justice system, clinical settings, treatment options, and victim safety planning. Few comprehensive studies have approached the concept of DV prediction. This review identifies a particular set of characteristic factors and risk assessments that can be used for the prediction of DV perpetration and re-offense. This study finds that the presence of a history of violence within an individual, along with high scores on the Spousal Assault Risk Assessment, establishes the highest predictive value among DV recidivism. With the ability to accurately assess the risk of DV re-offense, these methods can be utilized to predict future violent acts. A careful assessment of other risk factors, including neurobiological and genetic, as well as other assessments are identified in this paper. In addition to an increasing quantity of assessments being developed, it is recommended for clinicians to assess both these factors and the assessments before decisions regarding prediction are made.

Keywords: violence, domestic violence, intimate partner violence, risk assessment, correlates, spousal abuse, biological factors

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Predicting Domestic Violence: Risk Factors and Clinical Assessments

DV, also known as Intimate Partner Violence (IPV), is a significant problem in the United States affecting more than 10 million adults annually (Black et al., 2010). Since the coronavirus plague emerged in 2020, DV rates have dramatically increased in several countries as pandemic lockdowns and stay-at-home orders have been enforced, forcing DV victims to remain trapped in isolation with their abuser (Matoori et al., 2020). Domestic violence is generally defined as abuse perpetrated by one intimate partner against another and includes physical, sexual, and psychological violence (National Coalition Against Domestic Violence, 2020). According to The National Intimate Partner and Sexual Violence Survey, DV accounts for nearly 21% of all violent crime (Smith et al., 2017).

In the United States, DV is a public health issue with legal consequences for perpetrators. Numerous organizations compile yearly DV statistics based on the number of cases reported and physical outcomes for victims including the National Coalition Against Domestic Violence (NCADV) and Center for Disease Control and Prevention (CDC), but these statistics often fluctuate. Affecting all races and ethnicities, the frequency and severity of DV cases vary considerably as it is highly underreported due to the personal nature of the crime. As of 2018, more than 80% of IPV victims did not seek help or receive assistance and only 47% of cases reported the crime to the police (Morgan et al., 2019). Due to this, actual prevalence rates of DV are most likely higher than the data shows.

Domestic violence is more common against women, with one in four women experiencing severe IPV as compared to one in nine men (National Coalition Against Domestic Violence, 2020) with women being five to eight times more likely to become victims than men (Brodwin & Siu,2007). According to the CDC, homicide is the fifth leading cause of death for women

ages 18 to 44; an estimated 45% of female homicide victims are killed by an intimate partner contrasted with 6% of male homicides (Petrosky et al., 2017). In addition, DV results in substantial psychological complications for victims and those who are exposed to violence in the home, such as children or other family members. In a study of DV effects on children and their mothers, a documented 40% of children and 50% of mothers presented symptoms of posttraumatic stress disorder (Chemtob, 2004). Depression is also a common mental health problem for victims of domestic abuse, with more than 50% of a battered women sample meeting the criteria for major depressive disorder (Cascardi et al., 2004). This data reveals how high of a prevalence DV rates are among women.

Due to the high prevalence of DV in the United States and across the world, as well as the significant psychological and mental health issues that arise in both victims and perpetrators, it is essential for there to be both clinical and risk assessment for DV. With the US contributing nearly $3.41 trillion dollars to address the subject of crime annually (Office, 2017), the ability to identify individuals who are at greater risk for committing violent criminal behavior, such as domestic violence offenders, would greatly benefit the criminal justice system's decisions regarding bail, jail sentencing, probation, and treatment plans for offenders (Poldrack et al., 2017). These decisions, in addition to the ability to accurately predict the risk of an offender to commit a violent act again, can also aid in the prevention of future violent acts. Prediction of future violence is, generally, defined as the anticipation of a future violent act and encompasses whether an individual possesses a risk to the community (Poldrack et al., 2017). With the seriousness of DV, psychologists need the appropriate knowledge and the ability to identify risk factors that may assist with the protection of victims, aid in the management of offenders, and decrease the prevalence DV.

Numerous clinical assessments and the presence of risk factors can be utilized when trying to assess an individual or group's likelihood of committing DV against a spouse, family members, or relatives. However, it is important to note that the existing scope of literature on DV prediction indicators is outdated and does not provide a single clear, or set of clear, indicators that would accurately identify individuals who are at a greater risk for repeating future domestic violent acts. It is hypothesized that the best way to predict violence is by examining an individual's past for previous violence, as often past violence leads to future violence. This thesis aims to investigate this claim, as well as formulate and recommend the most effective clinical assessments to use to predict this future violence.

The purpose of this thesis is to determine the most accurate, current, and effective collection of clinical assessments to use to predict future DV acts and risk with the highest possible validity and reliability. This paper addresses the following specific research goals: (a) an overview of prior research on the best methods to predict future domestic violence; (b) what are the most accurate types of demographic, social, genetic, and neurobiological risk factors that can be analyzed in future and repeat offenders; (c) a clear collection of clinical assessments that can be used to predict and help prevent prospective DV cases.

Background on Risk Assessment Tools

A. Risk Assessment Tools

Before discussing tools and previously conducted studies of risk assessment, it is important to define risk assessment as it will be used in this thesis. Risk assessment is the process of identifying, analyzing, and quantifying the probability that an individual will engage in a certain type of behavior (Heilbrun et al., 2010). There are two types of risk assessment: clinical and actuarial, as will be described below. Extensive research on risk assessment indicate that these tools improve the accuracy of professional judgements regarding decisions about the likelihood of future criminal behavior and violence (Grove et al., 2000).

Within the literature of risk assessment, there is a distinction made between "clinical" prediction, also called structured clinical judgement, and "actuarial" (statistical) prediction (Poldrack et al., 2017). Actuarial risk assessment instruments (ARAIs) are based off statistical models of risk factors, supported by research as being predictive of future offending, and giving these factors numeric value. These models generally rate and combine variables to then generate a mathematical risk score or category (Buchanan et al., 2012). ARAIs vary widely upon the risk factors that are measured, as decisions about which factors to include fluctuate based off research findings and the type of risk being measured. Moving to the second category of risk assessment, this type involves structured clinical judgement (SCJ) which relies on a clinician's ability to determine the risk of an individual based off personal knowledge on both static and dynamic risk factors (Buchanan et al., 2012). SCJ tools do not produce a risk score, rather the clinician determines the risk estimate and makes suggestions on how this risk is to be managed. There has been significant instability and debate about which of these approaches are more accurate when predicting risk.

B. The History of Use of Risk Assessment Tools in Domestic Violence Cases

Specialized tools of risk assessment have been developed for cases of DV to assess if an individual has a low, medium, or high risk of re-offending. The use of risk assessment tools in the United States relating to DV was first introduced in the 1990s after a surge of policy changes increased the number of cases entering the criminal justice system (Cattaneo and Goodman, 2003), creating a need for risk assessment. This led to a growth of scientific research concerning risk predictors for DV. Risk assessment has become a common practice among professionals concerning decisions about domestic violence.

There have been several identified risk factors, with many appearing on DV risk assessment tools. Some examples of these risk factors include: two or more instances of violent behavior within the previous year, substance abuse, and a history of psychological problems. Straus (1991) developed a "List of Criteria for Identifying Life-Threatening Risk Among Violent Men": the first list of risk factors associated with DV (Dutton and Kropp, 2000). In 1997, Daniel Sonkin created another risk factor list, "The Perpetrator Assessment Handbook" which was intended for use by clinicians, but Sonkin alerted his readers that the chances of correctly predicting future violent behavior using his list was 50-50 (Dutton and Kropp 2000). This low prediction value allowed for the creation of a comprehensive risk instruments guide "A Review of Domestic Violence Risk Instruments" created by Donald Dutton and P. Kropp in 2000. This guide served as an attempt to empirically validate domestic risk assessments previously made such as the "Domestic Abuse Scale" (1995), "Psychopathy Checklist" (1997), and "Spousal Assault Risk Assessment" (1998). There are several limitations of this guide, as there was very little published research on the validity and reliability of these tools at the time. Dutton and Kropp also noted in their study that while this guide could be used, it should "constitute one part

… used to make determinations of risk" (Dutton and Kropp, 2000), as there are more variables, assessment methods, and criteria that constantly evolve.

While Dutton and Kropp's guide is the last full attempt at a comprehensive DV guide, there are several more studies reviewing risk assessments, as the demand for accurate evaluation of risk increased in the criminal justice system. In 2005, a validation study, "The RAVE Study," was completed by conducting interviews of 782 DV female victims. This study analyzed both participant characteristics (race, education, employment, etc.) and the validity and reliability of various risk assessment tools (focused on an SCJ approach) (Roehl et al., 2005). While this study was the largest test of predictive accuracy at the time and researchers found that the risk assessment methods correctly classified most of the women re-assaulted, there were several limitations such as its primary reliance on victim interviews and the inability to analyze more than four risk assessments out of numerous to exist. Additional research would need to be done, as they recommended a formal method as well as a combination of ARAIs and clinician judgement would be the best approach (Roehl et al., 2005).

Years later the number of commercially available DV risk assessment measures increased dramatically, with over 150 existing measures (Fazel et al., 2012). Accordingly, there was continued analysis of these risk assessments. In 2012, a systematic review of 73 risk assessment samples, a total of 24,847 participants spanning 13 countries, was completed (Fazel et al., 2012) with the goal of examining the predictive validity of these tools. Researchers found that these assessments performed moderately in predicting individuals of higher risk, with a high rate of negative predictive value (Fazel et al., 2012). With the negative predictive value being so high, the study was able to accurately predict subjects that did not pose a high risk, thus, they were able to effectively screen out low-risk individuals (Fazel et al., 2012). Large limitations in this

study included the exclusion of a clinician's judgement, proven to be useful in prediction

determination, and high rates of heterogeneity amongst the sample participants.

Finally, in 2014, as comparative analysis of DV predictors was created using several proven

descriptive risk factors. This study was done on 140 domestic violence victims, again all women,

aged between 23 and 32 years old. This study concluded that level of education and occupational

status was a significant predictor of DV in victims (Golu, 2014). Participants who did not have

an occupation or were housewives, and those who did not have a university diploma were found

to have a significant prediction influence of those who had experienced DV (Golu, 2014).

C. Future of Domestic Violence Risk Assessment Instruments

DV risk assessment tools serve many purposes and can be used in many different

environments such as sentencing, probation, bail, treatment, and victim safety planning. There

are several strengths in using DV risk assessments, but they also come with limitations as

well. Concerning strengths, these tools allow for a more accurate method and baseline of

assessing the dangerousness of an individual in a clinical or criminal justice system as

compared to relying solely on a clinician's judgement. Regarding limitations and due to

limited research, there is currently no determination of which DV risk assessment tool is the

most accurate, reliable, and valid for predicting intimate partner violence.

It is important to note that there is no occurrence of a comprehensive guide outlining risk

factors containing both actuarial and structured clinical judgement assessments. It has been

recommended that researchers consider sources of information based off individual risk factors

in addition to the use of specific clinical tools (Roehl et al., 2005). As of 2019, the

predictive, concurrent, and construct validity of eighteen risk assessments, made for clinical and criminal justice practices, has been successfully identified and researched (Graham et al., 2019).

Using this research, along with numerous other sources, past analyses, and new data concerning risk factors, it is now possible for a comprehensive guide containing both actuarial and structured clinical judgement assessments to be made. This guide would be essential to aide in the accurate prediction of DV offenders, thus serving as a baseline for clinicians to use when assessing risk. This thesis also aims to bridge the gap in previous research and provide a holistic collection of risk factors and clinical assessments (actuarial and clinical) to use to predict future DV risk with the highest possible validity and reliability.

Demographic Correlates

While DV occurs in all demographic groups, there are some characteristics that have been found to relate to the perpetration of intimate partner violence. A summary of these findings is offered in Table 1. There is an overlap between some correlates, with socioeconomic status fitting into both domestic and situational characteristics.

A. Sex

Women are more likely to be victims of DV, while men are more likely to be DV offenders. From the years 1994 to 2010, approximately four in five victims of DV were women (Domestic Violence Statistics, 2020), with men representing around 15% of the victim population (Huecker and Smock, 2020). In all domestic abuse cases where coercive controlling violence takes place, nearly 97% of the perpetrator population are males who have a female partner (Office for the Prevention of Domestic Violence, n.d.). It is important to note that while the number of female abusers seem small, the male victim population report abuse at a much lower rate than that of with women victims (Office for the Prevention of Domestic Violence, n.d.). Transgender individuals have a higher risk of DV and are approximately two times more likely to experience physical DV as compared to cisgender individuals (Huecker and Smock, 2020).

B. Race

Victims of DV are more likely to be people of color, with the highest rates occurring in African American and Native American women. According to the 2020 National Intimate Partner and Sexual Violence Survey, approximately four out of 10 non-Hispanic Black women, American Indian, and Alaskan Native (National Coalition Against Domestic Violence, 2020). Additionally, one in two multi-racial non-Hispanic women have been a victim of DV (National Coalition Against Domestic Violence, 2020). This rate is 30 to 50% higher than what is

experienced by White non-Hispanic, Hispanic, and Asian women (National Coalition Against Domestic Violence, 2020).

C. Age

Women between the ages of 18 to 24 have the highest rates of DV, followed by women between the ages of 25 to 34 and men between the ages of 18 to 25 have the highest rates of victimization (Black et al., 2011). According to the CDC, 5 million acts of DV occur annually to women aged 18 years and older, with 3 million involving men (Huecker and Smock, 2020). Nearly one in ten high school students have experienced IPV in the last year alone (Domestic Violence Statistics, 2020). Nearly 26% of women and 15% of men who have been victims of DV first experienced these incidents before the age of 18 (Preventing, 2020). According to the CDC, elderly abuse is highly underreported, but is thought to occur in three to 10% in the population of elders (Huecker and Smock, 2020).

