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The Role of the Speech-Language Pathologist with Survivors of Traumatic Brain Injury from
Intimate Partner Violence and Providers' Knowledge of this Role

A thesis
presented to
the faculty of the Department of Speech-Language Pathology
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Master of Science in Speech-Language Pathology

by
Nicolle McAdams
May 2024

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Keywords: speech-language pathology, traumatic brain injury, intimate partner violence

ABSTRACT

The Role of the Speech-Language Pathologist with Survivors of Traumatic Brain Injury from
Intimate Partner Violence and Providers' Knowledge of this Role

by

Nicolle McAdams

Intimate partner violence occurs globally at alarming rates. Many experience adverse health impacts such as traumatic brain injury. Healthcare providers do not know the role of the speech-language pathologist, or the rehabilitation needs of survivors.

Aims: This scoping review aims to identify speech-language pathology services for survivors of intimate partner violence with a resulting traumatic brain injury, and knowledge of healthcare providers on the rehabilitation needs of this population. A search was completed in May to October 2023, resulting in a total of 13 articles reviewed.

Main contributions: Speech-language pathologists lack knowledge to provide services to intimate partner violence survivors with a resulting traumatic brain injury. Healthcare providers that work with survivors are unaware of the rehabilitation needs of survivors.

Conclusions: Healthcare providers require knowledge of the needs of intimate partner violence survivors with a traumatic brain injury. Research regarding this population is warranted to meet their needs.

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Chapter 1. Introduction and Literature Review

Introduction

Intimate partner violence (IPV) causing traumatic brain injury (TBI) is an often-recurring event throughout the world yet does not have the public awareness or reach that many other diagnoses have. For example, there is substantial research regarding veterans with TBIs and TBIs caused by sport related accidents. Overall, women's health does not receive the research or public awareness when compared to men (National Academies Press, 2010), including research regarding IPV. Intimate partner violence more commonly impacts women than men, however women impacted by IPV may not receive adequate education of what IPV is and how it may impact them. Intimate partner violence and its impact on women's health may also be less researched due to the level trauma of the experienced by survivors, anonymity needed to protect the survivors' safety (including safety precautions put into place by women's shelters).

A specific example of where research may be needed in this area is the physiological impacts of IPV. Survivors of IPV struggle not only with the social and psychological trauma that accompanies violence, but also physiological consequences (i.e., direct physical injury) that may be lasting and severe. Due to safety concerns introduced above (e.g., need to escape their abuser and remaining anonymous), women may neglect or feel unable to pursue support for physiological injuries. Women may not be aware of or trust the safeguards that hospitals and other healthcare providers put in place, causing them to avoid care for physical injuries. Women also have many complex emotions related to the trauma from IPV that may make it difficult for them to disclose their physiological injuries. When women do seek healthcare for injuries, healthcare providers may not be aware of common physiological consequences of IPV, especially early-career healthcare providers (e.g., physicians, nurses, OTs, PTs, SLPs, and other

allied health professionals). Due to the sensitive nature of working with a survivor of IPV, early-career clinicians may not have the experience or knowledge of how IPV can impact the survivor's health. Along with being inexperienced with IPV, early-career clinicians are likely still learning the basics of physiological consequences such as TBI. For example, beginning clinicians are more likely to have had experiences with TBI caused by a motor vehicle accident or sport related injury than TBI caused by IPV.

Traumatic brain injury is the most common neurological disorder (Maas et al., 2022), making it imperative that early-career clinicians are aware of its impacts. Traumatic brain injuries can briefly be defined as a change in brain function caused by an external force (Brain Injury Association of America, 2022; Domestic Violence Service Management, 2018; Menon et al., 2010; Haag et al., 2016). Common causes of TBI include but are not limited to motor vehicle accidents, falls, sport-related injuries, assault, force from an external object, occupational related accidents, and blast injuries. Traumatic brain injuries that are less severe in nature can be called a mild TBI (mTBI), which is a term often used interchangeably with *concussion* in research literature and clinical practice. Acquired brain injury (ABI) is an umbrella term that includes TBIs caused by external force, and also includes injury to the brain that happens internally (Brain Injury Association of America, 2022). For example, an ABI can be caused due to anoxia from strangulation or result from cerebrovascular disturbance as a result of a physical injury. The distinction between ABI and TBI is important for full understanding of the injury and the precipitating causes. One possible cause of both ABI and TBI is IPV.

Intimate partner violence is a term used to describe abuse caused by a romantic partner (Breiding et al., 2015b). Intimate partner violence can include physical, sexual, financial, psychological abuse, and/or stalking, and often these types of abuse can co-occur. There are

strong links between IPV and both TBI and ABI, as head injuries are the most common injury reported by IPV survivors (Corrigan et al., 2003). As many as 50% of women in the United States experience IPV (Leemis et al., 2022) and approximately 33% of women worldwide (Valera, 2022; WHO, 2021). Women of any age experience IPV, but the most common age that women first experience IPV is at 18-24 years (Leemis et al., 2022). Due to the complex needs of survivors with a TBI caused by IPV, survivors often require a multidisciplinary team for recovery. One healthcare professional survivors may require is a speech-language pathologist (SLP).

A Speech-Language Pathologist assesses and treats the production of speech (dysarthria, apraxia of speech), comprehension and expressive use of language (aphasia), cognitive processes (problem solving, memory, executive function), fluency (stuttering), voice disorders (dysphonia, lesions), and swallowing disorders (dysphagia). People with TBIs can experience any of the disorders that SLPs treat depending on the location of the injury, making SLPs a vital role of their treatment team. One common communication disorder people with TBIs experience is a cognitive-communication disorder. Cognitive-communication disorders may include any combination of speech, language, voice, and cognitive function impairments, and may make communicating difficult for individuals with a TBI (American Speech-Language-Hearing Association, n.d.-a). Common examples include but are not limited to difficulty managing emotion, lack of inhibition, frequent agitation, poor problem-solving skills, difficulty managing time/money, and/or difficulty with understanding humor/figurative language (American Speech-Language-Hearing Association, n.d.-a).

Given the impact that an SLP can have on the early detection, treatment, and educational needs of a person with an IPV-related TBI, their role is vital, and they ideally should be a part of

a multi-disciplinary team. For example, the SLP can play a role in detecting a TBI in therapy sessions. If a survivor of IPV is referred to an SLP with no prior diagnosis of a TBI but the SLP suspects a TBI, the SLP can refer to a physician and report clinical observations. Speech-Language Pathologists can diagnose and treat common speech, language, cognition, and swallowing disorders that are associated TBIs, however there may be physiological factors that require immediate medical attention. Intimate partner violence survivors may also experience psychological symptoms such as anxiety, depression, and/or PTSD (Baxter & Hellewell, 2019). Although SLPs provide counseling when it involves communication disorders, SLPs are not qualified to provide counseling at the level of a specifically trained mental health professional. Due to the nature of IPV, it is likely that the survivor may need to be referred to a licensed mental health professional (Smith & Holmes, 2018).

Literature Review

Traumatic Brain Injury

Traumatic Brain Injury has been extensively studied by multidisciplinary audiences. To expand on the definition offered above, a TBI is caused by a blow to the head caused by an external force which can include deceleration force, such as during motor vehicle accident (Maas et al., 2022; Menon et al., 2010; New Zealand Guidelines Group, 2006). There are two categories of TBI: primary and secondary. Primary TBIs occur immediately after the blow to the head while secondary TBIs occur over time, such as from a hematoma (*Traumatic Brain Injury*, n.d.). Traumatic brain injuries can be further broken down into categories of *penetrating* or *non-penetrating*. In the case of a penetrating TBI, the skull and meningeal layers (dura mater) are pierced by an object while in a non-penetrating TBI, there is a blow or contact to the head strong

enough to injure the brain, however the skull (and meningeal layers) are not pierced (*Traumatic Brain Injury*, n.d.).

Traumatic Brain Injuries are the most common neurological disorder (Maas et al., 2022) and cause approximately 30% of injury-related deaths in the United States (Taylor et al., 2017). Traumatic brain injury can often occur from falls, motor vehicle accidents, assault, being struck by/against an item, and explosions, but can also be related to or caused by occupation related accidents or gunshot wounds (Menon et al., 2010; *Traumatic Brain Injury*, n.d.). Typically, men suffer from higher rates of TBI (Langlois et al., 2006), but in the context of IPV, women are more likely to sustain a TBI. The distinction between ABI and TBI is important for full understanding of the incidence and prevalence discussed above, the injury itself, and the precipitating causes. While ABI also causes trauma to the brain itself, in ABI, the catalyst or cause of the injury is rarely external (e.g., another human being, a weapon, etc.). For the purposes of maintaining connection to the overall topic of IPV, the focus of this review moving forward will be on TBI.

Traumatic brain injuries can range in severity from mild to severe. Mild TBIs can impact a person's everyday life in many ways, including social communication and performance at work (Sharma, 2022). Mild TBIs are not rare events, and in fact may compromise 90% or more of diagnosable TBIs (Kay et al., 1993; Lefevre-Dognin et al., 2021). When a person sustains multiple mTBIs, it can be very dangerous. One concern for multiple mTBIs is chronic traumatic encephalopathy (CTE) (Campbell et al., 2018). Chronic traumatic encephalopathy is a neurodegenerative disease which is caused by repetitive head trauma and can cause symptoms such as cognitive deficits and personality changes (Pierre et al., 2021). Specific symptoms of mTBIs range depending on the location of the injury. Symptoms of mTBI may resolve after a

short period of time (days to weeks), but for many people, symptoms remain for months.

Common symptoms of mTBI include cognitive-function symptoms (memory loss, decrease in attention, difficulty planning, lack of inhibition), emotional symptoms (anxiety, depression), and physiological symptoms (headaches, dizziness) (Levin & Diaz-Arrastia, 2015).

Moderate and severe TBIs are typically distinguished from mTBI based on 1) presence or absence and severity of immediate neurological symptoms 2) length or duration of symptom presence, 3) impact on the person's everyday life, 4) motor and/or sensory impairments, and 5) impairment in language. Emotional symptoms are especially complex, due to both the trauma of the event itself and potential physiological changes in the brain with regards to emotional regulation and processing. Emotional symptoms can include (but are not limited to) depression, anxiety, PTSD, and anger (Davis, 2014; Silver et al., 2009). All severities of TBI can increase the likelihood of suicidal thoughts (Fralick et al., 2019a). Healthcare providers typically utilize the Glasgow Coma Scale (GCS) to identify early physiological symptoms (including duration of loss of consciousness, presence of amnesia), and direct instrumental imaging, such as magnetic resonance imaging (MRI), computerized tomography (CT), positron emission tomography (PET) to classify the severity neurological lesion (Lefevre-Dognin et al., 2021; Levin & Diaz-Arrastia, 2015; Maas et al., 2022; *Traumatic Brain Injury*, n.d.). In recent years, the definition of mTBI has been greatly refined. Mild traumatic brain injury often cannot be seen on imaging and have a GCS score of 13-15 (Lefevre-Dognin et al., 2021). Although some medical professionals (e.g., primary and emergency care providers) believe that mTBI does not require treatment and will resolve spontaneously, there are still many benefits to treatment (Setnik & Bazarian, 2007). Proper identification of all levels and severity of TBI is important as it ensures that the person with a TBI receives the correct treatment (Goldin et al., 2016).

Involved in this complex process of diagnosis and treatment, there are many healthcare providers involved. Interprofessional treatment and collaboration between healthcare providers is vital for people with TBIs due to their many and complex physiological and psychosocial needs (Wiseman-Hakes et al., 2020). Treatment of TBI includes monitoring physical symptoms, pain relievers to manage symptoms caused by the TBI, other necessary medication to manage concomitant or pre-existing disorders, any necessary surgery, and/or rehabilitation including physical therapy, occupational therapy, neuropsychology, and/or speech-language therapy (Banks, 2007; Murray et al., 2015; Vargo et al., 2015). One complaint people with TBIs have is that they do not receive adequate treatment or information regarding their TBI (Gleeson, 2022a). It is also possible that healthcare providers require more education regarding TBI in order to assist people with TBIs (Gleeson, 2022b). Although TBI has many causes, this review will focus on IPV.

Intimate Partner Violence

As part of a larger discussion of intimate partner violence in the literature, several common topics associated with (and unique to) IPV will be discussed in detail. These include help-seeking behaviors, cultural/racial impact of IPV, LGBTQ+ populations and IPV, pregnant women, the psychological impact of IPV, women with disabilities, the impact of the COVID19 pandemic, and healthcare professionals. While specific populations of women are at an increased risk of IPV (as will be discussed further below), on average, approximately 1 in 3 women globally experience IPV (Valera, 2022; WHO, 2021) and approximately 1 in 2 women in the United States experience IPV (Leemis et al., 2022). Intimate partner violence involves abuse (sexual, stalking, emotional, physical, and/or financial) in a romantic relationship, such as a spouse, sexual partners, boyfriend/girlfriend, or previous romantic partner (Breiding et al.,

2015a; Jacques, 2021; Leemis et al., 2022; WHO, 2021). This can include violence, coercion, any harm, and/or controlling behaviors (WHO, 2021).