D. Location

Rates of DV are higher in regional, rural, and remote geographic areas. While DV occurs in all geographic locations in the United States, there are several studies that determine the prevalence, frequency, and severity of IPV can differ by rurality and variance in geographic access to resources (Peek-Asa et al., 2011). As of 2011, women in small, rural, and isolated areas reported the highest prevalence, frequency, and severity of domestic violence (22.5%) as compared to women living in an urban area (15.5%) (Peek-Asa et al., 2011). As of 2017, the Bureau of Justice Statistics created a report that noted only 41.4% of violent crimes (including domestic violence) are reported to the police (BJS, 2017). These low reporting rates are due to several reasons, a significant one being the fact that individuals living in rural areas have a higher prevalence of disparities in access to violence services and must travel a much greater

distance to reach existing services (Peek-Asa et al., 2011). In the United States as of 2021, Oklahoma, Kentucky, and Missouri have the highest DV statistics with more than 41.8% of the female population and 35.2% of the male population experiencing domestic abuse in their lifetimes (Domestic Violence by State, 2021). These states have reached epidemic levels of DV (Neiss-May, B, 2019).

E. Sexual Orientation

Victims of DV are higher among individuals who identify as being lesbian, bisexual, or gay. As of 2020, 44% of lesbian women and 61% of bisexual women experience rape, physical violence, and/or stalking by an intimate partner (National Coalition Against Domestic Violence, 2020); rates significantly higher than that of heterosexual women (35%). Literature for non-heterosexual couples is highly limited (Dutton, 2012; Office for the Prevention of Domestic Violence, n.d).

Table 1. Demographic Correlates of Domestic Violence.

Demographic Variables	Finding	References
Sex	Victims: • Females are more frequently known and reported victims • Transgendered individuals have highest risk of being victims. Perpetrators: • Men more frequently perpetrators	Domestic Violence Statistics, 2020; Huecker and Smock, 2020; Office for the prevention of domestic violence
Race	Highest rate of Victimization: • African Americans • Native Americans Lowest Rate of Victimization: • White non-Hispanic, Hispanic, and Asians	National Coalition Against Domestic Violence, 2020
Age	Highest occurrence: • Females: 18 to 24 years old • Males: 18 to 25	Black et al., 2011; Domestic Violence Statistics, 2020; Huecker and Smock, 2020; Preventing, 2020
Location	Rates higher in: • Rural areas States: • Oklahoma • Kentucky • Missouri	BJS, 2017; Domestic Violence by State, 2021; Neiss-May, B, 2019; Peek-Asa et al., 2011
Sexual Orientation	Highest rates among individuals identifying as bisexual, lesbian, or gay	National Coalition Against Domestic Violence, 2020

Social and Situational Correlates

All the following risk factors have been categorized into social and situational correlations. A summary of these findings is offered in Table 2.

A. History of Violence

One of the primary and most supported correlates of DV re-abuse is the presence of prior relationship aggression, when an individual perpetrating violence against a spouse or significant other committed this violence against the same person previously. It is very rare for an incident of domestic abuse to occur in isolation. In older longitudinal case studies, researchers found that among men who perpetrated aggression prior to marriage 51% continued to engage in aggression during the first year of marriage (Murphy and O'Leary, 1989). Since this study, completed in 1989, this correlation between past DV predicting future domestic violence has remained upheld. In a 2020 study, prior history of DV was found to serve as a risk factor for IPV amongst newly released incarcerated DV offenders (Walters, 2020). This theme can also be observed in another study of DV victims, with 32 out of 36 women screened for DV experiencing physical and verbal aggression within the next three months of reporting (Houry et al., 2004).

B. History of Abuse

There has been a proven correlation between children who have been exposed to DV and those who grow up to abuse their relationships and families (Nixon et al., 2013). Approximately 45 million children will be exposed to violence during childhood (Huecker and Smock, 2020), with an estimated 3.3 to 10 million children being exposed in the United States (Carlson, 1984; Straus and Gelles, 1990). Between 60 and 75% of family households in which DV takes place, child abuse also exists (Edleson, 1997; Rakovec-Felser, 2014). Children who are exposed to DV are often exposed to physical and emotional abuse, coercion, and manipulative behaviors (Office

of Juvenile Justice and Delinquency Prevention, 2000). These DV exposures increase the risk of these children developing and experiencing dating violence, having post-traumatic stress disorder, aggressive behavior, academic problems, and have a higher incidence of substance abuse (Huecker and Smock, 2020). These higher prevalence rates can also cause increased hyperactive, and/or aggressive behaviors (Huecker and Smock, 2020). Increased frequency, severity, and duration of violence in the home is more likely to cause the child to develop these behaviors (Office of Juvenile Justice and Delinquency Prevention, 2000). Male child victims tend to exhibit externalizing behaviors (e.g., aggression) while female children exhibit more internalizing behaviors (e.g., withdrawal or depression) (Office of Juvenile Justice and Delinquency Prevention, 2000). Research shows that these behaviors and an abusive home environment are linked to male perpetration of DV and many female victims come from abusive family backgrounds (Adams, 2007). In a 2008 study, women who witnessed interparental violence were 72% more likely to experience physical violence as compared to women who did not (Gover et al., 2008).

C. Social Class

Social class can be interpreted in a variety of ways based on both social and economic status. Occupation and income serve as key components in determining social class for individuals.

As of 2019, the occupation with the highest rate of DV perpetration is police officer, with a minimum finding of 40% of families with officers having experienced some type of domestic violence within the household (Gottlieb, 2019). Police officers in the United States are nearly four times more likely to perpetrate acts of domestic violence than the general population (Intimate Partner Violence Resource Guide, 2017). Physically demanding and violent occupations such as sports, police, and military are the highest group of domestic abusers

(Intimate Partner Violence Resource Guide, 2017). It is thought that individuals exhibiting aggressive tendencies required for some occupational obligations can transfer those to the home. Several studies also indicate that more than 27% of victims report job loss as a direct consequence of DV (Swanberg et al., 2006). Victims of DV who are without an occupation are more likely to experience higher levels of DV (Golu, 2014).

While all income levels have some degree of DV cases, lower income households experience a higher level of incidents. As of 2014, households earning between $15,000 and $24,999 reported slightly higher rates of DV than other income brackets (Intimate Partner Violence Resource Guide, 2017; Bonomi et al., 2014). Lower income and poverty-stricken households are more likely to have DV disputes due to higher stress levels concerning financial issues which have been shown to drive aggression and violence (Abramsky et al., 2019). Poverty also serves as the primary driver of the continuation of the abuser having power over a victim (Neiss-May, B, 2019), due to household financial stressors. Victims in low-income households also have less access to resources and thus become entrapped in the cycle of abuse or face homelessness (Neiss-May, B, 2019). In heterosexual couples, research shows that women contributing more financially as compared to their partners had a greater risk for experiencing DV (Abramsky et al., 2019).

D. Weapon Availability

Firearms significantly contribute to DV in the United States, as abusers use them to threaten, coerce, control, kill, and are involved in 19% of cases (Domestic Violence and Firearms, 2020; National Coalition Against Domestic Violence, 2020). Research published by the American Journal of Public Health found that DV situations with the presence of a firearm become increasingly more violent, as the risk of homicide to victims, other family members, bystanders,

and coworkers escalates as well (Campbell et al., 2003). This risk of homicide increases by 500% in the presence of a gun (National Coalition Against Domestic Violence, 2020), and a study of DV homicides found that 20% of victims were not the intimate partner themselves but other family members, friends, and neighbors. Nearly 4.5 million women in the US have been threatened with a gun; with nearly 1 million women being shot or shot at by an intimate partner or spouse (Domestic Violence and Firearms, 2020). Over half of all domestic violence homicides are committed with guns (Grinshteyn et al., 2015), and women are five times more likely to be murdered by an abusive partner who has access to a gun.

E. Education Level

Lack of education serves as a large risk factor for DV. Lack of education in this thesis is defined as having earned less than a high school diploma. Victims experiencing higher rates of DV often have less education experience compared to women earning a college level degree or higher (Rapp et al., 2012). Levels of higher education have been linked to lowering the rate of DV by nearly 7% (Golu, 2014). Having a higher level of education, and having the potential to earn a higher income gives victims an elevated sense of power or higher social status, thus, reducing the level of DV cases compared to those who are less educated with lower job income potential (Shiraz, 2016).

F. Substance Use

There is a strong correlation between substance use (alcohol and/or drug use) and domestic abuse (World Health Organization, 2006). Substance abuse occurs in 40 to 60% of all reported DV cases (Soper, 2014). Researchers identify a stronger correlation between alcohol use over drug use and DV (Watkins et al., 2014; Shorey et al., 2014). Alcohol use of the perpetrator, victim, or both parties increase both the occurrence and severity of DV incidents (World Health

Organization, 2006). The World Health Organization reports that roughly 55% of domestic abusers drinking alcohol prior to assault and women who are victims of abuse are 15 times more likely to abuse alcohol (World Health Organization, 2006). This correlation is further supported with excessive alcohol consumption and the number of binge drinking episodes as a strong correlate with DV perpetration and victimization, especially in individuals aging 18 to 23 (Shorey et al.,2014; Watkins et al., 2014). According to the CDC, a binge drinking episode is defined as having five or more drinks for men or having four or more drinks for women in a two-hour time frame (CDC, 2019). Alcohol directly affects cognitive and physical functioning, thus reducing self-control and leaving individuals less capable of negotiating non-violent resolutions to relationship conflicts (World Health Organization, 2006).

G. Pop Culture Influences

Children and adolescents exposed to highly violent video games and television programs are shown to exhibit more aggressive behaviors and can contribute to levels of violence within these individuals. Studies ranging from 2004 to 2019 show these indications and find positive correlations between exposure to violent media (television, movies, video games) and aggressive behaviors in adolescence (Shao & Wang, 2019; Snider, 2019). This data supports the General Aggression Model (GAM) which states that violent video games can enable children and teenagers to acquire, repeat, and reinforce aggressive knowledge structures (e.g., aggressive beliefs, schemata, desensitization) (Shao & Wang, 2019; Snider, 2019). With the GAM, aggressive behaviors are prompted and validated in the child's developing brain, thus increasing the possibility of aggression and violence (Shao & Wang, 2019).

H. Peers

Being involved in Greek life at the university level and having delinquent peer associations serve as the strongest predictors of younger DV cases (under the age of 25) (Anderson & Danis, 2007; Capaldi et al., 2012; Ferguson et al., 2009). In DV cases occurring at the college age level, there is an association found between individuals who participate in a fraternity or sorority, as a Northwestern university revealed; showing that women in Greek life were nearly six times more likely to experience DV than women who did not belong to a sorority (Anderson & Danis, 2007). Teenagers and young adults who have delinquent (e.g., participated in stealing, nonviolent and violent behaviors) peer influences have a higher rate of exerting abusive and aggressive behaviors (Capaldi et al., 2012; Ferguson et al., 2009).

Table 2. Social and Situational Correlates of Domestic Violence.

Social Variables	Finding	Select References
History of Violence	Perpetrators who had offended in the past are much more likely to re-offend.	Houry et al., 2004; Murphy and O'Leary, 1989; Walters, 2020
History of Abuse	Children who witnessed interparental abuse and who were exposed to child abuse are more likely to be domestic violence victims or abusers.	Adams, 2007; Gover et al., 2008; Huecker and Smock, 2020; Nixon et al., 2013; Rakovec-Felser, 2014
Social Class	Occupations for perpetrators are generally physically demanding or violent jobs, followed by female-dominated jobs. Lower income households are more likely to have domestic violence incidents.	Abramsky et al., 2019; Bonomi et al., 2014; Gottlieb, 2019; Intimate Partner Violence Resource Guide, 2017; Neiss-May, B, 2019
Weapon Availability	Rates of domestic violence homicides increase with the availability of weapons to the abuser.	Domestic Violence and Firearms, 2020
Education Level	Higher levels of education decrease the risk of a domestic violence incident.	Golu, 2014; Rapp et al., 2012; Shiraz, 2016
Substance Use	Binge drinking and drug use of the victim and/or perpetrator are linked to higher rates of domestic violence.	CDC, 2019; Shorey et al., 2014; Soper, 2014; Watkins et al., 2014
Pop Culture Influences	Children and teens exposed to higher levels of violent tv shows and gaming are more likely to exhibit aggressive behaviors.	Shao & Wang, 2019; Snider, 2019
Peers	Individuals in Greek life have a higher risk of being victims to or being an abuser. Delinquent peers serve as an increasing factor for young adults.	Anderson & Danis, 2007; Capaldi et al., 2012; Ferguson et al., 2009

Domestic Correlates

All the following correlates have been categorized into domestic (e.g., relationship, household) correlations. A summary of these findings is offered in Table 3.

A. Relationship and/or Marital Instability

Relationship and/or marital instability will be categorized into separation, divorced couples (current or filed), cohabitation, and jealous emotionality.

It is commonly found that the termination of a relationship by the victim dramatically increases the risk for, and escalation of, DV. Abusers will repeatedly go to extreme measures to prevent the victim from leaving, thus this action results in one of the most dangerous times for a victim experiencing DV (National Coalition Against Domestic Violence, 2020). Women are 500 times more at risk for DV when they leave that relationship (Mitchell, 2017). It is also important to note that the time after a victim leaves an abusive relationship also marks the highest lethal rates of DV, with more than 70% of DV murders occurring at the time of separation or after the victim had left their abuser (Domestic Violence Statistics, 2013). While rates of DV spike during the time of separation for some; for others the end of a relationship may be the first time violence occurs (Hall et al., 2014), with 42.8% of stalking victims reporting that their victimization began after the relationship ended (Tjaden and Thoennes, 2000).

Divorced or separated individuals (mainly women) report more incidents of violence as compared to women who remain married (Tjaden and Thoennes, 2000). Five studies reported that compared to married women, those who were separated or divorced were more likely to have a history of DV (Hall et al., 2014). A study by the University of Arizona found that couples having a history of DV before divorce are more likely to experience more violence in the first twelve months following the separation (Everett-Haynes, 2015).

Partners living apart from one another due to marital conflicts report higher incidents of DV. Married women living apart from their husbands are four times more likely to report rape, physical assault, and/or stalking compared to those living with their husbands (Tjaden and Thoennes, 2000). This trend is similar with male victims who were three times more likely to report victimization from their wives (7%) comparted to men who lived with their spouse (2.4%) (Tjaden and Thoennes, 2000).

Feelings of jealousy towards a partner is associated with DV rates. In a study examining male perpetration, jealous emotionality was associated with arrests for IPV, higher severity of injuries, and was also a predictor of aggression towards partners (Kerr and Capaldi, 2011). Following the control of demographic and other domestic variables, sexual jealously and possessiveness (in younger couples especially) serves as a large predictor for higher rates of relationship violence in both biological and stepfamilies (Giordano et al., 2010).

B. Pregnancy

Pregnancy among victims serves as a stressor in relationships, often causing rates of DV to increase, with the average reported prevalence of IPV during pregnancy being 30% emotional, 15% physical, and 8% sexual abuse (Huecker et al., 2021). DV affects nearly 325,000 (nearly one in four) pregnant women annually, with nearly 10% of pregnant hospital admissions being due to DV abuse (Huecker and Smock, 2020). Women in abusive relationships report the inability to make autonomous decisions regarding contraception; high rates of contraceptive sabotage from their abuser; reproductive coercion, and are much less likely to inform their partner about pregnancy (Hall et al., 2014). Reproductive coercion is defined as a form of power and control where a partner strips another of the ability to control their own reproductive system (Domestic Violence Statistics, 2020). One article studying male perpetrators found that 48.9% of

them involved in a relationship where their partner became pregnant resulted in a termination of pregnancy (Hall et al., 2014). Higher rates of stress, depression, and addiction to substances is also present in abused, pregnant women, often causing harm to the fetus or miscarriage (Huecker et al., 2021).

C. Children

The presence of children in a relationship can increase the rate and complexity of DV perpetration. Families with children are more likely to experience DV incidents with nearly 45 million children exposed to violence during childhood, accounting for 10% of children annually (Huecker et al., 2021). In nearly 43% of IPV incidents involving female victims children are residents of the households (The Facts on Children and Domestic Violence, 2008). Children often become a tactic and abusive mechanism for perpetrators to gain control over their victims, as abusive partners will threaten to harm or take the child away as a form of regaining power over the victim (Domestic Violence Statistics, 2020). Perpetrators will often batter their children in addition to their partners 30 to 60% of the time, with 80 to 90% of DV victims abusing or neglecting their children as well (Huecker et al., 2021). Children also put pressure on the abused parent to stay with their partner due to fear of retaliation; fear of losing child custody, and out of concern that it is in the child's best interest to keep the family together (Domestic Violence Statistics, 2020).

Table 3. Domestic Correlates of Domestic Violence.

Domestic Correlates	Finding	References
Relationship and/or Marital Instability	Separation • Victim separation from abuser increases risk for DV perpetration Divorce • Divorced victims report more incidents of DV compared to those remaining married. Cohabitation • Couples living apart report higher DV incidents Jealousy • Jealous emotionality in abusers increase risk of DV	Domestic Violence Statistics, 2013; Everett-Haynes, 2015; Giordano et al., 2010; Hall et al., 2014; Kerr and Capaldi, 2011; Mitchell, 2017; National Coalition Against Domestic Violence, 2020; Tjaden and Thoennes, 2000
Pregnancy	Pregnancy among DV victims increase DV rates	Domestic Violence Statistics, 2020; Hall et al., 2014; Huecker and Smock, 2020; Huecker et al., 2021;
Children	The presence of children within a DV household can increase the rate of DV. Children in these households also experience higher rates of DV against them and serve as an abusive mechanism for perpetrators.	Domestic Violence Statistics, 2020; Huecker et al., 2021; The Facts on Children and Domestic Violence, 2008

Biological Correlates

Aggression and impulsivity have been shown to have substantial heritability, ranging from nearly 44 to 72% of the trait being due to biological influences and genetics (Siever, 2008). Interactions between genes and the environment play a large role in these traits and contribute to the development of antisocial behaviors, thus having a large impact on the risk for DV perpetration (Siever, 2008). Environmental influences can include both situational and domestic factors as described previously such as childhood maltreatment. All the following factors have been categorized into biological correlations. A summary of these findings is offered in Table 4.

A. Genetic Factors

Genetic factors discussed will include intergenerational transmission of DV, the monoamine oxidase A (MAO-A) gene, variations in frontal lobe development, and levels of serotonin within the brain.

Intergenerational transmission can be defined as individual abilities, behaviors, and traits transferred from parents to their children (Black et al., 2010; Hines and Saudino, 2002). These transmissions are generally environmental through violence witnessed during childhood and adolescence, thus intergenerational transmission of violence has been a large theoretical reason to explain why DV tends to transfer from interparental aggression to subsequent relationships for children (Black et al., 2010; Choi, 2020). With previous research and literature showing this pattern of intergenerational transmission of IPV, there has been additional research done to examine the extent of genetic effects for the risk of DV tendencies. In a 2004 study examining intimate partner aggression, 175 pairs of same-sex adult twins (134 monozygotic, 41 dizygotic) were examined through correlational analyses relating to genetic relatedness (monozygotic sharing 100% genetics, dizygotic sharing 50%) (Hines and Saudino, 2004). Approximately 16 to

22% of psychological aggression was due to twins' shared genes, with the remaining percent due to twins' environmental influences (Hines and Saudino, 2004). This research provided preliminary evidence that while DV is largely influenced by environmental causes, it can be influenced by genetics as well. The importance of the biological and genetic component relating to intergenerational transmission of violence has been demonstrated in a variety of research and can be a factor influencing the presence of DV tendencies in adults (Besemer, 2017; Choi, 2020; Pinto et al., 2010; Safranoff and Tiravassi, 2018).

Abnormal versions of the monoamine oxidase A (MAO-A) gene, located on the X chromosome, has been linked to aggressive behaviors (Choi, 2020; DeWall et al., 2014; Garcia-Arocena, 2015; Ouellet-Morin et al., 2016; Pinto et al., 2010; Poldrack et al., 2017; Stuart et al., 2014). This gene is a mitochondrial enzyme involved in the metabolization of dopamine, serotonin, and epinephrine/norepinephrine (Garcia-Arocena, 2015; Stuart el al., 2014). Humans carry different variants of the MAO-A gene, thus resulting in different levels of gene expression (Garcia-Arocena, 2015). The normal variant produces high levels of active MAO-A and abnormalities can produce low levels and even the absence of functional MAO-A (Garcia-Arocena, 2015). There have been significant associations with the low-expressing allele variant with higher levels of substance abuse, adolescent behavioral problems, impulsivity, high rates of psychological and physical aggressive behaviors, conduct disorder, and high levels of antisocial traits (Choi, 2020; DeWall et al., 2014; Poldrack et al., 2017; Ouellet-Morin et al., 2016). The low levels of MAO-A in children, in combination with childhood abuse, has a higher risk for the development of conduct disorder, antisocial personality, and violent criminality in adulthood as compared to children with high levels of active MAO-A (Choi, 2020). These conditions significantly increase the risk for IPV perpetration and victimization (Choi,

2020; Garcia-Arocena, 2015; Ouellet-Morin et al., 2016). Approximately 40% of the population carries the low-expression MAO-A gene (Poldrack et al., 2017).

Magnetic resonance imaging studies show the adolescent brain's region-specific structural and functional vulnerability, with the immature limbic system and prefrontal cortex regions playing a large role in impulsivity among younger populations (Arain et al., 2013; Thompson-Schill et al., 2009). These imaging studies have shown that reduced brain volume and surface area, thus underdevelopment, in the frontal lobe is related to attention deficit hyperactivity disorder (ADHD) and conduct disorder (Arain et al., 2013). These regions are related to attention, impulse control, and stimulus integration abilities (Blum et al., 2008; Karolinska, 2018). The delayed development of the prefrontal cortex also causes deficits in cognitive control and decision making (Thompson-Schill et al., 2009). Genetic studies indicate substantial heritability for frontal lobe impairment, thus resulting in ADHD and conduct behavior (Blum et al., 2008; KM, 2017; Rowe et al., 2010). Both disorders also have the potential to result in higher levels of antisocial behaviors (Blum et al., 2008; Rowe et al., 2010). The underdevelopment of these frontal lobe regions makes the adolescent population highly vulnerable to the development of IPV perpetration and involvement in other acts of violence (Arain et al., 2013).

Lower levels of the neurotransmitter serotonin are linked to declines in control of impulsive and aggressive behaviors (George et al., 2001; Krakowski, 2003; Seo et al., 2008). Serotonin works to inhibit the firing of neurons in the amygdala and regulates the prefrontal cortex, thus lower levels inhibit an individual from anticipating risk and, therefore, increases their impulsivity to engage in aggressive behaviors (Seo et al., 2008). The association with impulsivity and aggression, in addition to comorbid disorders, may be a result of biological predisposition like the imbalance of different neurochemicals (Seo et al., 2008).

There is also extensive research establishing the link between the impairment of the serotonergic system leading to the dysregulation of dopamine in the prefrontal cortex (Seo et al., 2008; Krakowski, 2003). Low levels of serotonin in cerebrospinal fluid are also a marker and predictor of aggressive behaviors (Brain, 2007). Biological studies have found that increased concentrations of the serotonergic metabolite 5-hydrocyindoleacetic acid (5-HIAA), in addition to increased neuroendocrine responses to serotonergic probes, increase aggressive behaviors (Siever, 2008).

B. Limbic System and Subcortical Structures

Hyperactivity of the limbic system has been linked to impulsivity, aggression, and violence (Siever, 2008). The limbic system, composed of three main structures (amygdala, hypothalamus, and the hippocampus), is involved in behavioral and emotional responses (The limbic system, 2019).

Aggression is mainly controlled by the amygdala, which is responsible for regulation, perceptions, and reactions to aggression and fear in the brain (Jhangiani et al., 2014). Enhanced responses and reactivity of the amygdala, coupled with low prefrontal regulation, significantly increases the likelihood of aggressive behaviors (Siever, 2008). This increased activation of the amygdala is significantly correlated with borderline personality disorder patients, contrasting reduced amygdala activity with psychopathy and antisocial personality disorders (Siever, 2008).

Increased hypothalamic activation has been positively correlated with aggression in DV perpetrations (Siever, 2008). Perpetrators of DV often show a lower metabolism in the right hypothalamus as compared to non-DV offenders (George et al., 2004). Studies show that the hypothalamic area is related to the control of aggressive behaviors, thus the hypothalamus is a key component in the neurocircuitry involved in the expression of aggressive behaviors (Gouveia

et al., 2019). Hypothalamic lesions are also often associated with extreme aggression in DV perpetration (Gouveia et al., 2019). Additionally, abnormalities in hippocampal function have been reported in individuals diagnosed with antisocial personality traits and violent subjects (Siever, 2008).

C. History of Head Injury and Frontal Lobe Damage

Individuals suffering a past traumatic brain injury, predominantly affecting the frontal lobes, are more likely to exhibit aggressive behaviors, thus increasing the chance of DV perpetration (Rao et al., 2009; Williams et al., 2018). DV also serves as a common cause of traumatic brain injury among victims (Carmo et al., 2011; Haag et al., 2019; Zieman et al., 2017). Neuropsychological effects of traumatic brain injury include amnesia, declines in executive functioning, and deficits in emotional regulation are common (Williams et al., 2018). Injury to the frontal lobe and cortex is associated with lack of control/self-regulation, poor decision making, and can increase risk of impulsive aggression (Williams et al., 2018), thus causing an increase in violent tendencies as related to patients with injuries in other brain regions (Caterina and Coccaro, 2018; Williams et al., 2018).

Diffuse traumatic brain injury (dTBI) has been linked to significant dyscontrol of patients (impulsiveness, lack of anger control, and aggressiveness) (Thomas et al., 2015). dTBI is caused by external forces causing rapid acceleration and deceleration of the brain within the skull, thus causing axonal shearing and tissue distortion (Thomas et al., 2015). This type of traumatic brain injury causes almost immediate structural and functional damage within the brain, imitating a cascade of secondary complexes that continue to alter neurons minutes, weeks, and even months post injury (Thomas et al., 2015). This cascade involves the activation of cysteine proteases, resulting in contusion-related apoptotic and neurotic cell injury and even cell death (Farkas and

Povlishock, 2007; Thomas et al., 2015). This can lead to irreversible damage can cause long-term declines in cognition and personality, involving an increase in impulsivity within dTBI patients (Kocka and Gagnon, 2014). Animal models, especially in mice, have analyzed this increase of impulsivity and behavioral impairment (Kocka and Gagnon, 2014).