Although IPV is a common experience for women, compared to research done on other populations, there is little research regarding the impact of IPV on survivors' day-to-day life, the impact on their family, how it impacts their health overall, or their treatment by healthcare providers. Researchers began researching IPV in the 1980's (Plichta, 2004), however research has primarily focused on incidence and prevalence of IPV, the common behaviors of survivors when help-seeking, and general factors associated with IPV such as socioeconomic status. Although the previously mentioned research is important for IPV survivors and the providers working with IPV survivors, in order to be effective in helping this population, there needs to be more research in their specific needs and signs to look for as a provider working with them.

A complicating factor in this discussion is that domestic violence (DV) is a term commonly used interchangeably with IPV in research literature. Domestic violence is a broader term that involves any violence that takes place in the home including IPV, child abuse, elder abuse, or abuse of any other person living in the home (Jacques, 2021). Although it is unclear when exactly the term IPV was first introduced, this term became popular in research literature around the year 2000 (Kranick, 2020). The term IPV was introduced to demonstrate that violence can occur in any romantic relationship, not only in marital relationships (Kranick, 2020). This raised awareness of the topic for populations other than married women, such as same sex couples, women that are not married, and men. For the purposes of this scoping review and the aims of the project, the term IPV was used to most accurately represent these issues, and to exclude the pediatric population.

Help-Seeking Behaviors in IPV. One important concept for survivors of IPV is the help-seeking behaviors survivors demonstrate. Women who are survivors of IPV may demonstrate various support seeking behaviors, depending on their individual circumstances. There are two main types of support seeking behaviors, informal social and formal social (Ansara & Hindin, 2010; Anyikwa, 2015; Liang et al., 2005; Robinson et al., 2020a). Informal social support includes seeking support and help from family, friends, and religion (prayer, religious rituals) (Ansara & Hindin, 2010). Formal social support includes (but is not limited to) healthcare providers, law enforcement, staff at a women’s shelter, and other professionals (Ansara & Hindin, 2010). Having both types of social support is very important to ensure that the survivor is able to get away from the abuser (Ansara & Hindin, 2010). Survivors often are hesitant when seeking informal and formal help due to stigmatization of IPV and shame (Overstreet & Quinn, 2013).

For varying reasons, survivors of IPV require several different services including health, financial, legal, and social services. Some especially important resources include safe housing such as a women’s shelter, healthcare to provide immediate care and rehabilitation, and legal services related to the abuse (Bennett et al., 2004; Muenchberger et al., 2013). Women’s shelters are especially important because they may allow women to feel safe, receive resources, and assistance such as financial assistance (Dichter & Rhodes, 2011; Grossman et al., 2010; Hughes, 2017). Survivors value women’s shelters because they place a high value on safety in this situation (Thomas et al., 2015). Shelters for survivors also decrease the likelihood of continued abuse (Wood et al., 2021). Survivors in women’s shelters also had a decreased likelihood of depression and increased hope (Bennett et al., 2004). Although both informal and formal support are important, there are often barriers to formal support. Barriers include difficulty accessing

resources, lack of knowledge of resources, mistrust/fear of healthcare providers and law enforcement, lack of required resources, fear of the consequences of seeking support, and systemic failures (Beaulaurier et al., 2007; S. Robinson et al., 2020a). For example, many survivors are especially hesitant to seek the support of law enforcement due to the history of law enforcement frequently not assisting women calling or reaching out to report IPV (Schuyler, 1976). Survivors are also likely to wait to pursue formal support until the violence is considered “serious enough” (Fugate et al., 2005). Overall, women are much more likely to pursue informal support due to trust and perceptions of healthcare providers (Petersen et al., 2005). Each survivor seeks help in different ways depending on factors in their life. One factor that especially impacts help-seeking behaviors is culture and race (Anyikwa, 2015).

Cultural / Racial Impact of IPV / How Access to Resources is Impacted. Multiple researchers have found that members of racial and cultural minorities are more likely to experience IPV (Cheng & Lo, 2014; St Ivany & Schminkey, 2019; Waller et al., 2021). Oftentimes racial and cultural minorities receive less health, financial, and social services and in the context, survivors have a similar experience, this is for a number of reasons. One major reason that cultural and racial minorities receive less resources involves the rural locations that these women typically live (Bent-Goodley, 2004). An overall theme in literature discussing racial and cultural minorities is that they do not pursue IPV resources due to lack of knowledge of resources or lack of availability in rural communities (Bauer et al., 2000; Nnawulezi & Sullivan, 2013). Lack of knowledge regarding resources may also be partially due to language barriers of those newly immigrated to a foreign country.

African American women are at an increased risk for IPV and African American women who have moderate to lower income levels (under \$50,000), are at an even higher risk for IPV

(Banks & Ackerman, 2002; Rodriguez et al., 2009; Schollenberger et al., 2003). African American women have also been found to seek support for IPV in different ways than women from other races. African American women were less likely to seek formal support and reported that they were more comfortable discussing IPV with friends and family than healthcare providers (Anyikwa, 2015). African American women are also more likely to remain with their intimate partner after abuse occurs due to racism when seeking help (Waller et al., 2021). African Americans overall have a negative history with law enforcement, making it less likely for African American women to seek help from law enforcement. For example, in the past, law enforcement included slave patrol and even in recent history, African American women are 1.4 times more likely to be murdered by law enforcement than Caucasian women (Bailey et al., 2022). There is also a history of mental health care providers having discriminatory beliefs such as African American women are “uneducated, unintelligent, and likely to abuse alcohol and illegal drugs” (Waller et al., 2021). Women of any minority were found to seek out mental health services after experiencing IPV, but African American survivors of IPV are more likely to utilize medication rather than mental health services to heal from emotional wounds due to IPV (Cheng & Lo, 2014). When African American survivors do decide to seek help, they receive minimal support. For example, in women’s shelters, African American women experience microaggressions, such as having their experience minimized (Nnawulezi & Sullivan, 2013).

Indigenous women (other terminology may include Native American, American Indian) in the United States are especially at high risk for IPV and limited IPV services. It is estimated that approximately 65.5% of indigenous women experience IPV in their lifetime (Evans-Campbell et al., 2006). Indigenous women also face barriers to IPV services due to their location and availability of services outside of their community. Oftentimes, Indigenous communities are

rural and far away from the needed resources, making it more difficult for women to obtain services. Due to an increased rate of alcoholism in the Indigenous community, the risk of IPV is also increased (Jones, 2007).

Immigrant women, especially Latina women, encounter many barriers when seeking services for IPV. Prior to living in the United States, many Latina immigrant women do not know or speak English, which creates a barrier for seeking help. Another large factor is that some immigrant women are undocumented. They may fear deportation if they confide in a healthcare professional regarding IPV at home. Both Latina and Asian women in the United States were found to be less likely to discuss IPV with a healthcare provider due to strong family ties and a cultural stigma on divorce (Bauer et al., 2000). It is seen as a shame to their families, and women can even be shunned by their family after a divorce.

Although the Muslim population in the United States is less studied, they also experience IPV at higher rates than Caucasian women of other religions (Oyewuwo-Gassikia, 2016). Muslim women have experienced negative experiences when seeking services for IPV such as being told to take off their veil in women's shelters (Oyewuwo-Gassikia, 2016). This incident is an example of why Muslim women may not feel comfortable when seeking out services from and around women that are not Muslim. Similar to Latina women, Muslim women avoid seeking services due to embarrassment, shame, and fear of judgement. Muslim women are also more likely to seek informal help, especially religion (Oyewuwo-Gassikia, 2016).

LGBTQ+ Population. Another minority that has a different experience with IPV than straight Caucasian women are survivors in the LGBTQ+ community. The LGBTQ+ population, similar to racial and cultural minorities, experience more difficulty receiving services in the context of IPV and are underrepresented in research (Costello & Greenwald, 2022). Although

IPV in same-sex relationships is just as apparent as heterosexual relationships, women in same-sex relationships are even less likely to be provided with the necessary services (Simpson & Helfrich, 2014). It is much less likely that survivors that are a part of the LGBTQ+ community seek informal or formal services. One of the main reasons this population is less likely to seek support is a fear of homophobia (Guadalupe-Diaz & Jasinski, 2016). People in the LGBTQ+ community are especially less likely to report IPV to law enforcement due to previous or fear of negative interactions and homophobia (Guadalupe-Diaz & Jasinski, 2016). One population that is especially neglected (with regards to service availability) within this group are people who are transgender. People who are transgender and have experienced IPV may have had negative experiences with law enforcement over several years, making it less likely that they will seek services (Courvant & Cook-Daniels, 1998; Guadalupe-Diaz & Jasinski, 2016). Services for IPV such as DV shelters are specifically made for cisgender women, making it very difficult and distressing for people that are transgender to access the necessary services (Guadalupe-Diaz & Jasinski, 2016).

Pregnant Women. Pregnant women also experience IPV, making it essential to evaluate pregnant women for IPV because it not only puts the mother at risk of injury, but also the unborn child by causing pregnancy complications (Minsky-Kelly et al., 2005). IPV can have an impact on the unborn child by causing low birth weight (Campbell & Boyd, 2000; Rivas et al., 2015), prenatal care that is delayed, low maternal weight gain, and unhealthy coping strategies such as smoking (Hathaway et al., 2008). Although incidence of IPV is high during pregnancy, there are many ways for healthcare providers to detect IPV due to frequent visits to healthcare providers (McFarlane et al., 2000). Since women are more likely to see healthcare providers more often

during pregnancy, healthcare providers are offered opportunities to screen for IPV and provide the necessary services.

Women with Disabilities. People with disabilities are at an increased risk of IPV, especially people with mental health conditions (Barrett et al., 2009; Mikton et al., 2014). Survivors of IPV with a disability are much more vulnerable due to their disability (Ballan & Freyer, 2019). Having a disability further complicates the process of receiving services related to IPV, which is already difficult for many survivors (Ballan et al., 2016). The process of receiving services can be further complicated by a difficulty to express their needs/wants to others for help, or if the person has a physical disability, they may be unable to transport themselves to receive the help that they need. Specific to women that are disabled, abusers are more likely to withhold care or devices necessary for the survivor such as a wheelchair, hearing aids, regular bathing, and nutrition (Chang et al., 2003). This creates a control and attempt to threaten the survivor.

Women who are deaf are one group of people with disabilities that can be survivors of IPV (Ballan et al., 2016). Specific forms of abuse have been identified and may be utilized against women that are deaf when compared to other women. Some examples include the abuser withholding videophones and similar devices, damaging/hiding hearing aids, and similar behaviors (Ballan et al., 2016). Without their hearing aids and/or videophones they are unable to contact and communicate with others. This negatively impacts both their formal and informal help seeking behaviors. The threat of withholding and/or damaging devices also can keep the survivor from accessing resources and/or seeking help in any way out of fear (Ballan et al., 2016).

Intimate partner violence is also more likely to cause disabilities through the physical abuse inflicted on the survivor, especially chronic pain, and mental health conditions (Coker et

al., 2005; Wong et al., 2013). This chronic pain can stem from multiple conditions including TBI, or multiple, frequent physical injuries that are left untreated. For example, survivors of IPV are more likely to complain of pelvic pain, have gastrointestinal disorders, and fibromyalgia (Coker et al., 2005). Due to the psychological impact from IPV previously discussed, mental health conditions can also be a result of IPV causing disability in survivors. Survivors, including women that have disabilities, were greatly impacted by the COVID-19 pandemic (Allen & Jaffray, 2020; Ghidei et al., 2022).

Impact of the COVID-19 Pandemic. During an extended time period ranging from late 2019 to mid-2021 many areas in the world were shut down due to the COVID-19 pandemic with many countries asking their citizens to stay in their homes to prevent the spread of the virus. During this time, people experienced loss of employment as well as social isolation. Both of these factors were shown to have an increased effect on the rate of IPV (Allen & Jaffray, 2020; Ghidei et al., 2022). Abusers aim to isolate the survivor as much as they can so that they hold more control over them, and the pandemic furthered this. Intimate partner violence incidents and severity increased through this period, as well as the rate of alcoholism which is associated with IPV (Allen & Jaffray, 2020; Campbell, 2020; Elbelassy et al., 2022; Fogarty et al., 2022; Toccalino et al., 2022). Intimate partner violence related incidents reported to law enforcement increased approximately 300% during the initial period of shut down caused by COVID-19 (Valera, 2020). Women also avoided seeking services due to fear of contracting the COVID-19 virus (Toccalino et al., 2022). The pandemic also gave abusers more opportunity to control cell phones, communication with others, as well as internet searches (Campbell, 2020).

To directly address the increase in IPV during the pandemic, healthcare providers attempted to implement telehealth appointments. Although telehealth was offered for some

healthcare settings, living with an abuser would make it very difficult for survivors to access the service due to fear of the abuser hearing the conversation (Ragavan et al., 2020). Telehealth can also be difficult for some survivors that do not have access to technology or are not able to efficiently operate technology (Toccalino et al., 2022). Telehealth can lead to more opportunities and provide more services for people that may not have had services before due to location, transportation, employment status, and lack of available time/childcare. Some women also prefer this mode of delivery for convenience (Fogarty et al., 2022). Although survivors like the idea of telehealth for IPV intervention, anonymity is a large concern for their safety (Van Gelder et al., 2021).

Specific Physiological and Psychological Injuries as a Result of IPV. Overall, women survivors of IPV are more likely to sustain injuries, have illnesses/diseases, and their mortality rates are higher (Hamberger et al., 2007), making healthcare services important. Due to these factors, survivors of IPV are more likely to need emergency healthcare services (Rivara et al., 2007). One common injury that survivors of IPV sustain is strangulation. If a survivor survives a strangulation attack, the effects can cause injuries and chronic conditions such as difficulty swallowing, ABI due to anoxia, a sore throat, change in vocal quality, and loss of consciousness (Sheridan & Nash, 2007). Strangulation is very common in IPV (Domestic Violence Service Management, 2018; Mechanic et al., 2008), and can cause an acquired brain injury which can cause cognitive symptoms such as disturbances in attention, processing speed, memory, and executive function (Valera et al., 2022). Strangulation related to IPV occurs in approximately 57.6% to 68% of IPV cases in women's shelters and emergency rooms (Valera et al., 2022). Women that are survivors of strangulation demonstrate difficulty with long-term memory as well as mental health conditions such as PTSD and depression (Valera et al., 2022). Strangulation-

related injuries (again, while not uncommon) may be difficult to identify. This is because the survivor may minimize the incident, or they may have shame and feel too uncomfortable to discuss it (Bergin et al., 2022). Women also receive other physical injuries such as broken bones, dislocated joints, bruises, lacerations, eye/ear injuries, and/or blunt force trauma (Corrigan et al., 2003; Sheridan & Nash, 2007). Although all of these injuries occur frequently, facial injuries are the most common due to IPV (Arosarena et al., 2009). Due to these injuries, survivors may have access to healthcare providers frequently.

Although physical health is important, survivors of IPV seek mental health services as frequently as they may seek medical services (Campbell & Boyd, 2000). It is even estimated that up to 64% of women at a psychiatric hospital were survivors of IPV (Corrigan et al., 2003). Since these experiences are common for women that are survivors of IPV, it is vital that IPV survivors receive mental health services (Wong et al., 2022). Due to the traumatic and emotional circumstances surrounding IPV, each type of IPV experienced by women has a level of psychological impact on the survivors. Post-traumatic stress disorder (PTSD), anxiety, suicidal thoughts, and depression are very common among IPV survivors (Baxter & Hellewell, 2019; Galovski et al., 2021; Karakurt et al., 2021; Rivas et al., 2015; Smith & Holmes, 2018). Survivors are at an even higher risk if they have experienced both TBI and IPV (Valera & Berenbaum, 2003; Smith & Holmes, 2018; St Ivany & Schminkey, 2019). Due to the violent and traumatic nature of the TBI, survivors are six times more likely to have PTSD compared to other causes of TBI (Iverson et al., 2017; Iverson et al., 2019; Karakurt et al., 2021; Smirl et al., 2019).

There is a significant amount of research discussing the potential treatment options for survivors of IPV who are experiencing the psychological after-effects of abuse or injury. A common type of therapy that mental health professionals utilize for mental health conditions,

such as PTSD and depression, is cognitive processing therapy, which is a type of cognitive behavioral therapy (Galovski et al., 2021). Cognitive processing therapy assists people with PTSD to change their thoughts and beliefs regarding the trauma. In the case of PTSD from IPV, survivors are asked to provide the therapist with their negative thoughts surrounding the trauma and symptoms of PTSD. The survivor is then encouraged to confront these thoughts and beliefs. After confronting the thoughts and beliefs, they are modified to become more realistic and positive thoughts and beliefs about the world and their trauma.

Roles and Availability of Healthcare Providers to Treat Survivors of IPV

Healthcare providers play a crucial role in providing IPV services and resources to survivors. Some healthcare professionals that are commonly involved in survivors' care include imaging professionals, social workers, and rehabilitation professionals, such as SLPs. Although healthcare providers are so crucial, survivors have difficulty obtaining resources from them for various reasons. One critical factor that women mention that impacts their decision to confide in healthcare providers is they feel judged, shamed, not listened to, they fear they will lose their children, or blamed for the IPV (Bauer et al., 2000; Liu et al., 2020; Simmons et al., 2011; Smith & Holmes, 2018; St Ivany et al., 2018). Survivors are risking a lot, possibly including their lives, when discussing IPV with a healthcare provider and because of this, when they are blamed or not listened to, it can be very discouraging. Survivors may also fear they will have their children taken from them due to the abuse, lack of finances, and/or due to living in a women's shelter (St Ivany et al., 2018).

Survivors' concerns regarding healthcare providers are warranted as healthcare providers have reported for several years that they do not inquire about IPV due to time constraints and lack of comfortability/education regarding IPV (Black, 2011; Kemble et al., 2022; Kulkarni et

al., 2010; Kurz, 1990; Robinson & Spilsbury, 2007). Oftentimes, healthcare providers do not know what to say or do when they have a patient that experiences IPV. Research indicates that properly educating healthcare providers increases their confidence in assisting and referring IPV survivors (Hegarty & Glasziou, 2011). The occurrence of healthcare providers not inquiring about IPV, even when clear signs of IPV exist, has been a longstanding pattern, and because of this, survivors may not trust their healthcare providers (Warshaw, 1989). Intimate partner violence survivors have been invalidated and treated poorly when discussing IPV with healthcare providers throughout history (Kurz, 1987). IPV survivors have not only experienced feeling not listened to, but they have experienced healthcare providers provide negative responses. For example, healthcare providers have even blamed the survivor or denied that the incident happened at all (Hamberger et al., 1998).

Healthcare providers have admitted that they have limited education regarding IPV, and that they may even hold prejudices against survivors (Cohen et al., 1997). Research has shown that many women who were later murdered by their partners have visited healthcare professionals within the span of the last year (Black, 2011). The implication of this is that the healthcare providers that they saw likely did not adequately screen and/or refer the women or know what to look for. Ensuring that women receive adequate screening and referring is detrimental because it can save their lives. Emergency department healthcare providers are especially important for identification of IPV (Dearwater et al., 1998). Emergency department employees may be the only point of healthcare contact that the survivor has and adequately identifying IPV is critical.

There have been successful programs and training that hospitals and healthcare providers have adapted that educate providers on how to assess and refer survivors appropriately (Minsky-

Kelly et al., 2005). Although there have been several attempts over several years to create a protocol to detect IPV and refer survivors, there have not been many that have remained effective (McLeer et al., 1989). Many of the programs and trainings do not remain effective overtime, or healthcare providers do not implement the strategies after a period of time. This is often due to time constraints, lack of necessary resources, or lack of follow up with additional updated training.

Some strategies that survivors especially appreciate from healthcare providers include active listening, reassuring them that it is not their fault, and validation from the healthcare provider (Feder et al., 2006; McLeod et al., 2010). These are strategies are the opposite of what many women have experienced from healthcare providers as mentioned previously. They are also simple to implement and train healthcare providers on and do not take up a lot of their time, making healthcare providers more likely to implement them. Strategies, protocols, and programs to identify IPV are important to survivors who later, but it is still important to offer women tangible resources to ensure immediate safety (Morse et al., 2012). Women appreciate pamphlets provided from the doctor or in a waiting room as well as posters that offer information in a medical facility (Black, 2011). These provide survivors with the information that they need, and some do not require the survivor to discuss IPV with a provider, which may be beneficial for the women that are embarrassed and/or nervous to disclose this information. Although making the needed referrals is necessary, it is not always appropriate for the survivor. Pressuring a woman to pursue referrals can be dangerous (Feder et al., 2011). The woman will pursue services when she is ready and pressuring her will only add to her emotional distress and could potentially make the situation worse for her due to any danger she is in from the abuser.

Although the time spent waiting for a healthcare provider may seem like a universal problem, it has specific ramifications for survivors of IPV. When attempting to access healthcare, the amount of time survivors must wait for an appointment is often delayed. Forty percent of women reported delayed healthcare (Morse et al., 2012). If a woman is in a critical situation due to IPV, waiting a prolonged amount of time can put her in danger. Women did report that wait time with law enforcement was much shorter, ensuring that women can get a restraining order when necessary (Morse et al., 2012). Law enforcement are often one of the first people that survivors come into contact with, making the short wait time very important for their safety.

Imaging Professionals. Imaging professionals include healthcare providers such as radiologists and persons who are directly involved in diagnosing the immediate after-effects of IPV. Imaging professionals may encounter IPV survivors due to frequent and/or common severe injuries (Patton Foushee, 2017). Imaging professionals may not talk with the survivor for long periods of time, but they may see signs of IPV that other healthcare professionals may not notice. Imaging professionals may also notice if they frequently see a person with suspicious injuries. It is even appropriate that imaging professionals screen women for IPV (Patton Foushee, 2017). As mentioned before, they may notice signs of IPV that other professionals did not notice, making it important that they screen women if they have any suspicions. This also ensures that screening for IPV takes place at least once.

Social Work. One essential healthcare provider for survivors of IPV is a social worker. Social workers are often the first people that survivors of IPV are referred to and they assist in the survivors' access to necessary resources. Although social workers are vital for IPV survivors, some may lack important knowledge concerning IPV (Hageman & St George, 2018). Many

social workers lack knowledge on the relationship between IPV and TBI which is vital (Monahan, 2018; Monahan & O’leary, 1999). One area that is often addressed by social workers for their clients is the financial status of the survivor (Hageman & St George, 2018). Social workers often assist people with lower income, and survivors of IPV are not an exception. Finances are very important for IPV survivor and their wellbeing, which also makes asking about it important in order to offer them the necessary resources (Hageman & St George, 2018).

Speech-Language Pathologists. Speech-language Pathologists (SLP) are professionals that engage in practice in the areas of communication and swallowing across the life span (American Speech-Language-Hearing Association, n.d.-b). Speech-Language Pathologists also participate in counseling, education, screening of disorders, and treatment of disorders. Some examples of service delivery areas of SLPs are fluency, speech production, language, cognition, voice, swallowing, auditory rehabilitation, and cognitive-communicative disorders (American Speech-Language-Hearing Association, n.d.-b). For each of these areas, SLPs are responsible and ethically required to provide appropriate assessment and treatment, along with the necessary referrals.

Cognitive-communication disorders are commonly caused by TBIs (Blyth et al., 2012), and are the most common communication disorder caused by TBI (Short et al., 2014). Cognitive-communication disorders can also result from other events such as a stroke, brain tumor, or dementia. Although the severity of cognitive-communication disorders can range, some common signs and symptoms include impaired memory, judgement, and initiation, reduced awareness of deficits, difficulty communicating needs and wants, managing and expressing emotions, and difficulty fulfilling vocational role (American Speech-Language-Hearing Association, n.d.-a; Byom et al., 2020; Norman et al., 2019; Williams-Butler & Cantu, 2019). One example of this is

difficulty making a mature moral judgement about a situation (Allain et al., 2018), which of is particularly critical in the case of IPV.

People with cognitive-communication disorders frequently have difficulty with more ambiguous conversation such as sarcasm, figurative language, and humor in general (Angelieri et al., 2008; Rousseaux et al., 2010). People with TBIs also commonly have difficulty with executive functions (i.e., inhibition, reasoning, sequencing, initiation, impulse control), and because of this have difficulties with many activities of daily living (ADLs) (Constantinidou et al., 2012). These deficits make social settings and conversations with others difficult since people use these skills constantly throughout conversation with others. Research reports that more than half of healthcare providers clients had deficits in social communication (Sohlberg et al., 2019), making this a relevant topic.

Assessment of a patient with a suspected or confirmed TBI by an SLP first includes a patient interview (Krug & Turkstra, 2015). Patient interviews often obtain the most information about how they obtained the TBI as well as any signs and symptoms they may be experiencing. In the case of a patient with a TBI caused by IPV, this also offers the chance to build rapport in sensitive situations. Assessment procedures vary based on the presenting symptoms, setting, time restraints, and experience of the evaluating clinician, as there are no set protocols for a thorough and appropriate evaluation. Some popular examples of standardized assessments for cognitive-communication disorders include Repeatable Battery for the Assessment of Neuropsychological Status (RBANS), Functional Assessment of Verbal Reasoning and Executive Strategies (FAVRES), and Cognitive Linguistic Quick Test Plus (CLQT+) (Krug & Turkstra, 2015).

Treatment of cognitive-communication disorders vary depending on the experience of the treating SLP and the person's needs. Speech-Language Pathologists often begin with educating

and counseling the person with a TBI as well as any family that may be present (Duff et al., 2002). This ensures that they understand the treatment they will be receiving as well as results of the assessment. It is especially important to have a family member present for education with a person with a TBI due to deficits in executive functions, specifically memory. One type of education and treatment that many SLPs utilize communication partner training (CPT) (Togher et al., 2014; Wiseman-Hakes et al., 2020), particularly if the patient or person with a TBI is having difficulty comprehending or expressing language. In CPT, SLPs instruct a caregiver that is with the person frequently how to communicate with the person with a TBI. The SLP can give tips on how to implement therapy at home, as well as how they can best help the person with a TBI.