D. Perpetrator Common Psychiatric Disorders

Individuals can be clinically diagnosed using the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), which will list the diagnostic criteria for each disorder. It is important to note that individuals may meet the diagnostic criteria for more than one disorder described below thus, it is important not to limit diagnosis. A summary of these disorders is offered in Table 5.

Antisocial personality disorder (APD) serves as the highest risk factor among mental disorders that predict violence (Filov, 2019). Defined in the DSM-5, APD is an ingrained and dysfunctional thought process that focuses on exploitive, delinquent, and criminal behaviors, most commonly due to the individual's lack of remorse (Diagnostic, 2017). Reductions in prefrontal gray matter, associated with abnormal brain development, is often associated with individuals diagnosed with APD (Siever, 2008). Structural disparities in the medial temporal cortex of the brain and especially in the hippocampus have been associated with antisocial patients (Siever, 2008). APD develops in 50 to 70% of the adolescent population diagnosed with conduct disorder (Lillig, 2018). Rates of heritability range from 38% to 69% in correlation with environmental factors such as experienced DV abuse in childhood (Fisher and Hany, 2020). Among individuals diagnosed with APD, approximately 3-15% also have psychopathy and 30% have sociopathy (Johnson, 2019). Symptoms of this disorder include a tendency for aggression,

impulsivity, beliefs supporting abuse and rape, and use of substances to justify abuse and/or rape (Johnson, 2019), contributing to increased DV perpetration.

Conduct disorder significantly predicts DV perpetration (Fang et al., 2010; Lillig, 2018). According to the DSM-V, conduct disorder is a diagnosis usually given to adolescents under the age of 18 that repeatedly violate the rights of other individuals and refuse to conform to the law (Diagnostic, 2017). Symptoms of conduct disorder include physical aggression towards people, with a large risk factor for development of the disorder being exposure to domestic violence (Lillig, 2018; McCabe et al., 2005). There is an extensive link between conduct disorder symptoms and increased risk of developing other psychiatric disorders like anxiety, depression, and antisocial personality disorder (Lillig, 2018), therefore, causing conduct disorder to be a large predictor of violent crime.

Attention deficit hyperactivity disorder (ADHD) symptoms (e.g., hyperactivity, impulsivity, and inattention) are linked to IPV perpetration (Buitelaar et al., 2016; Wymbs et al., 2017). Aggression also serves as a serious symptom of ADHD, with kids and adults alike exhibiting aggressive outbursts due to trouble managing emotion intensity (Kelly, 2021). Preliminary studies present evidence that higher rates of ADHD symptom severity are linked to higher rates of both psychological and physical DV perpetration rates (Wymbs et al., 2017).

Borderline Personality Disorder (BPD) traits are positively associated with perpetration of DV and elevated rates of committing violent acts, along with a positive correlation to DV victimization (Jackson et al., 2015, Salters-Pedneault, 2019; Sansone and Sansone, 2012). BPD is diagnosed based on instability of interpersonal relationships, self-image, and effects impulsivity beginning in early adulthood (Diagnostic, 2017). Impulsivity and aggression, when in the presence of extreme emotional sensitivity and dysregulation, in BPD patients can increase

the risk of violence in interpersonal relationships (Siever, 2008). Reduced volume in gray matter of the left orbital frontal cortex, as well as in the right anterior cingulate cortex is also associated with BPD (Siever, 2008). There are four types of BPD: discouraged, self-destructive, impulsive, and petulant (Cherney, 2020). Both impulsive and petulant borderline types are associated with externalized outbursts of violence; these subtypes are more likely to be perpetrators of DV (Ackermann, 2019). BPD also rarely occurs in isolation and is often accompanied by co-occurring disorders such as major depressive disorder, bipolar disorder, and post-traumatic stress disorder (Ackermann, 2019), all disorders of which are associated with higher chances of DV perpetration.

Post-traumatic stress disorder (PTSD) is a risk factor for individuals to engage in aggressive and violent behaviors (Barrett et al., 2014; Breet el al., 2019; PTSD, 2020; Sippel and Marshall, 2011; Tull, 2020). PTSD is a mental health condition triggered by a experiencing a traumatic event with uncontrollable flashbacks, nightmares, and severe anxiety as some of the most notable symptoms (Tull, 2020). PTSD is often accompanied by severe depression and outbursts of rage or violence, which increases the risk for both spousal and child abuse rates (Breet et al., 2019; PTSD, 2020). The severity of PTSD is positively associated with violence perpetration over time (Barrett et al., 2014). Men reporting higher severity of PTSD symptoms were three times more likely to commit sexual coercion perpetration than that of men reporting lower severity of symptoms (Breet el al., 2019). PTSD is often present among victims as well.

Table 4. Biological Correlates of Domestic Violence.

Biological Correlates	Finding	References
Genetic	Intergenerational Transmission • Children of abusive parents are more likely to commit DV in subsequent relationships MAO-A Gene • Low expression of the MAO-A gene can cause higher risks of aggression and violence Frontal Lobe Development • Underdevelopment of the frontal lobe results in a higher vulnerability of DV perpetration Serotonin • Lower levels of serotonin are linked to increased aggressive and impulsive behaviors	Arain et al., 2013; Besemer, 2017; Black et al., 2010; Blum et al., 2008; Brain, 2007; Choi, 2020; DeWall et al., 2014; Garcia-Arocena, 2015; George et al., 2001; Hines and Saudino, 2002; Hines and Saudino, 2004; Karolinska, 2018; KM, 2017; Ouellet-Morin et al., 2016; Pinto et al., 2010; Poldrack et al., 2017; Rowe et al., 2010; Safranoff and Tiravassi, 2018; Seo et al., 2008; Stuart et al., 2014; Thompson-Schill et al., 2009;
Limbic System and Subcortical Structures	Hyperactivity of the limbic system has been linked to impulsivity, aggression, and violence.	George et al., 2004; Gouveia et al., 2019; Jhangiani et al., 2014; Siever, 2008; The, 2019
Head Injury and Frontal Lobe Damage	Individual suffering traumatic brain injury effecting the frontal lobes are more likely to be DV perpetrators. Diffuse traumatic brain injury increases impulsivity.	Caterina and Coccaro, 2018; Carmo et al., 2011; Haag et al., 2019; Rao et al., 2009; Williams et al., 2018; Zieman et al., 2017

Table 5. Psychiatric Disorder Correlates of Domestic Violence.

Perpetrator Psychiatric Disorders	Finding	References
APD	Highest risk factor for mental illness prediction of violence and significantly increases prevalence of abuse and rape.	Diagnostic, 2017; Filov, 2019; Fisher and Hany, 2020; Lillig, 2018
CD	Predictor of high levels of DV risk.	Diagnostic, 2017; Fang et al., 2010; Johnson, 2019; Lillig, 2018; McCabe et al., 2005
ADHD	Higher symptom severity linked to higher rates of DV.	Buitelaar et al., 2016; Kelly, 2021; Wymbs et al., 2017
BPD	Impulsive and petulant BPD linked to being more likely to perpetrate.	Ackermann, 2019; Cherney, 2020; Diagnostic, 2017; Jackson et al., 2015; Salters-Pedneault, 2019; Sansone and Sansone, 2012
PTSD	Higher rates of violence over time and higher severity of symptoms results in 3 times more likely to commit sexual coercion.	Barrett et al., 2014; Breet el al., 2019; PTSD, 2020; Sippel and Marshall, 2011; Tull, 2020

Methods of Assessing Violence

Questionnaires. Several valid and reliable actuarial questionnaires have been developed to assess spousal violence, allowing for the assessment of current risk and future risk. A number of these assessments have been developed for research purposes, but they can also be useful in a clinical setting as well. A questionnaire generally contains a set of oral or written questions for a given subject to answer (Debois, 2019, McLeod, 2018). There are two classifications of these tests: rapid and multivariate.

Rapid assessments utilize univariate scaling techniques to provide rapid diagnoses for a range of abnormalities and can often identify persons with violent personalities. These assessments can also assist in identifying people with persistent patterns of past and future violence. Rapid assessments are known to have high scores on both reliability and validity (Reiss and Roth, 2011).

Multivariate scaling techniques are made specifically to measure psychological and mental status associated with violence. In clinical settings, these tests can be used to specifically classify individuals as violent people or having violent personalities. These assessments are often longer and include more questions, giving a comprehensive evaluation of an individual's behaviors (Hout et al., 2013; Jaworska and Chupetlovska-Anastasova, 2009; Reiss and Roth, 2011).

Advantages of the questionnaire method include affordability, scalability to large scale populations, and comparability to other populations (Debois, 2019). This actuarial approach attempts to assess the risk of an individual by using information derived from group data, and produces a quantitative risk score (Phillips, 2012). Limitations with this method include dishonest answers given, miscommunication and different interpretations of questions, and lack

of conveying emotions of the participant (Debois, 2019; McLeoad, 2018). Dishonesty occurs

often in self-evaluative questionnaires, especially with DV victims, as respondents may lie due

to social desirability, shame of their situation, or fear of the perpetrator (McLeoad, 2018).

Clinical Interviews. While there are useful quantitative risk instruments for assessing DV,

clinicians often find that the most valuable information for assessing risk is obtained through

face-to-face interviews. Clinical interviews allow for there to be an individualized assessment of

the respondent, as clinicians can ask personalized open-ended questions that allow for clients to

elaborate on their thoughts and have a chance to get the general sense of a person (e.g.,

personality traits, behaviors, emotionality). These interviews also allow for the continuance of

assessment through follow-up sessions and enable clinicians to monitor client progress

(Clinical, 2016). Important topics to cover in these interviews include, for perpetrators: history

of abusive behavior, criminal history, past relationships, childhood abuse experience, history of

mental health, current life stressors (Yaxley et al., 2017), and for victims: history of abuse, past

relationships, details of recent abusive incident, perceived level of risk from spouse, presence of

children in the household and/or pregnancy (Yaxley et al., 2017).

Some challenges with using this method include the fact that these assessments

generally rely on a psychiatrist's intuition and clinical experience, allowing for individual bias

and poor interrater reliability (Phillips, 2012). While a psychologist may be unable to determine

a numerical value, they are able to use knowledge of violence risk factors to determine whether

an individual possesses a low, medium, or high level of threat (Assessing, 2012). A

participant's honesty is also not guaranteed. Several factors can impact a perpetrators'

willingness to disclose violent tendencies. Factors may include feelings of shame or

embarrassment, concern for legal action, or whether the individual has already experienced

legal reprimand, report of recent violence may be a violation of parole. For victims, the most important factor that influences disclosing or reporting abuse is fear of the perpetrator, along with feelings of shame and self-blame (National Coalition Against Domestic Violence, 2020).

Factors to Consider When Choosing a Risk Assessment Tool. As stated above, there are several different options when it comes to assessing and conducting DV risk assessments. While there is a large quantity of options available, it is important to note that studies have shown that the combination of clinical interview and actuarial assessments are the most accurate (Assessing, 2012). When determining which assessment to use, factors to consider include:

- Offender or victim focus based assessment

- Goal of risk assessment: to predict violence, reoffending risk, to determine DV homicidal risk, etc.

- Time requirements

- Experience and skill of assessor: some risk assessments do not require skill of clinician while other assessments do

In addition to these factors, it is also important to consider the reliability, validity, and accuracy of each DV risk assessment tool. An inability to determine accuracy may imply that there has been limited research on these tools making them of less predictive value.

<center>**Clinical Assessments**</center>

A. Personality Factors

Personality traits of individuals should be clinically assessed. There is a large difference between a violent act and a violent personality. Violent acts can often be a result of a situational state undergone by an individual as opposed to the possession of violent personality traits. Individuals who commit state-related violent acts may do so due to special circumstances or situations such as availability of weapons, argument with a spouse, relationship complications, or life stressors such as being fired from a job (Phillips, 2012). In opposition to this, violent and aggressive tendencies can be a trait of an individual's personality, thus, these individuals will likely have a high frequency of violent acts, a history of aggressive behavior, and high antisocial and/or self-destructive behaviors (Phillips, 2012). Individuals possessing violent personality traits are much more likely to be repeat DV offenders, with both trait anger and impulsivity being significant correlates of DV perpetration and DV arrests (Shorey et al., 2011). Below various state and trait measures will be analyzed.

The State-Trait Anger Expression Inventory-2 (STAXI-2) consists of a 57-item inventory used to measure the intensity of anger as an emotional state and the disposition of an individual to experience anger as a personality trait (STAXI-2, 2021). The STAXI-2 allows for the measure of (1) intensity of anger as an emotional state, (2) frequency of angry feelings experienced over time, and (3) control of anger, allowing for clinicians to see if the anger is externally expressed toward the environment (e.g., persons or objects) or suppressed internally (STAXI-2, 2021). Elevated levels of anger significantly increase the risk for DV perpetration and serve as possible symptoms and/or criterion for the diagnosis of several psychiatric disorders related to

DV such as PTSD, BPD, APD, bipolar disorder, and paranoid personality disorder (Lievaart et al., 2016).

The Minnesota Multiphasic Personality Inventory (MMPI-2) consists of 567 true/false items used to assess personality traits and psychopathology (Axelrod, 2016; MMPI-2). This psychological assessment can only be given and interpreted by a trained psychologist but is commonly administered by computer and preceded by a clinical interview of the testing psychologist (Axelrod, 2016). The MMPI-2 is made up of 10 clinical subscales to test: hypochondriasis, depression, hysteria, psychopathic deviate, masculinity/femininity, paranoia, psychasthenia, schizophrenia, hypomania, and social introversion (Axelrod, 2016; MMPI-2; Stanborough, 2020). While research has conflicting statistical correlations relating to DV, it is agreed that the MMPI-2 subscales serve as positive indicators for the identification of certain psychological characteristics shared by the overall population of DV perpetrators such as impulsivity and antisocial behaviors (Axelrod, 2016; Valliant et al., 2003; Lawson et al., 2010).