After education, treatment can include money/time management, orientation, problem-solving, memory, and attention activities, or any other deficit identified during the evaluation process (Beaulieu et al., 2015). Speech-Language Pathologists also assist in providing compensatory strategies and/or visuals to make ADLs easier to complete for the person with a TBI. Oftentimes treatment with people with cognitive-communication disorders require strategies and therapy regarding their occupation (Douglas et al., 2016). Speech-Language Pathologists can also implement group therapy for people with TBIs and cognitive-communication disorders. This not only creates a sense of belonging and offers people support for people in a similar situation, but it can target each person's goals in a unique way (Hardin & Kelly, 2019). For example, some people may have goals that have to do with socializing with others, and group therapy gives them an opportunity to do so.

Another important form of communication that can be impacted by TBIs is writing (Dinnes et al., 2018). Writing is important for vocational/academic purposes, as well as personal

reasons. Since writing is very important and is a form of communication, SLPs also target writing in therapy with people with cognitive-communication disorders (Dinnes et al., 2018). Writing can be targeted throughout activities rather than a specific treatment only targeting writing. This ensures that the writing implemented into therapy is salient and natural. Speech-Language Pathologists are not meant to teach a person how to write beyond their original ability or step beyond their scope of practice such as working on motor skills for writing which is the role of an occupational therapist (*Occupational Therapy Scope of Practice*, 2021).

Even though cognitive-communication disorders are important, many SLPs are not comfortable with assessing and/or treating them (Norman et al., 2019; Riedeman & Turkstra, 2018). This may be due to the fact that SLPs have a broad scope of practice, and SLPs often work with specific populations and become specialized in those populations. This often means that SLPs may not feel as comfortable with other populations, such as people with cognitive-communication disorders. Due to the correlation with IPV and TBI/ABI, it is imperative that survivors see an SLP if they are demonstrating any difficulty with communication and/or swallowing, which again highlights the need for SLPs to be aware of the multiple factors that may be impacted following a TBI. Speech-language pathologists can be effective individually, but the effectiveness increases when treated alongside other healthcare providers. Speech-language pathologists are meant to be in an interprofessional team of healthcare providers to offer rehabilitation for the individuals with TBI, especially cognitive rehabilitation (Beaulieu et al., 2015; Silver et al., 2009; Williams-Butler & Cantu, 2019). Although SLPs do have a large role in a TBI treatment team, over half of the frontline workers do not make the proper referrals to SLPs (Knollman-Porter et al., 2021; O'Brien et al., 2022). Overall, survivors and healthcare

providers are often unaware of the importance of SLP services for IPV survivors with a TBI (Wiseman-Hakes et al., 2020).

Intersection of IPV and TBI

Although IPV can frequently cause TBIs (Nicol et al., 2023; Valera et al., 2019), overall, there is limited research regarding the relationship between IPV and TBI (Costello & Greenwald, 2022; Hunnicutt et al., 2016; Kwako et al., 2011; Monahan, 2019). Survivors of IPV likely sustain blows to the head from their abusers, as more than 90% of violence focuses on the head, face, and neck areas, with up to 75% of survivors sustaining a brain injury (Haag et al., 2022; Hunnicutt et al., 2019; Zieman et al., 2017). Compared to TBIs caused by sports, there is much research to do (Gleeson, 2023b; Valera et al., 2019).

It is difficult to completely understand the occurrence of TBI from IPV due to the lack of reporting from survivors (Baxter & Hellewell, 2019). Lack of reporting may be due to not trusting healthcare providers, fear, shame, or they may not know they have a TBI (G. Hunnicutt et al., 2019). Traumatic brain injury from IPV can also be difficult to identify because only approximately 21% of survivors of IPV with a TBI seek medical care (Fortier et al., 2021). Traumatic brain injury from IPV is especially unique as survivors often sustain multiple blows to the head rather than it being a one-time event (Lifshitz et al., 2019). Due to repetitive blows to the head (Valera & Kucyi, 2016), survivors of IPV are at a greater risk for CTE as well as dementia (Esopenko et al., 2021; Gleeson, 2023a), making identifying the TBIs and the cause (IPV) important for the survivor's health.

Similar to increased rates of IPV, racial and cultural minorities are also at an increased risk of TBIs (Linton & Kim, 2014). Specifically, Indigenous women and African American women were found to be at an increased risk for both IPV and TBI (Linton & Kim, 2014). As

discussed previously, racial and cultural minorities are less likely to seek formal help and are more isolated from receiving help due to geographic location. Since they are less likely to seek out healthcare providers, it is more likely that they are living with untreated TBIs and continue to have additional TBIs resulting from IPV. Since IPV is a relevant topic when discussing TBI, healthcare providers are often provided with training and programs to assist women.

Training of Healthcare Providers for Recognizing IPV as a Potential Cause of TBI.

Although identification of TBIs resulting from IPV is a growing topic, many healthcare providers and front-line staff do not have the proper training and education to properly take care of survivors (Haag et al., 2019; Hunnicutt et al., 2019). Front-line staff are especially important because they are able to identify TBI and IPV earlier than others (Haag et al., 2019). For example, one of the first forms of formal support that survivors confide in are law enforcement officers. Researchers have found that law enforcement officers often do not understand the intersection between IPV and TBI, and because of this it would be beneficial to encourage them to collaborate with healthcare providers that are more knowledgeable in this topic (Higbee et al., 2019). Staff at women's shelter also are also front-line personnel very important for identifying TBIs in survivors. The staff are frequently around survivors and are more able to look for signs of TBI. They are more likely to know the local resources because they are exposed to survivors of IPV frequently, making them an asset to knowing and understanding the signs and symptoms of TBIs caused by IPV (Grossman et al., 2010). Although they are important for identification of TBI, most staff do not have knowledge regarding TBI and are unprepared when they do have a resident with a TBI (Nemeth et al., 2019; Nicol et al., 2023).

Although IPV is a common cause of TBIs and it is agreed upon in the literature that there needs to be screening for TBIs in IPV survivors (Jackson et al., 2002), there has been little effort

to do so. Screening for TBIs among IPV survivors is agreed to be of importance, but it is difficult to develop a universally appropriate screening tool for this type of TBI. Many TBI screening tools and protocols are made specifically for environmental or physical accidents (Liu et al., 2020). The lack of protocols or agreed-upon procedures increase the difficulty of specifically screening for IPV following a TBI.

Objective and Aims of this study:

Based on the results of the literature review, it appears that research in TBI related to IPV and the importance of the role of the SLP is minimal. The objective of this scoping review is to fully explore the availability of research regarding SLP services available to survivors of IPV with a TBI and the healthcare workers' knowledge of the importance of the referral to an SLP.

Chapter 2. Methods

Design

For this study, a scoping review was used as described by Colquhoun et al. (2014), Munn et al. (2018), and Verdejo et al. (2021). Scoping reviews are used to investigate available research on a given topic in broad scope, clarify concepts on the topic, and to identify any themes or common topics discussed within a content area. Framework stages include identifying the research question, identifying relevant studies, study selection, charting the data, collating, summarizing, and reporting the results, and consultation with relevant stakeholders (Colquhoun et al., 2014). A scoping review was chosen rather than a systematic review for the purpose of identifying a knowledge gap while retaining the ability to identify the research that is available. Study design and reporting of results was based on the protocol outlined by Tricco et al (2018), specifically the Preferred Reporting Items of Systematic reviews and Meta-Analysis extension for Scoping Reviews (PRISMA-ScR).

Identifying the Research Question

Following the literature review, the research questions were identified as follows: (1) What speech-language pathology resources are available to survivors of traumatic brain injury (TBI) caused by intimate partner violence (IPV)? (2) Are healthcare providers who work closely with survivors of IPV aware of these resources, and the potentially complex rehabilitation needs?

Identifying Relevant Studies

A search was conducted from May to October of 2023 for articles on the following three databases: Psycinfo, EBSCO, and PubMed. Several articles were obtained through manual searching through obtained articles' references to discover articles not initially identified in databases. The search strategy utilized words related to the topic and the provided related terms

by the databases. Terms for each database search included “intimate partner violence or domestic violence”, “traumatic brain injury or TBI or acquired brain injury”, “head injury or concussion or mTBI”, “resources or services or social work”, and “speech-language pathology or speech therapy”. Articles in a language other than English were always available in translated versions and thus utilized in the literature review.

Intimate partner violence and domestic violence (DV) were searched together (or) due to newness of IPV in the research literature and frequent use of IPV and DV interchangeably, and DV also is a broad term that includes IPV. TBI, ABI, head injury, and concussion were searched together (or) due to frequent interchangeable usage in research literature. Traumatic brain injury is a type of ABI and when searching ABI, TBIs are often included. Traumatic brain injuries are often simply called head injuries or concussions in certain settings, especially with survivors of IPV. Resources, services, and social work were searched together (or) due to being related and often being used interchangeably. Social workers often provide resources and services, making this search term similar to the terms “services” and “resources”. Speech-language pathology and speech therapy were searched together (or) as they are also often used interchangeably. SLPs administer speech therapy, and research literature often refers to the therapy itself rather than the professional.

See table 1 for search terms and justification of combined terms (e.g., Intimate Partner Violence or Domestic Violence).

Table 1*Inclusion Terms*

Term	Justification
Intimate partner violence / or Domestic Violence	Physical, psychological, financial, and/or sexual abuse involving romantic partners / Broader term including IPV
Traumatic brain injury (TBI) / or Acquired Brain Injury (ABI) / or Head injury / or Concussion (mTBI)	Acquired injury to the brain from an external force / Acquired injury to the brain from internal forces. / Broader term including TBI and/or ABI / A more specific and mild type of TBI frequently seen with IPV
Resources / or Services / or Social Work	A common synonym for services / Physical and psychological health access and information / Targeted Profession
Speech-Language Pathology / or Speech Therapy	Targeted profession / profession of interest for this project

Searches were also conducted for non-peer reviewed sources available through general search of the internet. The search engines Google© and Google Scholar were used to search publicly available websites and resources related to the topic. Publicly available resources were included due to the likelihood of minimal results being found through research literature.

Publicly available resources also provide a more accurate view of how a survivor may find information and resources since many of the public do not have unpaid access to research articles. Google Scholar often leads to paywall/protected articles, however access through ETSU website allowed for retrieval of many articles found. Search terms were similar to those utilized in the database searches. Records from this search are identified as “additional records identified through other sources” in Table 2. The research design included reviews due to minimal results. Reviews provided an overall view of resources for IPV survivors and did not involve the research questions of this scoping review.

Selecting Studies

Selected articles were uploaded onto Mendeley Reference Manager to sort articles and remove duplicates. Title and abstract of all articles peer-reviewed articles (sources) were screened, and then each article was read at full length to determine eligibility and exclusion of the articles. Internet sources were included to broaden the search and include articles made accessible to the public. This led to a broadening of criterion to include more relevant articles and resources.

Eligibility Criteria

Studies were included if they met the following criteria:

1. Referred to conditions related to TBI from IPV treated by Speech-Language Pathologists (e.g., cognitive-communicative deficits or disorders, dysphagia, etc.).
2. Discussed the health impacts and/or services required for TBI from IPV.
3. Focused on adults over the age of 18 years old.

Studies were excluded if they:

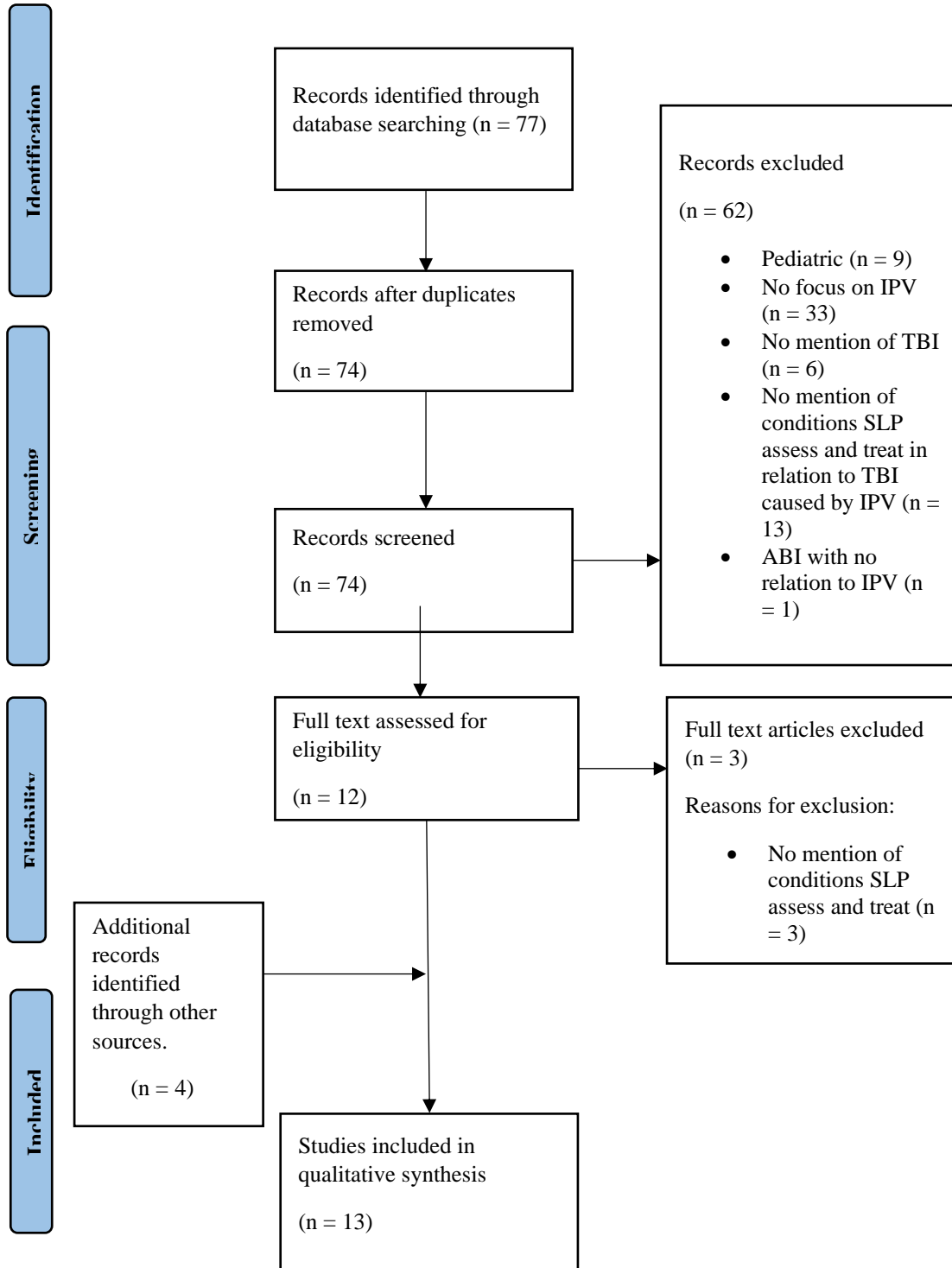
1. Focused on pediatrics in any capacity (e.g., developmental/congenital neurological conditions, domestic violence involving pediatrics).
2. Focused on acquired brain injuries that had no connection to a traumatic injury (e.g., dementia, stroke, tumors).
3. Parties involved were parent-child rather than intimate partners.

Charting the Data

A chart template was developed to identify articles identified, excluded, included, and screened. Duplicate articles were removed via Mendeley Reference Manager. This was made to include various types of articles (research articles, websites, etc.). Figure 1 shows the PRISMA flow diagram, with breakdown of article identification, screening, eligibility, and inclusion.

Figure 1

Article Inclusion Process



Chapter 3. Results

Literature Search Results

This literature search resulted in identification of 77 peer-reviewed articles and four publicly available websites. Categorization of study design (e.g., review, descriptive design) was constructed in two ways; 1) utilizing the author's description in the abstract or methods, or 2) analysis of methods to best represent study design presented. Many studies that were originally included were later excluded upon further consideration due to the absence of conditions assessed and treated by speech-language pathologists (SLP). The articles frequently targeted other professions with no mention of conditions treated by SLPs. Table 2 lists all articles included in the final / qualitative synthesis after all exclusion criteria were applied and appropriateness was assessed.

Table 2

Publication Type

Citation	Publication type
Ballan & Freyer, 2019	Viewpoint
Burke et al. 2022	Publicly Available Survey
<i>Intimate Partner Violence & Brain Injury, 2022</i>	Website
Kontos et al., 2014	Qualitative
Langlois, 2018	Website
MacDonald, 2021	Survey
Murray et al., 2015	Literature Review
Palm LaGrange, 2022	Publicly Available Magazine
Sogoni, 2021	Descriptive

Toccalino et al., 2023	Scoping Review
Trzaska, 2022	Literature Review
Wiseman-Hakes, Colantonio, et al., 2020a	Workshop
Zieman et al., 2017	Observational

Year of Publication and Country of Origin

The year of publication of all sources reviewed ranged from 2008-2023. Countries of origin primarily include Canada (n = 5), the United States (n = 6), along with South Africa (n = 1).

What Speech-Language Pathology Resources are Accessible to Survivors of TBI Caused by Intimate Partner Violence (IPV)?

Review Articles

The three review articles identified in the results including a scoping review, literature review, and one unknown type of review. Trzaska (2022) completed a literature review, with the aim of creating a website that provides resources for people with a traumatic brain injury (TBI). In the definition of TBI, the author included survivors of intimate partner violence (IPV) as a population that is more likely to be impacted by TBI. The resources provided were meant to be evidence-based and reliable for survivors. Authors stated that the result of this review article and website creation increased awareness of TBI and relevant resources (Trzaska, 2022). Resources for survivors of TBI included educational information for both the survivor and caregiver, health insurance information, financial assistance information, and information specifically for veterans. The author also discussed the SLP resources aimed at people with TBIs, emphasizing communication, speech, and swallowing needs of survivors. The communication disorder

primarily discussed is a cognitive-communication disorder, and authors discussed the importance of assessment and therapy by an SLP. Trzaska (2022) also discussed the lack of patient friendly websites for survivors. Cognitive resources were searched and screened online and the author found that only 23% were at a patient friendly reading level, and varied in accessibility, usability, and reliability.

Qualitative

Results included two qualitative research articles, a survey and one article utilizing observations and semi-structured interviews. The article by Kontos et al., (2014) utilized observations and semi-structured interviews to discuss the use of emotion work practices in various rehabilitation professions for people with TBIs. Emotion work involves a professional managing their own emotions and how the professional expresses their own emotions to their client (Kontos et al., 2014). The authors discuss the impact and concerns when utilizing emotion work with survivors of TBI from IPV. Due to the nature of a TBI from IPV, increased sensitivity with emotion work from rehabilitation professionals is important. The author also included SLP in this article to discuss language disorders (such as aphasia) caused by TBIs. The grief and trauma caused by TBIs, especially those caused by IPV, mean that SLPs have to utilize their counseling skills along with the specific communication and swallowing needs of the client.

MacDonald (2021) utilized a survey aimed to create a checklist that better refers and identifies acquired brain injuries (ABI). The author mentions that this checklist can be especially beneficial to use for survivors of a TBI from IPV, and the United States frequently utilizes it for this population since they are at risk for having a cognitive-communication disorder that may go unnoticed due to their circumstances. This resource is important for an initial screen of a cognitive-communication disorder to ensure proper referral and appropriate assessments are

completed. The author completed a survey for SLPs, multidisciplinary referral sources, and survivors of a brain injury. Overall, the checklist was positively viewed for initial identification and referral purposes.

Descriptive Design

One descriptive design was identified in the search for literature to identify common trends among people with TBI. Sogoni (2021) discussed the challenges that TBI survivors face when attempting to reintegrate into their home after a hospitalization. Intimate partner violence is identified as a common cause of TBI but is not the primary focus of the article. The author discusses the role of the SLP being primarily for cognitive-communication therapy, but also mentions the impact on speech and language. The author also provided indirect evidence of the necessary role of the SLP for assessment and treatment of people with TBIs. For example, many participants mentioned the impact their communication deficits had on their lives. Participants mentioned that their memory deficits kept them from finding employment and being made fun of at local events due to their speech. Both of these examples greatly impact a person's life, making the treatment provided by an SLP valuable to people with TBIs (Sogoni, 2021).

Observational Design

One observational design was identified. The observational design was a retrospective chart review which discussed the common injuries and other factors related to TBI caused by IPV (Zieman et al., 2017). A neurology clinic provided a screener to women's shelters for women that are suspected to have a TBI. If a woman is suspected to have a TBI, she was sent to the neurology clinic for further evaluation and care (Zieman et al., 2017). The author discussed a program for women's shelters that provides free resources and services (including speech

therapy) due to the need of speech therapy for people with TBIs and the frequent need of cognitive therapy for cognitive-communication disorders.

Workshop

One workshop peer-reviewed article was included in the results during the literature search. As described by the authors, a workshop allows for collaboration among survivors, researchers, and stakeholders (Wiseman-Hakes et al., 2020). These groups of people participated in classes and were asked their opinion on relevant topics, such as the state of available services. Since workshops utilize several important groups of people, they allow for more information and real-life experiences. This workshop discusses how to integrate important resources for people with a TBI along with addictions and/or mental health conditions (Wiseman-Hakes et al., 2020). The participants especially focused on populations such as people that experience homelessness, interact with the criminal justice system, and survivors of IPV. The impact on communication that TBIs have was discussed on several occasions, including the cognitive-communication deficits that SLPs often treat with people with TBIs. A type of education and treatment utilized by SLPs that the authors mention is communication-partner training. Although SLPs frequently utilize this therapy with the client's caregiver and family members, the author also mentioned using this to educate people that frequently work with this population. For example, the SLP would educate police officers on how to talk to IPV survivors with TBIs due to communication deficits.

Viewpoint

One viewpoint article was identified. A viewpoint article is a focused research article that provides an overview and analysis of a specific topic (Pugh, 2012). Compared to reviews, viewpoints are less comprehensive (Pugh, 2012). In this case, Ballan and Freyer's (2019)

viewpoint article discuss how the SLP may assess and treat survivors of IPV with a communication disorder. The authors discuss both how communication disorders can place women at a higher risk of experiencing IPV as well as how IPV can cause communication disorders. Conditions that are acquired due to TBI from IPV that the author discusses include difficulty with expressive and receptive language, dysarthria, and speech disfluency. Some conditions that may result from ABIs from IPV include aphasia, dysphagia, and dysphonia.

Publicly Available Articles

During the search for literature, three publicly available articles were identified through a search of online magazines and websites. The first article discussed the impact and relationship of TBI caused by IPV (*Intimate Partner Violence & Brain Injury*, 2022). This article explains the relationship of TBI and IPV, along with statistics, and the common impacts on survivors.

Toward the end of the article, treatment and resources are provided for people to have access to if they need to learn more about this topic. Similar to other articles, the authors discuss symptoms related to cognitive-communication disorders such as memory, attention, and problem-solving deficits, along with difficulty communicating. This article points out the complexity of a TBI caused by IPV and how it can make symptoms worse. Due to the complexity and the possible increased severity in these types of TBIs, the cognitive-communication needs would also be more severe, requiring an SLP on the treatment team.

Another publicly available article by Langlois (2018), discusses how aggression can cause and be caused by TBI. The author discusses IPV as a cause of TBI, mentioning the various factors that may impact the survivor and their experience with help-seeking. One factor relevant to SLPs discussed in this article is the cognitive level of the survivor. Langlois (218) stated that people may not take survivors as seriously if they have cognitive deficits resulting from a TBI,

making it difficult to get the necessary help and resources that they need. Speech-language pathologists can assist survivors in rehabilitating their cognitive-communicative skills to be able to properly communicate if they need help in the future without the fear that they will not be taken seriously and advocate for their clients.

Palm LaGrange (2022) discusses the impact of trauma on patients and how SLPs and audiologists provide care to people with trauma. The author gives ways to talk to clients with trauma, along with how to build trust and ensure they are comfortable during the session. SLPs can improve assessment and treatment by building trust and ensuring that the client feels safe with them. Palm LaGrange (2022) state that the client will feel less afraid to make mistakes and more comfortable sharing their difficulties with the clinician. Speech-language pathologists can also provide education regarding typical experiences the survivor may have after a TBI relating to communication. This may help the survivor feel less ashamed of their symptoms and understand why they act or feel a certain way after a TBI. The author also states that if a person with a TBI is exhibiting negative mental health symptoms that interfere with their lives, it is the SLPs role to refer them to a mental health professional.

Are Healthcare Providers Who Work Closely with Survivors of IPV Aware of these Resources, and the Potentially Complex Rehabilitation Needs?

Review

Trzaska (2022) stated that the knowledge of physicians on IPV and/or TBI survivors' needs varies depending on the setting. For example, physicians that worked with veterans outside of the military were unlikely to refer due to lack of knowledge and/or resources. Since many physicians lack knowledge regarding TBI, many patients with mTBI go unnoticed and untreated (Trzaska 2022). This article stated that providers also did not ask about common comorbid

conditions such as PTSD due to lack of comfortability and awareness. Overall, this article acknowledged that providers lacked the proper knowledge and training to treat and refer patients with a TBI and common comorbid conditions.

One review article that was included was a literature review discussing the relevant knowledge professionals that are not brain injury specialists should have when working with survivors of a TBI resulting from IPV (Murray et al., 2015). The purpose of this article was to ensure that healthcare providers know and understand the roles of other healthcare professionals when working with people with a TBI due to the common lack of knowledge in this area. Physical therapists, occupational therapists, and SLPs were all mentioned as an important role of rehabilitation of TBI. The author mentions reasons that the SLPs role is vital to this team including speech and memory deficits, both of which are commonly impacted by TBI and negatively impact the person's quality of life.