The Beck Depression Inventory (BDI) consists of 21 self-reporting items used to measure characteristics and symptoms of depression (BDI; Devries et al., 2013). There are a variety of different forms including those administered on a computer and a shorter 13-tem form coined the BDI-II. It has been found that the BDI-II could help predict IPV victims with moderate to severe mental health symptoms, allowing for this tool to be of use to recognize at-risk patients and for referring IPV victims to mental health services (Houry et al., 2007). Individuals scoring high on the full scale BDI measure have also been linked to higher rates of IPV victimization (Devries et al., 2013).

B. Domestic Violence Screening

Clinical assessments are often utilized to measure current DV incidents. The Conflict Tactics Scale is the most widely used measure of intimate partner victimization within heterosexual couples (Cascardi et al., 2018; DeKeseredy and Schwartz, 1998; Straus et al., 1996).

The Conflict Tactics Scale and Revised Conflict Tactics Scale (CTS and CTS2) consists of 39 items used to measure the extent of psychological and physical attacks on a partner in a dating, cohabitating, or marital relationship, in addition to the couples' use of reasoning and negotiation when dealing with conflicts (CTS2; Straus et al., 1996). Scores on this scale produce scores for both "self" and "partner" for negotiation, psychological aggression, physical assault, sexual coercion, and injury (Straus et al., 1996).

C. Domestic Violence Reoffending

The Spousal Assault Risk Assessment (SARA) consists of a 20-item inventory used to determine the degree of DV risk an individual poses to their partner, children, and other family members (Kropp et al., 1999; SARA, 2015). The first ten of 20 items in total are associated with risk for general violence with the next ten items being directly associated with the offender's history of spousal abuse in addition to both past and current assaultive behaviors (SARA, 2015). This then classifies individuals in a low, moderate, or high-risk category of reoffending.

Prediction

Shifting the focus from general risk factors to research on specific factors having high predictive value, there are some detailed parameters used for predicting the occurrence of violent behaviors. When excluding subcultural, ecological, and situational factors, there are four main parameters most important for prediction.

1. *Prevalence*: the number of people within an area, or study population, that have ever committed an act of violence and the likelihood in that population that any given person will be violent

2. *Frequency*: the rate of violent acts that an individual commits over the time frame of a year

3. *Persistence*: the duration or length of a person's history of violence (e.g., how long has it been since their first violent act)

4. *Seriousness*: how serious and/or extreme are the violent acts committed by the individual (e.g., punching vs. spousal homicide) (Phillips, 2012)

Considerable empirical research has found evidence that the highest predictive factor is the presence and persistence of an individual's history of violence (Hanson and Wallace, 2017; Hayes, 2016; Johnson, 2008; National, 2015; North, 2016; Phillips, 2012; Predicting, 1998; Recidivism, 2013; Snowden et al., 2009; Stoddard et al., 2015). With DV, DV homicides are preceded by prior domestic violence more than 90% of the time, with nearly 50% of DV murderers having had a restraining order placed against them in the past (Barnowski and Drake, 2007; Hayes, 2016). In a 2013 study specifically analyzing DV recidivism, DV offenders have been found to have higher rates of overall recidivism (36% convicted of a new felony or misdemeanor within 36-months) compared to non-DV offenders (30% convicted), as well as

higher rates of DV recidivism (18% convicted of a new DV felony or misdemeanor) as compared to non-DV offenders (4% convicted) (Recidivism, 2013). Findings of this study indicate that DV recidivism is positively predicted by past DV offense. Another study revealed that the number of prior convictions increased the offender's odds of re-arrest, with each prior criminal offense conviction increasing the offender's odds of re-arrest by 1.2 and each prior DV offense increasing the odds of re-arrest by .76 (Johnson, 2008). This data also supports that both the frequency and persistence of past violence has predictive power over future re-offense. Each time an individual commits a violent act, it is more probable that violence will reoccur again in the future, thus the probability of violence increases in a positive linear pattern with the frequency and persistence of past violent acts (Hanson and Wallace, 2017; Johnson, 2008; Recidivism, 2013; Snowden et al., 2009).

There is mixed literature regarding the predictive ability of the seriousness of violent acts, but there is some evidence that severe violence can predict future severe re-assault within a 4-month period (Weisz et al., 2000).

Regarding clinical assessments, there is some evidence of predictive validity in these measures. When tested on a population of DV criminal offenders, it has been found that elevated scores on the hypomania subscale (related to impulsivity) of the MMPI-2 have been found to be a significant predictor of DV recidivists and the increase in re-offense (Valliant et al., 2003). The SARA is also a tool that has shown predictive evidence for future re-offense, with several individual items having high predictive validity of future violence, as well as the total score of the assessment having a significant statistical improvement of predicting violence over chance alone (Kropp et al., 1999; SARA, 2015; Svalin and Levander, 2020).

Results

This review includes five instruments used in the examination of DV and IPV risk assessment (See Table 6). These tools range from 20 to 567 items to determine the risk of DV perpetration, re-assault, and/or were designed for the use in varied contexts such as clinical use. The risk factors used in these tools extensively focus on perpetrator history, personality, and psychopathology. Two versions of the Conflict Tactics Scale and Beck Depression Inventory were included because it was determined that each version had varied uses in different contexts and dependent on the information that was available for each version.

Reliability and Validity. This review included instruments that tested reliability, validity, and accuracy. While different articles reported on different aspects of each assessment tools' reliability and validity, data was combined to get a comprehensive view of these scores. Numerous studies examined more than one psychometric property of a given instrument. These psychometric properties include internal reliability, interrater reliability, construct validity, concurrent validity, and predictive validity. Given the purpose of DV risk assessment tools, the most common psychometric property studied was predictive validity. Findings linked to all above properties of reliability and validity was only available for one instrument: SARA (see table 6). Reliability scores are denoted by the reliability coefficient "r" that ranges from 0 (no reliability) to 1.00 (perfect reliability). Typically, a reliability score of 0.8 or higher is considered good and reliable. Validity scores are denoted by the validity coefficient ranging from 0 (no validity) to 1.00 (perfect validity). Validity scores ranging 0.4 or higher indicate an assessment being valid.

Table 6. Clinical Assessments used to identify DV perpetration personality traits, DV screening, and DV re-offense.

Title of Assessment; Authors, Date	Use	Reliability Score	Validity Score
Beck Depression Inventory (BDI); Beck, Steer, Brown (1996)	Designed to measure the severity of depression and depressive symptomology	BDI: 0.73 to 0.93 BDI-II: 0.81 to 0.86 Test-retest specific: 0.93	0.60 to 0.72
Conflict Tactics Scale (CTS); Straus (1979)	Measures the extent of psychological and physical attacks on an intimate Partner: couples' use of reasoning and negotiation when dealing with conflicts	0.79 to 0.95	Some evidence of construct validity, no solid value
Minnesota Multiphasic Personality Inventory (MMPI-2); Hathaway, McKinley (1989)	Used to assess personality traits and psychopathology	0.50 to 0.80; Subtest for Hypochondriasis has highest reliability	Some evidence of good convergent and discriminant validity; assessment additionally contains three validity scales
Spousal Assault Risk Assessment (SARA); Kropp (2015)	Used to assess spousal risk individuals who are suspected of spousal abuse	Internal: 0.65 to 0.78 Interrater: 0.52 to 0.88	Construct: 0.63 to 0.74 Concurrent: 0.43 or higher. Predictive: 0.49 to 0.52
State-Trait Anger Expression Inventory (STAXI-2); Spielberger (1999)	Measures the intensity of anger as an emotional state and the disposition of an individual to experience anger as a personality trait	0.73 to 0.76	High

Instrument Locations and Administration. The risk assessment tools identified in this study were tested in numerous other countries, thus allowing for cross-cultural scalability of each study. Most tools were conducted in the United States, followed by Canada, and were tested in a variety of different languages with English and Spanish being the most widely used version. These risk assessment tools were administered or coded by researchers (BDI, MMPI-2; CTS, SARA, STAXI-2), with three allowing for self-administration (BDI, CTS, STAXI-2). Specifically, some tools like the SARA have been administered or coded by individuals apart from clinicians, such as law enforcement, counselors, and mental health staff.

DV Risk Factors. This review compiles 30 risk factors that are pertinent for determining risk of DV/IPV perpetration and/or victimization. These risk factors are categorized into two different types: (1) fixed and (2) variable. Fixed factors are unable to change (e.g, biological sex, ethnicity, and date of birth). Variable factors can change spontaneously within a subject and can be changed due to intervention or treatment (e.g., income, peers, employment). It is important to note that risk factors and the outcome cannot be assumed as automatic or to be ofthe same pertinence within different populations and individuals. The same holds true for DV risk factors, as there remains a high number of DV cases not reported, thus it is to be assumed that these risk factors, while accurate, may have pitfalls.

Discussion

Given the critical need to prevent DV, it is imperative that psychologists be equipped with DV/IPV risk assessment instruments that are valid, reliable, accessible, easy to use, and appropriate for their practice. It is also important to have a list of DV risk factors to look for and apply that will be appropriate for their setting and clients of interest. This thesis synthesized research regarding both these instruments and risk factors is feasible for use in identifying high risk of DV and allowing for the use of this identified risk in possibly predicting and preventing future DV incidents.

Five different DV risk assessments were identified. Review of these findings indicate that these instruments are useful to aid in the identification of DV personality traits, as well as determining risk of occurrence and re-offense. Reliability was reported as, generally, high across these instruments indicating that these tools are reliable. Predictive validity, while commonly examined as the key aim for risk assessment, was underreported for four out of the five instruments. Further, there were mixed reporting of validity and reliability from various researchers and studies, thus it is imperative for there to be future research into these psychometric properties within DV risk assessment tools. In use within a clinical setting, these identified tools can be of great use to psychologists, as they can mold the administration of these assessments to real-world settings and individuals. This would contribute to the most appropriate use and success of these tools. Furthermore, while these tools have been examined in several different countries, the primary literature investigated was conducted in North American countries, therefore, further research should be done in the administration of these assessments in non-Western countries. Evidence shows that the Spousal Assault Risk Assessment (SARA) is the best predictive risk assessment for future re-offense, with several individual items having high

predictive validity of future violence, as well as the total score of the assessment having a significant statistical improvement of predicting violence over chance alone (Kropp et al., 1999; SARA, 2015; Svalin and Levander, 2020).

There were 30 risk factors linked to DV perpetration identified in this thesis. Comprehensive research of these factors indicates that there is a high correlation with each of these factors to increase risk of DV perpetration and victimization. These risk factors and the associated risk outcome judgements cannot be assumed as automatic or to be of the same pertinence within different populations and individuals. While an individual may possess varying risk factors, these factors do not provide an automatic risk outcome, therefore, it is important for clinicians to use these factors as an aid in the prediction of DV outcomes, but not limit conclusions to one factor or set of factors. The highest predictive factor for recidivism is the presence of a history of violence (Hanson and Wallace, 2017; Hayes, 2016; Johnson, 2008; National, 2015; North, 2016; Phillips, 2012; Predicting, 1998; Recidivism, 2013; Snowden et al., 2009; Stoddard et al., 2015). Each time an individual commits a violent act, it is more probable that violence will reoccur again in the future, therefore, probability of violence increases in a positive linear pattern with the frequency and persistence of past violent acts (Hanson and Wallace, 2017; Johnson, 2008; Recidivism, 2013; Snowden et al., 2009). This finding is crucial, as this risk factor is the most accurate predictive measure that needs to be utilized when analyzing DV perpetration. Other factors to consider include common victimization disorders. The most common disorders for victims of DV include depression, PTSD, and anxiety (Capaldi et al., 2012; Intimate, n.d.).

Findings should be considered when taking into account existing limitations in this research. Given the well-established finding that DV incidents remain highly underreported (Morgan et al., 2019), it is understood that the findings in the research found are likely

an unrepresentative sample of DV occurrences. Additionally, thus far most research for DV has been conducted in heterosexual relationships with the primary focus on male perpetrators (Dutton, 2012). Due to male perpetration being vastly underreported, data is also limited for heterosexual couples with female perpetration and LGBTQIA relationships (Office for the Prevention of Domestic Violence, n.d). Despite trying for a comprehensive research strategy, all relevant DV risk assessments and factors were not identified. The limit to this research is further impounded by studies only available in English, thus relevant studies in other languages, regions, and cross-cultural contexts may have been neglected. It is also important to note that only using these risk factors and assessments can be a flawed approach, as some individuals who display these factors never commit any acts of DV.

Despite the limitations distinguished above, this review still gathered important research and findings for the use of DV and IPV clinical professionals by compiling the reliability, validity, practicability, and comprehensive list of high predicting factors for DV perpetration, victimization, and recidivism. While this is the most current version of a comprehensive list, new studies evaluating risk factors and assessments are developed annually. Even after nearly 50 years of DV risk assessment development, the ability to predict violence remains a possibility but still needs further research. Prediction of violence remains an everchanging mission that will need constant readaptation.

Conclusion

Due to the high prevalence of DV in the United States and across the world, as well as the significant psychological and mental health issues that arise in both victims and perpetrators, it is essential for there to be both clinical and risk assessment for DV. The ability to identify individuals who are at greater risk for DV perpetration, in addition to the ability to accurately predict the risk of an offender to commit a violent act again, would serve numerous purposes in the criminal justice system, clinical settings, treatment options, and victim safety planning. The benefits of DV risk assessments tools and their predictive value remain vast, but also come with limitations.