In Toccalino et al.'s (2023) scoping review, the authors discussed the relationship between IPV and rehabilitation professionals, the availability of rehabilitation for IPV survivors, and the need for training concerning IPV for rehabilitation professionals. The authors specifically target occupational therapy, speech therapy, physical therapy, and physiatry. Overall, they discovered that rehabilitation professionals do not feel that they have the adequate knowledge to treat survivors of IPV due to the complex needs. The article's results also mention the lack of articles including the intersection of TBI and IPV in rehabilitation. Although rehabilitation professionals play a large role in TBIs from IPV (Toccalino et al., 2023), the results demonstrated minimal information on the intersection. Specific to SLPs, articles discussing IPV and the role of SLPs were lower than any other rehabilitation profession, accumulating to three articles in total, which was only 7% of the articles included.

Descriptive Design

Sogoni (2021) reported the specific role of the social worker in referring survivors to the appropriate rehabilitation resources. Social workers often have the resources to refer survivors appropriately, but the author also mentions failing to refer to rehabilitation professionals appropriately. In Sogoni's (2021) article, TBI survivors report that they did not receive adequate rehabilitation after their TBI and were not aware of the rehabilitation often offered to people with TBIs. Participants also mentioned that they had not received cognitive therapy, which they said would have been valuable to them due to the difficulty with communication and cognitive functions.

Observational Design

In Zieman et al.'s (2017) chart review article, the authors discussed the impact of rehabilitation professions on survivors of TBI from IPV, and states that staff at women's shelters do often refer to rehabilitation professionals. According to these authors, physical therapists were referred to for 64.7% of people, occupational therapists were referred to for 42.9% of people, and SLPs were referred to for 43.8% of people (Zieman et al., 2017). Authors also noted that survivors frequently complain of behavioral, cognitive, and physical deficits that warrant these referrals. Although survivors of a TBI from IPV complain as cognitive symptoms being the second worst group of symptoms, less than half of survivors receive referrals for speech therapy for cognitive deficits.

Viewpoint

Ballan and Freyer's (2019) viewpoint article contributes to this aspect of the research question as well, in that it discusses the role of the SLP with survivors of IPV with disabilities. Similar to other articles, the authors point out how there is a lack of research and knowledge

concerning the relationship of IPV and the role of the SLP, although there is an apparent connection. Authors argue that to best support the survivor, the SLP should be on an interprofessional team to collaborate with other professionals and come up with a collaborative plan of care. As a part of a collaborative team, the SLP can also raise awareness for the role of the SLP with survivors of IPV, especially those with communication disorders.

Publicly Available Articles

While discussing aggression and the relationship with TBI, Langlois (2018) also discusses the role of the physician. Physicians are an essential part of referring survivors with a TBI from IPV, but physicians may not screen for IPV as often as necessary. For example, Langlois (2018) states that physicians only screen when there are warning signs of IPV. This means that if a person is experiencing IPV, but does not demonstrate warning signs, they are not screened, and therefore may not receive adequate referrals and help.

Burke et al. (2022) utilized a survey to understand the standard of care for people with mTBI and neurodegeneration caused by brain trauma such as CTE and post-concussion syndrome. The primary target of this survey included nurses and physicians. According to the surveys, physicians do understand that survivors of IPV are a group that are at a higher risk of CTE given their history. Although they are aware of the increased risk, the survey shows that the participants were not adequately comfortable and/or knowledgeable with the concept of CTE. This means that physicians would likely be unfamiliar with the complex referral needs of these individuals. Approximately 41.8% of participants reported that they only sometimes referred patients to concussion specialists, including rehabilitation professionals. The majority of the answers reported that they referred to neurologists for someone that requires a concussion specialist. Only 43.8% referred to physical therapy, 33.8% referred to occupational therapy, and

35% referred to speech therapy. These percentages demonstrate that patients are likely not being referred to the appropriate rehabilitation professionals for a TBI.

Chapter 4. Discussion

In this scoping review, the accessibility of speech-language pathology resources to survivors of TBI caused by IPV was examined, along with healthcare providers awareness of the rehabilitation needs of this population. A scoping review was conducted which resulted in 13 articles. The results of this scoping review will be discussed along with other relevant findings and implications.

What Speech-Language Pathology Resources are Accessible to Survivors of TBI Caused by Intimate Partner Violence (IPV)?

Overall, results of this review indicate that there is a lack of research concerning speech-language pathology resources available to for all relevant practitioners, providers, and stakeholders. Some of the research included only briefly mentioned IPV as a cause of TBI and only discussed resources for people with a TBI in general. Although these resources are still relevant to survivors of IPV, due to the circumstances, survivors may need additional and specific resources. For example, they may need a clear understanding of which services are anonymous, or they may need other specific accommodations that other people with TBIs may not require.

The majority of the articles identified discuss the cognitive-communicative impact that TBI has on survivors. This result was expected due to the common occurrence of cognitive deficits that often impact communication after a TBI. One implication cognitive-communication disorders have on survivors of IPV mentioned by multiple articles was their access to resources. A common theme was that survivors with a cognitive-communication disorder may have additional challenges with regards to clearly expressing or utilizing help-seeking behaviors due to communication deficits that may impact their ability to fully express themselves (Sogoni,

2021; Trzaska, 2022; Wiseman-Hakes, et al., 2020). Several articles also briefly yet alluded to the impact that TBIs had on speech, language, and fluency, stating (or listing) that people with TBIs of any cause may have dysarthria, aphasia, and/or experience neurogenic stuttering (Ballan and Freyer, 2019; *Intimate Partner Violence & Brain Injury*, 2022; Kontos et al., 2014; MacDonald, 2021; Sogoni, 2021; Trzaska, 2022; Wiseman-Hakes, et al. 2020; Zieman et al., 2017). Many articles referred to these conditions but did not go into detail other than mention that people receive speech therapy when they experience these.

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The results of this study indicate that while many healthcare providers are aware of the many needs of people with TBIs, they often lack the knowledge of the rehabilitation needs of persons with TBI caused specifically by IPV. When IPV is a concomitant condition (along with TBI), providers have even less knowledge and state that they do not have the education or training to properly help and refer this population. Since mTBIs are often missed even without the presence of IPV (Trzaska, 2022), it may be even more likely to miss a mTBI in a survivor due to other concerns such as safety.

According to the results of this scoping review, there is a significant and visible need for more research discussing the intersection of IPV and TBI. Specifically, there is an apparent need for increased research for rehabilitation professionals' roles with survivors of IPV. Generally, many healthcare providers state that they lack knowledge in this area, and many rehabilitation professionals are unaware of their role or feel they lack knowledge in this area as well. Social workers that often refer IPV survivors state that they may not adequately refer to rehabilitation

professionals, which demonstrates that even those that frequently work with IPV survivors may not be aware of the complex rehabilitative needs that IPV survivors have.

Recommendations

Clinical Practice

The results indicate that there appears to be a general agreement among research literature that healthcare providers require more education regarding the relationship of TBIs caused by IPV. Although many healthcare providers may know that TBIs are a consequence of IPV for some survivors, many TBIs, especially mTBIs, go unnoticed. When TBIs are left untreated, the individual's quality of life decreases. It would be beneficial to survivors if there was a general screening protocol in place to detect TBIs to ensure that the survivor receives adequate care.

The results demonstrate that healthcare providers require additional training in, which is how to talk to survivors (Kontos et al., 2014). Some healthcare providers such as social workers and psychiatrists may be trained to talk to survivors of IPV, but most healthcare providers do not have this knowledge or experience. Many healthcare providers understand that they may have a role in treating IPV survivors, but they feel that they are inadequately trained to do so. Survivors of IPV have very complex needs and may also have mental health conditions such as PTSD, changing how healthcare providers should interact with them. Even healthcare providers that are not mental health professionals can implement strategies to build trust and increase the client's level of comfort with them. For example, healthcare providers can implement active listening throughout the session, provide a quiet environment, and reassure the client that it is not their fault, and their feelings are valid (Feder et al., 2006; McLeod et al., 2010). There are many more

strategies, but these are simple and effective strategies to make the survivor feel comfortable and safe in their environment.

Along with receiving education on how to talk to a survivor, healthcare providers may also require education on how to listen to survivors. A survivor with a resulting TBI may experience increased difficulty in communication (American Speech-Language-Hearing Association, n.d.-a), making it difficult for healthcare providers to fully grasp the complexity of their situation. Survivors may also have trauma from IPV, creating an additional barrier to communication. Healthcare providers should educate themselves and talk with SLPs to receive communication partner training for cognitive-communication disorders. Communication partner training would help the healthcare providers to communicate more effectively with the survivor along with the training and strategies for IPV survivors mentioned previously.

Results showed that healthcare providers also require increased education regarding the role of rehabilitation professionals with this population. According to research literature, physical therapists are the most often referred to rehabilitation professional for survivors with a TBI from IPV. Even though physical therapists are referred to the most, they are still referred to less than half of the time (Burke et al., 2022). Physical therapists may be referred to more often than other rehabilitation professionals because physical deficits are easier to identify than cognitive deficits. Although cognitive deficits may be more difficult to identify, many survivors complain that cognitive deficits have the most impact on their quality of life. Due to the importance of cognitive deficits as well as the physical deficits, rehabilitation professionals such as physical therapists, occupational therapists, and speech therapists play an important role. To improve survivors' quality of life, healthcare providers need to be educated on the role of

rehabilitation professionals in assessing and treating IPV survivors. This can be done by simply understanding the rehabilitation professional's scope of practice.

The role of the SLP is of particular interest in this area, and is one of the primary aims of this study. Results indicate that SLPs may lack knowledge assessment and treatment of treating survivors of IPV with a resulting TBI, although it is in their scope of practice. Due to lack of knowledge, SLPs require additional education regarding their role with this population as well as what assessments and treatments can be utilized. Speech-language pathologists with knowledge and experience in this area can also educate other SLPs to increase knowledge and understanding in other SLPs as well as a way to advocate for survivors. Speech-language pathologists can only advocate for their role with this population if they are aware of how they can be involved.

Results indicate that healthcare providers, including SLPs, need to have an increase in general awareness of the referral needs of survivors of IPV with a resulting TBI. According to Zieman et al. (2017), one group of professionals that do adequately refer survivors are staff at women's shelters. Staff at women's shelters are typically effective at referring survivors to various other professions, including to rehabilitation professionals when necessary. These providers likely know better than others how to refer this population due to working closely with them. Therefore, it would be beneficial if they provided education to other healthcare providers regarding common and uncommon needs survivors may have. Social workers also frequently work with survivors but do not adequately refer according to the results (Sogoni, 2021). Due to the fact that social workers frequently work with and refer survivors, they are a profession that especially needs to know about the complex referral needs those survivors have. Mental health services are very important for survivors, since mental health is often negatively impacted by their lived experiences of IPV. Social workers often know to refer survivors to mental health

providers, but they state that they do not have adequate knowledge on how to refer survivors overall. As survivors' primary referring healthcare professional and likely first professional that they contact, it is vital that social workers receive additional education on the referral needs of survivors with a resulting TBI.

Due to the complex needs of survivors, it would be especially beneficial if healthcare providers, including SLPs and social workers, used an interdisciplinary approach. This would allow for the providers to educate each other about the role that they can play and the various conditions that survivors may have that can impact each domain and profession. Each profession would then be able to adequately treat and refer the survivor and understand the survivor as a whole, rather than just the parts that the professional treats. This approach would address healthcare providers concern regarding lack of knowledge and/or experience with this population and the conditions that this population may have.

According to the results, there may be forms of intervention that are particularly helpful for survivors of IPV with diagnosis of TBI. One form of treatment found to be effective (but not consistently utilized) is cognitive remediation (MacDonald, 2021). Although mental health services are important, cognitive remediation is also very important. If a survivor has cognitive communication deficits due to a TBI, a cognitive-communication disorder can negatively impact important events and their overall quality of life. For example, survivors frequently have court dates to attend relating to their abuser and/or custody of their children. If the survivor has cognitive-communicative deficits, this may make it very difficult to communicate effectively in court. Survivors may need assistance preparing for these events, making the SLP's role vital.

If a healthcare provider, such as an SLP, has a client that demonstrates signs that they may be experiencing IPV, it is vital that the healthcare provider knows how to refer the survivor.

Unless the healthcare provider is a licensed mental health provider, they should not offer mental health treatment beyond the limits of their scope of practice. This can do more damage to the survivor than good, making it vital that healthcare providers understand when to refer a patient to a mental health provider. If the healthcare provider suspects their client is experiencing IPV, it is vital that the client is referred as soon as possible for their safety as well as mental health needs.

Future Directions

Research

Two actions, or directions for future research that can be taken from the results of this study are 1) the need to increase research in all areas of identification, assessment, and treatment of women with a diagnosed TBI due to IPV, and 2) the need to provide additional services to survivors. From the results only one of the articles focused solely on the role of the SLP with IPV. Although there is little research, the role of the SLP is apparent in that they can assess and treat speech, language, cognition, and swallowing, all of which can be negatively impacted by IPV. Research can be completed to further understand healthcare providers knowledge of the role of the SLP, along with SLP's knowledge and expertise with working with survivors of IPV. Research can also be completed on the topic of the impact of TBIs caused by IPV. Much of the research literature states that there is little research on the subject of TBIs caused by IPV, although survivors frequently experience injuries to their head from their abuser. Survivors of IPV with a resulting TBI should also be provided with additional services that meet their specific and unique needs.

Additional Services

One barrier to receiving help noted by both healthcare providers and survivors is lack of anonymity and concern for their safety. It would be beneficial to develop a form of services that

provided survivors with anonymity and protection. Survivors state that they like telehealth services due to increased anonymity and convenience. Survivors often have many responsibilities such as children and finances which require most of their time. Offering telehealth ensures that it is easier for the survivors to access the services that they need. It would also be beneficial if survivors were able to access telehealth services that are encrypted and kept safe from their abusers. This extra level of assurance of safety would increase the survivor's likelihood of accessing resources. It would also be beneficial for the telehealth appointment to have no indication of where the survivor may be in order to keep them safe from their abuser.

Limitations

This scoping review has several limitations due to the nature of IPV. One limitation is that IPV is a novel term. Research literature and websites often use DV and IPV interchangeably, making it difficult to identify relevant articles. Terminology surrounding populations at risk of IPV is also frequently changing. For example, LGBTQ+ terminology is evolving frequently, impacting the search for research literature regarding this population. Another limitation is that the topic of IPV includes a fragile population. This creates a barrier to research due to the difficulties accessing IPV survivors. This aspect can also impact data collection due to lack of access of survivors and unwillingness of survivors to participate in research due to fear for safety and other concerns that they may deem more important at the time (e.g., finances, employment, search for safe housing).

Conclusion

This scoping review was completed to identify relevant information regarding the role of the SLP with survivors with a TBI resulting from IPV, along with the knowledge of healthcare providers knowledge of this role. The results demonstrated that there is a significant lack of

available research on these topics. Many of the articles that do discuss the role of the SLP only provide a brief mention of some deficits SLPs may treat. This information shows that there is a need for increased research in this area as well as a need for increased education of healthcare providers regarding this topic.

References

- Allain, P., Togher, L., & Azouvi, P. (2018). Social cognition and traumatic brain injury: current knowledge. *Brain Injury*, 33(1), 1–3. <https://doi.org/10.1080/02699052.2018.1533143>
- Allen, M. K., & Jaffray, B. (2020). *The COVID-19 pandemic and its impacts on Canadian victim services*.
- American Speech-Language-Hearing Association. (n.d.-a). *Cognitive-Communication referral guidelines for adults*. <https://www.asha.org/slp/cognitive-referral/>
- American Speech-Language-Hearing Association. (n.d.-b). *Scope of practice in Speech-Language Pathology*. <https://www.asha.org/policy/SP2016-00343/>
- American Speech-Language-Hearing Association. (n.d.-c). *Traumatic Brain Injury (TBI)*. <https://www.asha.org/public/speech/disorders/Traumatic-Brain-Injury/>
- Angeleri, R., Bosco, F., Zettin, M., Sacco, K., Colle, L., & Bara, B. G. (2008). Communicative impairment in traumatic brain injury: A complete pragmatic assessment. *Brain and Language*, 107(3), 229–245. <https://doi.org/10.1016/j.bandl.2008.01.002>
- Ansara, D. L., & Hindin, M. J. (2010). Formal and informal help-seeking associated with women's and men's experiences of intimate partner violence in Canada. *Social Science and Medicine*, 70(7), 1011–1018. <https://doi.org/10.1016/j.socscimed.2009.12.009>
- Anyikwa, V. A. (2015). The intersections of race and gender in Help-Seeking strategies among a battered sample of Low-Income African American women. *Journal of Human Behavior in the Social Environment*, 25(8), 948–959. <https://doi.org/10.1080/10911359.2015.1047075>

- Arosarena, O. A., Fritsch, T. A., Hsueh, Y., Aynehchi, B. B., & Haug, R. H. (2009).
Maxillofacial injuries and violence against women. *Archives of Facial Plastic Surgery*,
11(1). <https://doi.org/10.1001/archfacial.2008.507>
- Bailey, J. A., Jacoby, S. F., Hall, E. C., Khatri, U. G., Whitehorn, G. L., & Kaufman, E. J.
(2022). Compounding Trauma: The Intersections of Racism, Law Enforcement, and
Injury. *Current Trauma Reports*, 8(3), 105–112. <https://doi.org/10.1007/s40719-022-00231-7>
- Ballan, M. S., & Freyer, M. B. (2019). Intimate Partner Violence and Women With Disabilities:
The Role of Speech-Language Pathologists. *American Journal of Speech-language
Pathology*, 28(4), 1692–1697. https://doi.org/10.1044/2019_ajslp-18-0259
- Ballan, M. S., & Freyer, M. B. (2017). Trauma-Informed Social Work Practice with Women
with Disabilities: Working with Survivors of Intimate Partner Violence. *Advances in
Social Work*, 18(1), 131–144. <https://doi.org/10.18060/21308>
- Ballan, M. S., Freyer, M. B., Powledge, L., & Marti, C. N. (2016). Intimate partner Violence
among Help-Seeking Deaf Women: an empirical study. *Violence Against Women*, 23(13),
1585–1600. <https://doi.org/10.1177/1077801216664428>
- Banks, M. E. (2007). Overlooked But Critical. *Trauma, Violence, & Abuse*, 8(3), 290–298.
<https://doi.org/10.1177/1524838007303503>
- Banks, M. E., & Ackerman, R. J. (2002). Head and brain injuries experienced by African
American women victims of intimate partner violence. *Women & Therapy*, 25(3–4), 133–
143. https://doi.org/10.1300/j015v25n03_10

- Barrett, K., O'Day, B., Roche, A., & Carlson, B. L. (2009). Intimate Partner Violence, Health Status, and Health Care Access Among Women with Disabilities. *Womens Health Issues, 19*(2), 94–100. <https://doi.org/10.1016/j.whi.2008.10.005>
- Bauer, H. M., Rodríguez, M., Quiroga, S. S., & Flores-Ortiz, Y. (2000). Barriers to health care for abused Latina and Asian immigrant women. *Journal of Health Care for the Poor and Underserved, 11*(1), 33–44. <https://doi.org/10.1353/hpu.2010.0590>
- Baxter, K., & Hellewell, S. C. (2019). Traumatic Brain Injury within Domestic Relationships: Complications, Consequences and Contributing Factors. *Journal of Aggression, Maltreatment & Trauma, 28*(6), 660–676. <https://doi.org/10.1080/10926771.2019.1602089>
- Beaulaurier, R. L., Seff, L. R., Newman, F. L., & Dunlop, B. D. (2007). External barriers to help seeking for older women who experience intimate partner violence. *Journal of Family Violence, 22*(8), 747–755. <https://doi.org/10.1007/s10896-007-9122-y>
- Beaulieu, C. L., Dijkers, M., Barrett, R., Horn, S. D., Giuffrida, C., Timpson, M., Carroll, D. M., Smout, R., & Hammond, F. M. (2015). Occupational, physical, and speech therapy treatment activities during inpatient rehabilitation for traumatic brain injury. *Archives of Physical Medicine and Rehabilitation, 96*(8), S222-S234.e17. <https://doi.org/10.1016/j.apmr.2014.10.028>
- Bennett, L., Riger, S., Schewe, P. A., Howard, A., & Wasco, S. M. (2004). Effectiveness of hotline, advocacy, counseling, and shelter services for victims of domestic violence. *Journal of Interpersonal Violence, 19*(7), 815–829. <https://doi.org/10.1177/0886260504265687>

- B. Bent-Goodley, T. (2004). Perceptions of Domestic Violence: A Dialogue with African American Women. *Health & Social Work, 29*(4).
- Bergin, A., Blumenfeld, E., Anderson, J., Campbell, J. C., & Patch, M. (2022). Describing Nonfatal intimate partner strangulation Presentation and Evaluation in a Community-Based Hospital: partnerships between the Emergency Department and In-House advocates. *Journal of Head Trauma Rehabilitation, 37*(1), 5–14.
<https://doi.org/10.1097/htr.0000000000000742>
- Binder, S., Corrigan, J., & Langlois, J. (2005). The Public Health Approach to Traumatic Brain Injury. *Journal of Head Trauma Rehabilitation, 20*(3), 189–195.
<https://doi.org/10.1097/00001199-200505000-00002>
- Black, M. C. (2011). Intimate partner violence and adverse health consequences. *American Journal of Lifestyle Medicine, 5*(5), 428–439. <https://doi.org/10.1177/1559827611410265>
- Blyth, T., Scott, A., Bond, A., & Paul, E. (2012). A comparison of two assessments of high level cognitive communication disorders in mild traumatic brain injury. *Brain Injury, 26*(3), 234–240. <https://doi.org/10.3109/02699052.2012.654587>
- Breiding, M. J., Basile, K., Smith, S., Black, M., & Mahendra, R. (2015b). *Intimate Partner Violence Surveillance: uniform definitions and recommended data elements*.
- Briddell, J. W., Mallon, A., DeFatta, R. A., Chowdhury, F. R., & Nagorsky, M. J. (2020). Dysphagia after strangulation. *Ear, Nose, & Throat Journal*.
<https://doi.org/10.1177/0145561319898600>
- Burke, M., Bureau, S., Nowinski, C., & Cantu, R. (2022, March). *Alaska Concussion Care & CTE Knowledge*. Concussion Legacy Foundation.
<https://concussionfoundation.org/Alaska>

- Byom, L., O'Neil-Pirozzi, T. M., Lemoncello, R., MacDonald, S., Meulenbroek, P., Ness, B., & Sohlberg, M. M. (2020). Social Communication following Adult Traumatic Brain Injury: A Scoping Review of Theoretical models. *American Journal of Speech-language Pathology*, 29(3), 1735–1748. https://doi.org/10.1044/2020_ajslp-19-00020
- Campbell, A. (2020). An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic Science International: Reports*, 2, 100089. <https://doi.org/10.1016/j.fsir.2020.100089>
- Campbell, J., & Boyd, D. (2000). Violence Against Women: Synthesis of Research for Health Care Professionals. *National Institute of Justice*.
- Campbell, J. C., Anderson, J., McFadgion, A. L., Gill, J., Zink, E. K., Patch, M., Callwood, G. B., & Campbell, D. (2018). The effects of intimate partner violence and probable traumatic brain injury on central nervous system symptoms. *Journal of Womens Health*, 27(6), 761–767. <https://doi.org/10.1089/jwh.2016.6311>
- Cimino, A. N., Yi, G., Patch, M., Alter, Y., Campbell, J. C., Gundersen, K. K., Tang, J. T., Tsuyuki, K., & Stockman, J. K. (2019). The effect of intimate partner violence and probable traumatic brain injury on mental health outcomes for Black women. *Journal of Aggression, Maltreatment & Trauma*, 28(6), 714–731. <https://doi.org/10.1080/10926771.2019.1587657>
- Chang, J. C., Martin, S. L., Moracco, K. E., Dulli, L., Scandlin, D., Loucks-Sorrel, M. B., Turner, T., Staroneck, L., Dorian, P., & Bou-Saada, I. (2003). Helping Women with Disabilities and Domestic Violence: Strategies, Limitations, and Challenges of Domestic Violence Programs and Services. *Journal of Womens Health*, 12(7), 699–708. <https://doi.org/10.1089/154099903322404348>

- Cheng, T. C., & Lo, C. C. (2014). Racial disparities in intimate partner violence and in seeking help with mental health. *Journal of Interpersonal Violence*, *30*(18), 3283–3307.
<https://doi.org/10.1177/0886260514555011>
- Cohen, S., E, D. V., & Newberger, E. H. (1997). Barriers to physician identification and treatment of family violence: lessons from five communities. *PubMed*, *72*(1 Suppl), S19-25. <https://pubmed.ncbi.nlm.nih.gov/9008584>
- Coker, A. L., Smith, P. H., & Fadden, M. K. (2005). Intimate Partner Violence and Disabilities among Women Attending Family Practice Clinics. *Journal of Women's Health*, *14*(9), 829–838. <https://doi.org/10.1089/jwh.2005.14.829>
- Colquhoun, H., Levac, D., O'Brien, K. K., Straus, S. E., Tricco, A. C., Perrier, L., Kastner, M., & Moher, D. (2014). Scoping reviews: time for clarity in definition, methods, and reporting. *Journal of Clinical Epidemiology*, *67*(12), 1291–1294.
<https://doi.org/10.1016/j.jclinepi.2014.03.013>
- Constantinidou, F., Wertheimer, J., Tsanadis, J., Evans, C. C., & Paul, D. R. (2012). Assessment of executive functioning in brain injury: Collaboration between speech-language pathology and neuropsychology for an integrative neuropsychological perspective. *Brain Injury*, *26*(13–14), 1549–1563. <https://doi.org/10.3109/02699052.2012.698786>
- Corrigan, J., Wolfe, M., Mysiw, W. J., Jackson, R. D., & Bogner, J. (2003). Early identification of mild traumatic brain injury in female victims of domestic violence. *American Journal of Obstetrics and Gynecology*, *188*(5), S71–S76. <https://doi.org/10.1067/mob.2003.404>
- Costello, K., & Greenwald, B. D. (2022). Update on Domestic Violence and Traumatic Brain Injury: A Narrative review. *Brain Sciences*, *12*(1), 122.
<https://doi.org/10.3390/brainsci12010122>