This thesis demonstrates that there are numerous options in risk factors and assessment that are available for use to help clinicians predict the risk of DV perpetration and recidivism. Due to limited research pertaining to both these factors and instruments, it remains unknown which approach (actuarial or clinical judgement) or set of tools is the most accurate in predicting DV. With this, this thesis has clearly identified a comprehensive collection of individual risk factors and assessments that can be used for the prediction of DV recidivism. A history of past violence, in addition to higher scores of the SARA assessment, have been found as the most useful tools when predicting DV.

It is advised that this topic continue to be researched. Due to a continuing increase in research of risk factors and risk assessments, the field will be constantly changing. There are several factors an assessor needs to use in order to choose the most successful tools. These factors include the population in question, the individual they are assessing, and the purpose of the assessments being utilized. It is important for clinicians to keep in mind strengths and weaknesses of each assessment as well as various elements confounding risk factor applicability.

Keeping in mind all these elements, there is a possibility for the use of this comprehensive collection of risk tools for the prediction of DV and for future publications to add to current research in order to develop an in-depth guide to the prediction of DV.

References

Abramsky, T., Lees, S., Stöckl, H., Harvey, S., Kapinga, I., Ranganathan, M., … Kapiga, S. (2019). Women's income and risk of intimate partner violence: secondary findings from the MAISHA cluster randomised trial in North-Western Tanzania. *BMC Public Health*, *19*(1). https://doi.org/10.1186/s12889-019-7454-1

Ackermann, K. (2019, June 17). What is borderline personality disorder? Retrieved March 28, 2021, from https://americanaddictioncenters.org/co-occurring-disorders/bpd

Adams, C. (2007). The consequences of witnessing family violence on children and implication for family counselors. The family journal: Counseling and therapy for couples and families. 14:4,334-341. DOI: 10.1177/1066480706290342.

Anderson, Kim & Danis, Fran. (2007). Collegiate Sororities and Dating Violence: An Exploratory Study of Informal and Formal Helping Strategies. Violence against women. 13. 87-100. 10.1177/1077801206294808.

Arain, M., Haque, M., Johal, L., Mathur, P., Nel, W., Rais, A., Sandhu, R., & Sharma, S. (2013). Maturation of the adolescent brain. *Neuropsychiatric disease and treatment*, *9*, 449–461. https://doi.org/10.2147/NDT.S39776

Assessing Violence Risk in General Practice. (2012). *American Psychological Association, Society of Clinical Psychology*.

Axelrod, J. (2016, May 17). Minnesota Multiphasic personality Inventory (MMPI). Retrieved March 28, 2021, from https://psychcentral.com/lib/minnesota-multiphasic-personality-inventory-mmpi#What-Does-the-MMPI-2-Test?

Barnoski, R & Drake, E. K. (2007). Washington's Offender Accountability Act:

Department of Corrections' Static Risk Assessment. Olympia: Washington State Institute
for Public Policy.

Barrett, E. L., Teesson, M., & Mills, K. L. (2014). Associations between substance use, post-
traumatic stress disorder and the perpetration of violence: A longitudinal investigation.
Addictive Behaviors, 39(6), 1075-1080. https://doi.org/10.1016/j.addbeh.2014.03.003

Beck depression Inventory (BDI). (n.d.). Retrieved March 28, 2021, from
https://www.apa.org/pi/about/publications/caregivers/practice-
settings/assessment/tools/beck-depression

Besemer, Sytske. (2017). Intergenerational Transmission of Violence.
10.1002/9781118524275.ejdj0064/abstract.

Black, D. S., Sussman, S., & Unger, J. B. (2010). A further look at the intergenerational
transmission of violence: witnessing interparental violence in emerging
adulthood. *Journal of interpersonal violence*, *25*(6), 1022–1042.
https://doi.org/10.1177/0886260509340539

Black, M.C., Basile, K.C., Breiding, M.J., Smith, S.G., Walters, M.L., Merrick, M.T., Chen, J.,
& Stevens, M.R. (2011). The National Intimate Partner and Sexual Violence Survey
(NISVS): 2010 Summary Report. Atlanta, GA: National Center for Injury Prevention and
Control, Centers for Disease Control and Prevention.

Blum, K., Chen, A. L., Braverman, E. R., Comings, D. E., Chen, T. J., Arcuri, V., Blum, S. H.,
Downs, B. W., Waite, R. L., Notaro, A., Lubar, J., Williams, L., Prihoda, T. J., Palomo,
T., & Oscar-Berman, M. (2008). Attention-deficit-hyperactivity disorder and reward
deficiency syndrome. *Neuropsychiatric disease and treatment*, *4*(5), 893–918.
https://doi.org/10.2147/ndt.s2627

Bonomi, A. E., Trabert, B., Anderson, M. L., Kernic, M. A., & Holt, V. L. (2014). Intimate

partner violence and neighborhood income: a longitudinal analysis. Violence against

women, 20(1), 42–58. https://doi.org/10.1177/1077801213520580

Brain chemicals involved in aggression identified: May lead to new treatments. (2007,

November 07). Retrieved March 27, 2021, from

https://www.sciencedaily.com/releases/2007/11/071106122309.htm

Breet, E., Seedat, S., & Kagee, A. (2019). Posttraumatic Stress Disorder and Depression in Men

and Women Who Perpetrate Intimate Partner Violence. *Journal of interpersonal*

violence, *34*(10), 2181–2198. https://doi.org/10.1177/0886260516660297

Brodwin, M. G., & Siu, F. W. (2007). Domestic violence against women who have disabilities:

What educators need to know. Education, 127(4), 548-551.

Buchanan, A., Binder, R., Norko, M., & Swartz, M. (2012). Psychiatric violence risk assessment.

American Journal of Psychiatry, 169(3), 340.

https://doi.org/10.1176/appi.ajp.2012.169.3.340

Buitelaar, N. J., Posthumus, J. A., & Buitelaar, J. K. (2016). Adhd in childhood and/or adulthood

as a risk factor for domestic violence or intimate partner violence: A systematic review.

Journal of Attention Disorders, 24(9), 1203-1214. doi:10.1177/1087054715587099

Campbell, J. C., Webster, D., Koziol-McLain, J., Block, C., Campbell, D., Curry, M. A., …

Laughon, K. (2003). Risk Factors for Femicide in Abusive Relationships: Results From a

Multisite Case Control Study. *American Journal of Public Health*, *93*(7), 1089–1097.

https://doi.org/10.2105/ajph.93.7.1089

Capaldi, D. M., Knoble, N. B., Shortt, J. W., & Kim, H. K. (2012). A Systematic Review of Risk

Factors for Intimate Partner Violence. *Partner abuse*, *3*(2), 231–280.

https://doi.org/10.1891/1946-6560.3.2.231

Carlson, B.E. (1984). "Children's observations of interparental violence." In A.R. Roberts (Ed.),

Battered women and their families (pp. 147–167). New York: Springer.

Carmo, R., Grams, A., & Magalhães, T. (2011). Men as victims of intimate partner violence.

Journal of Forensic and Legal Medicine, 18(8), 355–359. doi: 10.1016/j.jflm.2011.07.006

Cascardi M., Avery-Leaf S., Rosselli M. (2018) Conflict Tactics Scale-2. In: Lebow J.,

Chambers A., Breunlin D. (eds) Encyclopedia of Couple and Family Therapy. Springer,

Cham. https://doi.org/10.1007/978-3-319-15877-8_392-1

Cascardi, M., O'Leary, K.D. Depressive symptomatology, self-esteem, and self-blame in battered

women. *Journal of Family Violence 7*, 249–259 (1992).

https://doi.org/10.1007/BF00994617

Cattaneo, Lauren & Goodman, Lisa. (2003). Victim-Reported Risk Factors For Continued

Abusive Behavior: Assessing The Dangerousness of Arrested Batterers. Journal of

Community Psychology. 31. 349 - 369. 10.1002/jcop.10056.

Centers for Disease Control and Prevention. (2019, December 30). *Binge Drinking is a serious*

but preventable problem of excessive alcohol use. Centers for Disease Control and

Prevention. https://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm.

Chemtob, C. M., & Carlson, J. G. (2004). Psychological Effects of Domestic Violence on

Children and Their Mothers. *International Journal of Stress Management*, 11(3), 209–

226. https://doi.org/10.1037/1072-5245.11.3.209

Cherney, K. (2020). All About Quiet BPD (Borderline Personality Disorder). Retrieved 2021,

from https://www.healthline.com/health/quiet-bpd

Choi, C. (2020). "Intergenerational Intimate Partner Violence: Pathways of Genetic and

   Environmental Interactions." *Inquiries Journal*, *12*(09). Retrieved

   from http://www.inquiriesjournal.com/a?id=1800

Clinical interview. (2016, September 27). Retrieved March 28, 2021, from

   http://psychology.iresearchnet.com/counseling-psychology/personality-

   assessment/clinical-interview/

Debois, S. (2019). 10 advantages and disadvantages of questionnaires. Retrieved March 28,

   2021, from https://surveyanyplace.com/questionnaire-pros-and-cons/

DeKeseredy, W., & Schwartz, M. (1998). Measuring the extent of woman abuse in intimate

   heterosexual relationships: A critique of the conflict tactics scales. Retrieved March 28,

   2021, from https://vawnet.org/material/measuring-extent-woman-abuse-intimate-

   heterosexual-relationships-critique-conflict-tactics

DeWall, C. N., & Way, B. M. (2014). A new piece to understanding the intimate partner

   violence puzzle: what role do genetics play?. *Violence against women*, *20*(4), 414–419.

   https://doi.org/10.1177/1077801214528585

Devries KM, Mak J , Bacchus LJ, Child JC, Falder G, et al. (2013) Intimate Partner Violence

   and Incident Depressive Symptoms and Suicide Attempts: A Systematic Review of

   Longitudinal Studies. PLoS Med 10(5): e1001439. doi:10.1371/journal.pmed.1001439

Domestic Violence and Firearms. The Educational Fund to Stop Gun Violence. (2020, October

   28). https://efsgv.org/learn/type-of-gun-violence/domestic-violence-and-firearms/.

Domestic Violence by State 2021. https://worldpopulationreview.com/state-rankings/domestic-

   violence-by-state.

Domestic Violence Statistics. (2020, September 28). Retrieved March 04, 2021, from

https://www.thehotline.org/stakeholders/domestic-violence-statistics/

Domestic Violence Statistics. (2013). Retrieved March 26, 2021, from

https://www.standffov.org/statistics

Diagnostic and statistical manual of mental disorders: DSM-5. (2017). Arlington, VA: American

Psychiatric Association.

Dutton, D. G. (2012). The case against the role of gender in intimate partner violence.

Aggression and Violent Behavior, 14(1), 99-104.

https://doi.org/10.1016/j.avb.2011.09.002

Edleson, J. (1997, April). The overlap between child maltreatment and woman abuse.

Harrisburg, PA: VAWnet, a project of the National Resource Center on Domestic

Violence/Pennsylvania Coalition Against Domestic Violence.

Everett-Haynes, L. (2015, November 03). Ua study: Abuse continues after divorce. Retrieved

March 26, 2021, from https://news.arizona.edu/story/ua-study-abuse-continues-after-

divorce

Fang, X., Massetti, G. M., Ouyang, L., Grosse, S. D., & Mercy, J. A. (2010). Attention-

deficit/hyperactivity disorder, conduct disorder, and young adult intimate partner

violence. *Archives of general psychiatry*, *67*(11), 1179–1186.

https://doi.org/10.1001/archgenpsychiatry.2010.137

Farkas, O., & Povlishock, J. T. (2007). Cellular and subcellular change evoked by diffuse

traumatic brain injury: a complex web of change extending far beyond focal damage.

Progress in Brain Research, *161*, 43–59. https://doi.org/10.1016/S0079-6123(06)61004-2

Ferguson CJ, San Miguel C, Hartley RD. A multivariate analysis of youth violence and

aggression: the influence of family, peers, depression, and media violence. J Pediatr.
(2009). 155(6):904-908.e3. doi: 10.1016/j.jpeds.2009.06.021. Epub 2009 Aug 15. PMID:
19683724.

Filov I. (2019). Antisocial Personality Traits as a Risk Factor of Violence between Individuals
with Mental Disorders. *Open access Macedonian journal of medical sciences*, *7*(4), 657–
662. https://doi.org/10.3889/oamjms.2019.146

Fisher KA, Hany M. Antisocial Personality Disorder. (2020). In: StatPearls
Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from:
https://www.ncbi.nlm.nih.gov/books/NBK546673/

Garcia-Arocena, D. (2015). The genetics of violent behavior. Retrieved March 27, 2021, from
https://www.jax.org/news-and-insights/jax-blog/2015/december/the-genetics-of-violent-
behavior#

George, D. T., Rawlings, R. R., Williams, W. A., Phillips, M. J., Fong, G., Kerich, M.,
Momenan, R., Umhau, J. C., & Hommer, D. (2004). A select group of perpetrators of
domestic violence: evidence of decreased metabolism in the right hypothalamus and
reduced relationships between cortical/subcortical brain structures in position emission
tomography. *Psychiatry research*, *130*(1), 11–25. https://doi.org/10.1016/S0925-
4927(03)00105-7

George, D. T., Umhau, J. C., Phillips, M. J., Emmela, D., Ragan, P. W., Shoaf, S. E., &
Rawlings, R. R. (2001). Serotonin, testosterone and alcohol in the etiology of domestic
violence. *Psychiatry research*, *104*(1), 27–37. https://doi.org/10.1016/s0165-
1781(01)00292-x

Giordano, P. C., Soto, D. A., Manning, W. D., & Longmore, M. A. (2010). The Characteristics

of Romantic Relationships Associated with Teen Dating Violence. *Social science research*, *39*(6), 863–874. https://doi.org/10.1016/j.ssresearch.2010.03.009

Gover AR, Kaukinen C, Fox KA. The relationship between violence in the family of origin and dating violence among college students. J Interpers Violence. 2008 Dec;23(12):1667-93. doi: 10.1177/0886260508314330. Epub 2008 Mar 18. PMID: 18349342.

Gottlieb, M. A. (2019, September 16). What Profession Has The Highest Rate Of Domestic Violence? Broward Criminal Lawyer. https://browardcriminallawyer.com/2016/07/what-profession-has-the-highest-rate-of-domestic-violence/#:~:text=So%20which%20occupation%20has%20the,harassment%20and%20stalking%20to%20homicide.

Gouveia, F. V., Hamani, C., Fonoff, E. T., Brentani, H., Lopes Alho, E. J., Morais, R. M., … Martinez, R. C. R. (2019). Amygdala and Hypothalamus: Historical Overview With Focus on Aggression. Neurosurgery, 85(1), 11–30. https://doi.org/ /10.1093/neuros/nyy635

Grinshteyn E, Hemenway D. Violent death rates in the US compared to those of the other high-income countries, 2015. Prev Med. 2019 Jun;123:20-26. doi: 10.1016/j.ypmed.2019.02.026. Epub 2019 Feb 25. PMID: 30817955.

Grove, W. H., Zald, D. H., Lebow, B. S., Snitz, B. E., & Nelson, C. (2000). Clinical versus mechanical prediction: A *meta-analysis*. *Psychological Assessment, 12(1)*, 19-30

Haag, H., L., Sokoloff, S., Macgregor, N., Broekstra, S., Cullen, N., & Colantonio, A. (2019). Battered and brain injured: Assessing knowledge of traumatic brain injury among intimate partner violence service providers. Journal of Women's Health, 28(7), 990–996. doi: 10.1089/jwh.2018.7299

Hall, M., Chappell, L. C., Parnell, B. L., Seed, P. T., & Bewley, S. (2014). Associations between intimate partner violence and termination of pregnancy: a systematic review and meta-analysis. *PLoS medicine*, *11*(1), e1001581. https://doi.org/10.1371/journal.pmed.1001581

Hanson, R. K., & Wallace-Capretta, S. (2017). Predicting Recidivism Among Male Batterers. *International Journal of Scientific & Engineering Research, 8*(4), 1045-1051. doi:10.14299/ijser.2017.04.008

Hayes, L. L. (2016, June 28). The problem isn't mental illness, or prejudice, or Even isis. it's ANGER. and we can fix it. Retrieved March 28, 2021, from https://slate.com/technology/2016/06/the-biggest-predictor-of-future-violence-is-past-violence-but-mindfulness-could-help-reform-these-angry-people.html

Heilbrun, Kirk & Yasuhara, Kento & Shah, S. (2010). Violence risk assessment tools: Overview and critical analysis. Handbook of Violence Risk Assessment. 1-17.

Hines, Denise & Saudino, Kimberly. (2002). Intergenerational Transmission of Intimate Partner Violence: A Behavioral Genetic Perspective. Trauma Violence & Abuse. 3. 210-225. doi: 10.1177/15248380020033004.

Hines, Denise & Saudino, Kimberly. (2004). Genetic and environmental influences on intimate partner aggression: a preliminary study. Violence Vict. 6. 701-718. doi: 10.1891/vivi.19.6.701.66341. PMID: 16007739.

Houry D, Feldhaus K, Peery B, Abbott J, Lowenstein SR, al-Bataa-de-Montero S, Levine S. A positive domestic violence screen predicts future domestic violence. J Interpers Violence. 2004 Sep;19(9):955-66. doi: 10.1177/0886260504267999. PMID: 15296611.

Houry, D., Kemball, R. S., Click, L. A., & Kaslow, N. J. (2007). Development of a brief mental

health screen for intimate partner violence victims in the emergency

department. *Academic emergency medicine : official journal of the Society for Academic*

Emergency Medicine, *14*(3), 202–209. https://doi.org/10.1197/j.aem.2006.09.056

Hout, M. C., Papesh, M. H., & Goldinger, S. D. (2013). Multidimensional scaling. *Wiley*

interdisciplinary reviews. Cognitive science, *4*(1), 93–103.

https://doi.org/10.1002/wcs.1203

Huecker, M. R., King, K. C., Jordan, G. A., & Smock, W. (2021). Domestic Violence. *NCBI*.

Retrieved 2021, from https://www.ncbi.nlm.nih.gov/books/NBK499891/.

Huecker MR, Smock W. Domestic Violence. [Updated 2020 Oct 15]. In: StatPearls.

Treasure Island (FL): StatPearls Publishing; 2020 Jan-. Available from:

https://www.ncbi.nlm.nih.gov/books/NBK499891/

Intimate partner violence. (n.d.). Retrieved March 28, 2021, from

https://www.psychiatry.org/psychiatrists/cultural-competency/education/intimate-partner-

violence

Intimate Partner Violence and Alcohol. *World Health Organization. (2006).*

https://www.who.int/violence_injury_prevention/violence/world_report/factsheets/fs_inti

mate.pdf.

Intimate Partner Violence Resource Guide. (2017).

https://www.ncjrs.gov/ovc_archives/ncvrw/2017/images/en_artwork/Fact_Sheets/2017N

CVRW_IPV_508.pdf.

Jackson, M. A., Sippel, L. M., Mota, N., Whalen, D., & Schumacher, J. A. (2015). Borderline

personality disorder and related constructs as risk factors for intimate partner violence perpetration. *Aggression and violent behavior*, *24*, 95–106. https://doi.org/10.1016/j.avb.2015.04.015

Jaworska, N., & Chupetlovska-Anastasova, A. (2009). Review of Multidimensional Scaling (MDS) and its Utility in Various Psychological Domains. *Tutorials in Quantitative Methods for Psychology, 5*(1), 1-10. doi:10.20982/tqmp.05.1.p001

Jhangiani, D. R., Tarry, D. H., & Stangor, D. C. (2014, September 26). *The Biological and Emotional Causes of Aggression*. Principles of Social Psychology 1st International Edition. https://opentextbc.ca/socialpsychology/chapter/the-biological-and-emotional-causes-of-aggression/.

Johnson, R. R. (2008). Correlates of Re-arrest among Felony Domestic Violence Probationers. *Federal Probation, 72*(3).

Johnson, S. A. (2019). Understanding the violent personality: Antisocial personality disorder, psychopathy, & sociopathy explored. *Foresic Research & Criminology International Journal, 7*(2). doi:10.15406/frcij.2019.07.00267

Karolinska Institutet. (2018, August 31). Similar changes in the brains of patients with ADHD and emotional instability. *ScienceDaily*. Retrieved March 27, 2021 from www.sciencedaily.com/releases/2018/08/180831110413.htm

Kelly, K. (2021, March 25). Adhd and aggression. Retrieved March 27, 2021, from https://www.understood.org/en/learning-thinking-differences/child-learning-disabilities/add-adhd/adhd-and-aggression-what-you-need-to-know

Kerr, D. C., & Capaldi, D. M. (2011). Young men's intimate partner violence and relationship

functioning: long-term outcomes associated with suicide attempt and aggression in

adolescence. *Psychological medicine*, *41*(4), 759–769.

https://doi.org/10.1017/S0033291710001182

KM, L. (2017, August 08). Conduct disorder: Causes, Symptoms, treatment dsm-5 312.89

(F91.9) - Thriveworks. Retrieved March 27, 2021, from

https://thriveworks.com/blog/conduct-disorder/

Kocka, A., & Gagnon, J. (2014). Definition of Impulsivity and Related Terms Following

Traumatic Brain Injury: A Review of the Different Concepts and Measures Used to

Assess Impulsivity, Disinhibition and other Related Concepts. *Behavioral sciences

(Basel, Switzerland)*, *4*(4), 352–370. https://doi.org/10.3390/bs4040352

Krakowski, M. (2003). Violence and Serotonin: Influence of impulse CONTROL, AFFECT

regulation, and social functioning. *The Journal of Neuropsychiatry and Clinical

Neurosciences, 15*(3), 294-305. doi:10.1176/jnp.15.3.294

Kristalyn Salters-Pedneault, P. (2019, September 19). Is there a prevalence of violence with

borderline personality? Retrieved March 28, 2021, from

https://www.verywellmind.com/borderline-personality-and-violence-425192

Kropp, P. R., Hart, S. D., Webster, C. D., & Eaves, D. (1999). Spousal assault risk assessment

guide: Assessment of the likelihood of domestic violence. Retrieved March 28, 2021,

from https://vawnet.org/material/spousal-assault-risk-assessment-guide-assessment-

likelihood-domestic-violence

Lawson, D. M., Brossart, D. F., & Shefferman, L. W. (2010). Assessing gender role of partner-

violent men using the Minnesota Multiphasic Personality Inventory-2 (MMPI-2):

     Comparing abuser types. *Professional Psychology: Research and Practice, 41*(3), 260–

     266. https://doi.org/10.1037/a0019589

Lievaart, M., Franken, I. H., & Hovens, J. E. (2016). Anger Assessment in Clinical and

     Nonclinical Populations: Further Validation of the State-Trait Anger Expression

     Inventory-2. *Journal of clinical psychology*, *72*(3), 263–278.

     https://doi.org/10.1002/jclp.22253

Lillig, M. (2018, November 15). Conduct disorder: Recognition and management. Retrieved

     March 27, 2021, from https://www.aafp.org/afp/2018/1115/p584.html

Matoori, S., Khurana, B., Balcom, M.C. *et al.* Intimate partner violence crisis in the COVID-19

     pandemic: how can radiologists make a difference?. *Eur Radiol* 30, 6933–6936 (2020).

     https://doi.org/10.1007/s00330-020-07043-w

McCabe, Kristen & Lucchini, Sara & Hough, Richard & Yeh, May & Hazen, Andrea. (2005).

     The Relation between Violence Exposure and Conduct Problems among Adolescents: A

     Prospective Study.. The American journal of orthopsychiatry. 75. 575-84. 10.1037/0002-

     9432.75.4.575.

Mcleod, S. (2018). Questionnaire: Definition, examples, design and types. Retrieved March 28,

     2021, from https://www.simplypsychology.org/questionnaires.html

Minnesota Multiphasic Personality inventory-2. (n.d.). Retrieved March 28, 2021, from

     https://www.pearsonassessments.com/store/usassessments/en/Store/Professional-

     Assessments/Personality-%26-Biopsychosocial/Minnesota-Multiphasic-Personality-

     Inventory-2/p/100000461.html

Mitchell, J. (2017, January 29). Most dangerous time for battered women? When they leave.

Retrieved March 26, 2021, from

https://www.clarionledger.com/story/news/2017/01/28/most-dangerous-time-for-

battered-women-is-when-they-leave-jerry-mitchell/96955552/

Morgan, R.E., & Oudekerk, B.A. (2019). Criminal victimization, 2018. Bureau of Justice

Statistics. Retrieved from https://www.bjs.gov/content/pub/pdf/cv18.pdf.

Mosti, C., & Coccaro, E. F. (2018). Mild traumatic brain injury and Aggression, IMPULSIVITY,

and history of other- and Self-directed Aggression. *The Journal of Neuropsychiatry and*

Clinical Neurosciences, 30(3), 220-227. doi:10.1176/appi.neuropsych.17070141

Murphy, C. M., & O'Leary, K. D. (1989). Psychological aggression predicts physical aggression

in early marriage. *Journal of Consulting and Clinical Psychology, 57*(5), 579–

582. https://doi.org/10.1037/0022-006X.57.5.579

National Coalition Against Domestic Violence (2020). *Domestic violence*. Retrieved from

https://assets.speakcdn.com/assets/2497/domestic_violence-

2020080709350855.pdf?1596828650457

National Collaborating Centre for Mental Health (UK). (2015). *Violence and Aggression: Short-*

Term Management in Mental Health, Health and Community Settings. British

Psychological Society.

Niess-May, B. (2019). *The Intersection of Domestic Violence and Poverty: SafeHouse Center –*

Domestic Violence Services. SafeHouse Center. https://www.safehousecenter.org/the-

intersection-of-domestic-violence-and-poverty/.

Nixon, K., Radtke, H., & Tutty, L. (2013). "Every day it takes a piece of you away": Experiences

of grief and loss among abused mother involved with child protective services. Journal of

public child welfare, vol. 7: 172-193. DOI: 10.1080/15548732.2012.715268.

North Carolina State University. (2016, March 1). Researchers identify risk factors that predict violence in adults with mental illness. *ScienceDaily*. Retrieved March 27, 2021 from www.sciencedaily.com/releases/2016/03/160301131115.htm

Office for the prevention of domestic violence. (n.d.). Retrieved March 04, 2021, from https://opdv.ny.gov/professionals/abusers/genderandipv.html

Office of Juvenile Justice and Delinquency Prevention (November 2000). Safe from the start: Taking action on children exposed to violence (Publication #NCJ182789) Washington, DC: Department of Justice, Office of justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Office, U. (2017). Costs of Crime: Experts Report Challenges Estimating Costs and Suggest Improvements to Better Inform Policy Decisions. Retrieved November 25, 2020, from https://www.gao.gov/products/GAO-17-732

Ouellet-Morin, I., Côté, S. M., Vitaro, F., Hébert, M., Carbonneau, R., Lacourse, É., … Tremblay, R. E. (2016). Effects of the MAOA gene and levels of exposure to violence on antisocial outcomes. *British Journal of Psychiatry*, *208*(1), 42–48. http://doi.org/10.1192/bjp.bp.114.162081

Pinto, L. A., Sullivan, E. L., Rosenbaum, A., Wyngarden, N., Umhau, J. C., Miller, M. W., & Taft, C. T. (2010). Biological Correlates of Intimate Partner Violence Perpetration. *Aggression and violent behavior*, *15*(5), 387–398. https://doi.org/10.1016/j.avb.2010.07.001

Peek-Asa, C., Wallis, A., Harland, K., Beyer, K., Dickey, P., & Saftlas, A. (2011). Rural disparity in domestic violence prevalence and access to resources. Journal of women's health (2002), 20(11), 1743–1749. https://doi.org/10.1089/jwh.2011.2891

Petrosky E, Blair JM, Betz CJ, Fowler KA, Jack SP, Lyons BH. (2017). Racial and Ethnic

Differences in Homicides of Adult Women and the Role of Intimate Partner Violence —

United States, 2003–2014. MMWR Morb Mortal Wkly Rep 2017;66:741–746.

DOI: http://dx.doi.org/10.15585/mmwr.mm6628a1External.

Phillips, R. T. (2012). Predicting the Risk of Future Dangerousness. *Virtual Mentor, 14*(6), 472-

476. doi:10.1001/virtualmentor.2012.14.6.hlaw1-1206.

Poldrack, Russell & Monahan, John & Imrey, Peter & Reyna, Valerie & Raichle, Marcus &

Faigman, David & Buckholtz, Joshua. (2017). Predicting Violent Behavior: What Can

Neuroscience Add?. *Trends in Cognitive Sciences*. 22. 10.1016/j.tics.2017.11.003.

Predicting and Dealing with Violence. (1998). *Jordan Institute for Families, 3*(2).

Preventing teen dating violence |violence prevention|injury center|CDCc (2020, January 27).

Retrieved March 04, 2021, from

https://www.cdc.gov/violenceprevention/intimatepartnerviolence/teendatingviolence/fastf

act.html

PTSD, domestic violence and it's tie to post traumatic stress. (2020, June 09). Retrieved March

28, 2021, from https://artherapyinternational.org/blog/ptsd-domestic-violence-trauma/

Rakovec-Felser, Z. (2014, October 22). *Domestic Violence and Abuse in Intimate Relationship

from Public Health Perspective*. Health psychology research.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4768593/.

Rao, V., Rosenberg, P., Bertrand, M., Salehinia, S., Spiro, J., Vaishnavi, S., Rastogi, P., Noll, K.,

Schretlen, D. J., Brandt, J., Cornwell, E., Makley, M., & Miles, Q. S. (2009). Aggression

after traumatic brain injury: prevalence and correlates. *The Journal of neuropsychiatry

and clinical neurosciences*, *21*(4), 420–429. https://doi.org/10.1176/jnp.2009.21.4.420

Rapp, D., Zoch, B., Khan, M.M.H., Pollmann, Thorsten., Kramer, Alexander. (2012).

    Association between gap in spousal education and domestic violence in India and

    Bangladesh. *BMC Public Health* **12,** 467. https://doi.org/10.1186/1471-2458-12-467

Recidivism Trends of Domestic Violence. (2013). *Washington State Institute for Public Policy*.

    Retrieved 2021.

Reiss, A. J., & Roth, J. A. (2011). *Understanding and Preventing Violence* (Vol. 4). Washington

    D.C.: National Academy Press. Retrieved 2021, from

    https://www.nap.edu/read/4422/chapter/1

Revised conflict tactics scale (cts2). (n.d.). Retrieved March 28, 2021, from

    https://elcentro.sonhs.miami.edu/research/measures-library/cts2/index.html

Rowe, R., Costello, E. J., Angold, A., Copeland, W. E., & Maughan, B. (2010). Developmental

    pathways in oppositional defiant disorder and conduct disorder. *Journal of abnormal*

    psychology, *119*(4), 726–738. https://doi.org/10.1037/a0020798

Sansone, R. A., & Sansone, L. A. (2012). Borderline personality and externalized

    aggression. *Innovations in clinical neuroscience*, *9*(3), 23–26.

Safranoff, A., & Tiravassi, A. (2018). The Intergenerational Transmission of Violence. Retrieved

    2021, from https://publications.iadb.org/publications/english/document/The-

    Intergenerational-Transmission-of-Violence-Testimonials-from-Prison.pdf

Seo, D., Patrick, C. J., & Kennealy, P. J. (2008). Role of Serotonin and Dopamine System

    Interactions in the Neurobiology of Impulsive Aggression and its Comorbidity with other

    Clinical Disorders. *Aggression and violent behavior*, *13*(5), 383–395.

    https://doi.org/10.1016/j.avb.2008.06.003

Siever L. J. (2008). Neurobiology of aggression and violence. The American journal of

psychiatry, 165(4), 429–442. https://doi.org/10.1176/appi.ajp.2008.07111774

Shao, R., & Wang, Y. (2019). *The Relation of Violent Video Games to Adolescent Aggression: An Examination of Moderated Mediation Effect*. Crisis Prevention Institue. https://www.crisisprevention.com/Blog/Domestic-Violence-Statistics-and-Your-Workplace.

Shiraz, M.S. (2016), The impact of education and occupation on domestic violence in Saudi Arabia. International Journal of Social Welfare, 25: 339-346. https://doi.org/10.1111/ijsw.12214

Shorey, R. C., Brasfield, H., Febres, J., & Stuart, G. L. (2011). The association between impulsivity, trait anger, and the perpetration of intimate partner and general violence among women arrested for domestic violence. *Journal of interpersonal violence*, *26*(13), 2681–2697. https://doi.org/10.1177/0886260510388289

Shorey, R. C., Stuart, G. L., McNulty, J. K., & Moore, T. M. (2014). Acute alcohol use temporally increases the odds of male perpetrated dating violence: a 90-day diary analysis. Addictive behaviors, 39(1), 365–368. https://doi.org/10.1016/j.addbeh.2013.10.025

Shorey, R. C., Stuart, G. L., Moore, T. M., & McNulty, J. K. (2014). The temporal relationship between alcohol, marijuana, angry affect, and dating violence perpetration: A daily diary study with female college students. Psychology of addictive behaviors : journal of the Society of Psychologists in Addictive Behaviors, 28(2), 516–523. https://doi.org/10.1037/a0034648

Sippel, L. M., & Marshall, A. D. (2011). Posttraumatic stress disorder symptoms, intimate

partner violence perpetration, and the mediating role of shame processing bias. *Journal of anxiety disorders*, *25*(7), 903–910. https://doi.org/10.1016/j.janxdis.2011.05.002

Snider, M. (2019, August 8). *Study confirms link between violent video games and physical aggression*. USA Today. https://www.usatoday.com/story/tech/news/2018/10/01/violent-video-games-tie-physical-aggression-confirmed-study/1486188002/.

Snowden, R. J., Gray, N. S., Taylor, J., & Fitzgerald, S. (2009). Assessing risk of future violence Among forensic PSYCHIATRIC Inpatients with the classification of Violence Risk (COVR). *Psychiatric Services, 60*(11), 1522-1526. doi:10.1176/ps.2009.60.11.1522

Smith, S.G., Chen, J., Basile, K.C., Gilbert, L.K., Merrick, M.T., Patel, N., Walling, M., & Jain, A. (2017). The National Intimate Partner and Sexual Violence Survey (NISVS): 2010-2012 State Report. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

Soper, R. G. (2014, October 6). Intimate Partner Violence and Co-Occurring Substance Abuse/Addiction. American Society of Addiction Medicine . https://www.asam.org/Quality-Science/publications/magazine/read/article/2014/10/06/intimate-partner-violence-and-co-occurring-substance-abuse-addiction.

Spousal assault risk ASSESSMENT (SARA). (2015, October 08). Retrieved March 28, 2021, from http://criminal-justice.iresearchnet.com/forensic-psychology/spousal-assault-risk-assessment-sara/

Stanborough, R. J. (2020). What to Know About the MMPI Test (1277000136 942514770 T. J. Legg, Ed.). Retrieved 2021, from https://www.healthline.com/health/mmpi-test

State-trait anger expression inventory - 2. (2021, February 05). Retrieved March 28, 2021, from

https://www.sigmaassessmentsystems.com/assessments/state-trait-anger-expression-inventory-2/

Stoddard, S. A., Heinze, J. E., Choe, D. E., & Zimmerman, M. A. (2015). Predicting violent behavior: The role of violence exposure and future educational aspirations during adolescence. *Journal of adolescence*, *44*, 191–203. https://doi.org/10.1016/j.adolescence.2015.07.017

Straus, M. A. and Gelles, R. J. (Eds.). (1990). Physical violence in American families: Risk factors and adaptations to violence in 8,145 families. New Brunswick, NJ: Transaction.

Straus, Murray & Hamby, Sherry & Boney-McCoy, Sue & Sugarman, David. (1996). The Revised Conflict Tactics Scales (CTS2): Development and Preliminary Psychometric Data. Journal of Family Issues - J FAM ISS. 17. 283-316. 10.1177/019251396017003001.

Stuart, G. L., McGeary, J. E., Shorey, R. C., Knopik, V. S., Beaucage, K., & Temple, J. R. (2014). Genetic associations with intimate partner violence in a sample of hazardous drinking men in batterer intervention programs. *Violence against women*, *20*(4), 385–400. https://doi.org/10.1177/1077801214528587

Svalin, K., Levander, S. (2020). The Predictive Validity of Intimate Partner Violence Risk Assessments Conducted by Practitioners in Different Settings—a Review of the Literature. *J Police Crim Psych* **35,** 115–130. https://doi.org/10.1007/s11896-019-09343-4

Swanberg, J. E., Logan, T. K., & Macke, C. (2006). The Consequences of Partner Violence on

Employment and the Workplace. In E. K. Kelloway, J. Barling, & J. J. Hurrell, Jr.,

Handbook of workplace violence (p. 351–379). Sage Publications, Inc.

https://doi.org/10.4135/9781412976947.n16

The Facts on Children and Domestic Violence. (2008). Retrieved March 27, 2021, from

https://www.futureswithoutviolence.org/

The limbic system. Queensland Brain Institute. (2019, January 24).

https://qbi.uq.edu.au/brain/brain-anatomy/limbic-

system#:~:text=The%20limbic%20system%20is%20the,and%20fight%20or%20flight%2

0responses.

Thomas, T. C., Colburn, T. A., & Korp, K. (2015). Translational Considerations for

Behavioral Impairment and Rehabilitation Strategies after Diffuse Traumatic Brain

Injury. Brain Neurotrauma.

Thompson-Schill, S. L., Ramscar, M., & Chrysikou, E. G. (2009). Cognition without control:

When a little frontal lobe goes a long way. *Current directions in psychological

science*, *18*(5), 259–263. https://doi.org/10.1111/j.1467-8721.2009.01648.x

Tjaden, P. G., & Thoennes, N. (2000). *Extent, nature, and consequences of intimate partner

violence*. Washington, DC: U.S. Dept. of Justice, Office of Justice Programs, National

Institute of Justice.

Tull, M. (2020, January 16). Is ptsd a cause of domestic violence in relationships? Retrieved

March 28, 2021, from https://www.verywellmind.com/ptsd-and-domestic-violence-

2797405

Valliant, P. M., Freeston, A., Pottier, D., & Kosmyna, R. (2003). Personality and Executive

Functioning as Risk Factors in Recidivists. *Sage Journals, 92*(1), 299-306.

https://doi.org/10.2466/pr0.2003.92.1.299

Walters, G. D. (2020). Predicting Future Intimate Partner Violence with Past Intimate Partner

Violence: The Moderating Role of Proactive and Reactive Criminal Thinking. *Criminal*

Justice and Behavior, *47*(8), 943–955. https://doi.org/10.1177/0093854820921549

Watkins, L. E., Maldonado, R. C., & DiLillo, D. (2014). Hazardous alcohol use and intimate

partner aggression among dating couples: The role of impulse control difficulties.

Aggressive Behavior, 40(4), 369–381. https://doi.org/10.1002/ab.21528

Weisz, A. N., Tolman, R. M., & Saunders, D. G. (2000). Assessing the Risk of Severe Domestic

Violence: The Importance of Survivors' Predictions. *Sage Journals, 15*(1), 75-90.

https://doi.org/10.1177/088626000015001006

Williams, W. H., Chitsabesan, P., Fazel, S., McMillan, T., Hughes, N., Parsonage, M., & Tonks,

J. (2018). Traumatic brain injury: a potential cause of violent crime?. *The lancet.*

Psychiatry, *5*(10), 836–844. https://doi.org/10.1016/S2215-0366(18)30062-2

Wymbs, B. T., Dawson, A. E., Suhr, J. A., Bunford, N., & Gidycz, C. A. (2017). ADHD

Symptoms as Risk Factors for Intimate Partner Violence Perpetration and

Victimization. *Journal of interpersonal violence*, *32*(5), 659–681.

https://doi.org/10.1177/0886260515586371

Yaxley, R., Norris, K., & Haines, J. (2017). Psychological Assessment of Intimate Partner

Violence. *Psychiatry, psychology, and law : an interdisciplinary journal of the Australian*

and New Zealand Association of Psychiatry, Psychology and Law, *25*(2), 237–256.

https://doi.org/10.1080/13218719.2017.1356211

Zieman, G., Bridwell, A., & Cárdenas, J. F. (2017). Traumatic brain injury in domestic violence

victims: A retrospective study at the barrow neurological institute. Journal of

Neurotrauma, 34(4), 876–880. doi: 10.1089/neu.2016.4579