- Courvant, D., & Cook-Daniels, L. (1998). Trans and Intersex Survivors of Domestic Violence: Defining Terms, Barriers and Responsibilities. *National Coalition of Domestic Violence*.
- Daugherty, J. C., Pérez-García, M., Hidalgo-Ruzzante, N., & Bueso-Izquierdo, N. (2021). Perceived Executive Functioning among Female Survivors of Intimate Partner Violence. *Journal of Aggression, Maltreatment & Trauma*, 30(1), 25–42.
<https://doi.org/10.1080/10926771.2020.1783734>
- Davies, K., Block, C. R., & Campbell, J. C. (2007). Seeking Help from the Police: Battered Women’s Decisions and Experiences. *Criminal Justice Studies*, 20(1), 15–41.
<https://doi.org/10.1080/14786010701241317>
- Davis, A. (2014). Violence-Related mild traumatic brain injury in women. *Journal of Trauma Nursing*, 21(6), 300–308. <https://doi.org/10.1097/jtn.0000000000000086>
- Dearwater, S. R., Coben, J. H., Campbell, J. C., Nah, G., Glass, N., McLoughlin, E., & Bekemeier, B. (1998). Prevalence of intimate partner abuse in women treated at community hospital emergency departments. *JAMA*, 280(5), 433.
<https://doi.org/10.1001/jama.280.5.433>
- Dichter, M. E., & Rhodes, K. V. (2011). Intimate partner violence survivors’ UNMET social service needs. *Journal of Social Service Research*, 37(5), 481–489.
<https://doi.org/10.1080/01488376.2011.587747>
- Dinnes, C., Hux, K., Holmen, M., Martens, A., & Smith, M. M. (2018). Writing Changes and Perceptions After Traumatic Brain Injury: “Oh, by the way, I can’t write.” *American Journal of Speech-language Pathology*, 27(4), 1523–1538.
https://doi.org/10.1044/2018_ajslp-18-0025

- Domestic Violence Service Management. (2018). *Project report: Improving Awareness of and Responses to the Intersection of Domestic and Family Violence (DFV) and Acquired Brain Injury (ABI): DFV/ABI Intersection*. <https://dvnsdsm.org.au/wp-content/uploads/2023/02/DFV-ABI-Project-Report-5-July-Final-eCopy.pdf>
- Douglas, J., Bracy, C. A., & Snow, P. (2016). Return to work and social communication ability following severe traumatic brain injury. *Journal of Speech Language and Hearing Research, 59*(3), 511–520. https://doi.org/10.1044/2015_jslhr-l-15-0025
- Duff, M. C., Proctor, A., & Haley, K. L. (2002). Mild traumatic brain injury (MTBI): assessment and treatment procedures used by speech-language pathologists (SLPs). *Brain Injury, 16*(9), 773–787. <https://doi.org/10.1080/02699050210128870>
- Elbelassy, A. E., Van Gelder, N., Ligthart, S. A., & Oertelt-Prigione, S. (2022). Optimization of eHealth interventions for intimate partner violence and abuse: A qualitative study amongst Arabic-speaking migrant women. *Journal of Advanced Nursing, 79*(4), 1414–1425. <https://doi.org/10.1111/jan.15437>
- Esopenko, C., Meyer, J., Wilde, E. A., Marshall, A. D., Tate, D. F., Lin, A., Koerte, I. K., Werner, K., Dennis, E., Ware, A. L., De Souza, N. L., Menefee, D. S., Dams-O'Connor, K., Stein, D. J., Bigler, E. D., Shenton, M. E., Chiou, K. S., Postmus, J. L., Monahan, K., . . . Hillary, F. G. (2021). A global collaboration to study intimate partner violence-related head trauma: The ENIGMA consortium IPV working group. *Brain Imaging and Behavior, 15*(2), 475–503. <https://doi.org/10.1007/s11682-020-00417-0>
- Evans-Campbell, T., Lindhorst, T., Huang, B., & Walters, K. L. (2006). Interpersonal Violence in the lives of urban American Indian and Alaska Native Women: Implications for

- Health, Mental Health, and Help-Seeking. *American Journal of Public Health*, 96(8), 1416–1422. <https://doi.org/10.2105/ajph.2004.054213>
- Feder, G., Davies, R. A., Baird, K., Dunne, D. D., Eldridge, S., Griffiths, C., Gregory, A., Howell, A., Johnson, M., Ramsay, J., Rutterford, C., & Sharp, D. (2011). Identification and Referral to Improve Safety (IRIS) of women experiencing domestic violence with a primary care training and support programme: a cluster randomised controlled trial. *The Lancet*, 378(9805), 1788–1795. [https://doi.org/10.1016/s0140-6736\(11\)61179-3](https://doi.org/10.1016/s0140-6736(11)61179-3)
- Feder, G., Hutson, M., Ramsay, J., & Taket, A. (2006). Women exposed to intimate partner violence. *Archives of Internal Medicine*, 166(1), 22. <https://doi.org/10.1001/archinte.166.1.22>
- Fogarty, A., Savopoulos, P., Seymour, M., Cox, A., Williams, K., Petrie, S., Herman, S., Toone, E., Schroeder, K., & Giallo, R. (2022). Providing therapeutic services to women and children who have experienced intimate partner violence during the COVID-19 pandemic: Challenges and learnings. *Child Abuse & Neglect*, 130, 105365. <https://doi.org/10.1016/j.chiabu.2021.105365>
- Fortier, C., Beck, B. M., Werner, K. B., Iverson, K. M., Kim, S., Currao, A., Fonda, J. R., & Galovski, T. E. (2021). The Boston Assessment of Traumatic Brain Injury-Lifetime Semistructured Interview for Assessment of TBI and Subconcussive Injury Among Female Survivors of Intimate Partner Violence: Evidence of Research Utility and Validity. *Journal of Head Trauma Rehabilitation*, 37(3), E175–E185. <https://doi.org/10.1097/htr.0000000000000700>

Fralick, M., Sy, E., Hassan, A., Burke, M. J., Mostofsky, E., & Karsies, T. (2019a). Association of concussion with the risk of suicide. *JAMA Neurology*, *76*(2), 144.

<https://doi.org/10.1001/jamaneurol.2018.3487>

Fugate, M., Landis, L., Riordan, K., Naureckas, S., & Engel, B. (2005). Barriers to Domestic Violence Help Seeking. *Violence Against Women*, *11*(3), 290–310.

<https://doi.org/10.1177/1077801204271959>

Galovski, T. E., Smith, B. N., Micol, R. L., & Resick, P. A. (2021). Interpersonal violence and head injury: The effects on treatment for PTSD. *Psychological Trauma: Theory, Research, Practice, and Policy*, *13*(3), 376–384. <https://doi.org/10.1037/tra0000976>

Ghidei, W., Montesanti, S., Tomkow, K., Silverstone, P. H., Wells, L., & Campbell, S. (2022). Examining the effectiveness, acceptability, and feasibility of virtually Delivered Trauma-Focused Domestic Violence and Sexual Violence interventions: a Rapid Evidence assessment. *Trauma, Violence, & Abuse*, *24*(3), 1427–1442.

<https://doi.org/10.1177/15248380211069059>

Giusti, R., & Ravi, A. (2021). Strangulation as a Cause of Dysphagia. *American Family Physician*, *104*(2).

Gleeson, H. (2022a, October 22). Concussion symptoms can last for months or years but too many Australians are struggling to find help. *ABC News*.

<https://www.abc.net.au/news/2022-10-23/persistent-post-concussion-symptoms/101527610>

Gleeson, H. (2022b, October 24). Australians struggling with persistent concussion symptoms need specialist services, trained doctors, brain injury experts say. *ABC News*.

<https://www.abc.net.au/news/2022-10-25/australians-struggling-care-persistent-post->

[concussion-](#)

[symptoms/101545592?utm_campaign=abc_news_web&utm_content=link&utm_medium=content_shared&utm_source=abc_news_web](#)

Gleeson, H. (2023a, August 10). Inside Australia's invisible crisis of domestic violence, concussion and brain injury. *ABC News*. <https://www.abc.net.au/news/2023-08-06/shaken-brains-australia-crisis-brain-injury-domestic-violence/102674036>

Gleeson, H. (2023b, August 18). Why isn't the brain injury crisis in our homes causing as much concern as concussion in sport? *ABC News*. <https://www.abc.net.au/news/2023-08-19/brain-injury-domestic-violence-crisis-concussion-sports/102740930>

Goldin, Y., Haag, H., & Trott, C. T. (2016). Screening for History of Traumatic Brain Injury Among Women Exposed to Intimate Partner Violence. *Pm&R*, 8(11), 1104–1110. <https://doi.org/10.1016/j.pmrj.2016.05.006>

Grossman, S. F., Lundy, M., George, C., & Crabtree-Nelson, S. (2010). Shelter and service receipt for victims of domestic violence in Illinois. *Journal of Interpersonal Violence*, 25(11), 2077–2093. <https://doi.org/10.1177/0886260509354505>

Guadalupe-Diaz, X. L., & Jasinski, J. L. (2016). "I wasn't a priority, I wasn't a victim." *Violence Against Women*, 23(6), 772–792. <https://doi.org/10.1177/1077801216650288>

Haag, H., Caringal, M., Sokoloff, S., Kontos, P., Yoshida, K., & Colantonio, A. (2016). Being a woman with acquired brain injury: challenges and implications for practice. *Archives of Physical Medicine and Rehabilitation*, 97(2), S64–S70. <https://doi.org/10.1016/j.apmr.2014.12.018>

Haag, H., 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 Womens Health*, 28(7), 990–996.
<https://doi.org/10.1089/jwh.2018.7299>
- Haag, H., Toccalino, D., Estrella, M. J., Moore, A. M., & Colantonio, A. (2022). The Shadow Pandemic: A Qualitative Exploration of the Impacts of COVID-19 on Service Providers and Women Survivors of Intimate Partner Violence and Brain Injury. *Journal of Head Trauma Rehabilitation*, 37(1), 43–52. <https://doi.org/10.1097/htr.0000000000000751>
- Hageman, S. A., & St George, D. M. M. (2018). Social workers, intimate partner violence (IPV), and client financial concerns. *Journal of Social Service Research*, 44(3), 391–399.
<https://doi.org/10.1080/01488376.2018.1476288>
- Hamberger, L. K., Ambuel, B., & Guse, C. E. (2007). Racial Differences in Battered Women’s Experiences and Preferences for Treatment from Physicians. *Journal of Family Violence*, 22(5), 259–265. <https://doi.org/10.1007/s10896-007-9071-5>
- Hamberger, L. K., Ambuel, B., Marbella, A., & Donzé, J. (1998). Physician Interaction with battered Women: The Women’s Perspective. *Archives of Family Medicine*, 7(6), 575–582. <https://doi.org/10.1001/archfami.7.6.575>
- Hardin, K., & Kelly, J. P. (2019). The role of Speech-Language Pathology in an interdisciplinary care model for Persistent Symptomatology of mild Traumatic Brain Injury. *Seminars in Speech and Language*. <https://doi.org/10.1055/s-0038-1676452>
- Hathaway, J., Zimmer, B., Willis, G., & Silverman, J. G. (2008). Perceived changes in health and safety following participation in a Health Care-Based Domestic Violence Program. *Journal of Midwifery & Women’s Health*, 53(6), 547–555.
<https://doi.org/10.1016/j.jmwh.2008.07.008>

- Hegarty, K., & Glasziou, P. (2011). Tackling domestic violence: is increasing referral enough? *The Lancet*, 378(9805), 1760–1762. [https://doi.org/10.1016/s0140-6736\(11\)61386-x](https://doi.org/10.1016/s0140-6736(11)61386-x)
- Higbee, M. D., Eliason, J. L., Weinberg, H., Lifshitz, J., & Handmaker, H. (2019). Involving Police Departments in Early Awareness of Concussion Symptoms during Domestic Violence Calls. *Journal of Aggression, Maltreatment & Trauma*.
<https://doi.org/10.1080/10926771.2019.1653412>
- Hughes, J. (2017). Women’s Advocates and Shelter Residents: describing experiences of working and living in domestic violence shelters. *Journal of Interpersonal Violence*, 35(15–16), 3034–3053. <https://doi.org/10.1177/0886260517707307>
- Hunnicut, G., Murray, C. E., Lundgren, K., Crowe, A., & Olson, L. N. (2019). Exploring Correlates of Probable Traumatic Brain Injury among Intimate Partner Violence Survivors. *Journal of Aggression, Maltreatment & Trauma*, 28(6), 677–694.
<https://doi.org/10.1080/10926771.2019.1587656>
- Hunnicut, G. C., Lundgren, K., Murray, C., & Olson, L. (2016). The intersection of intimate partner violence and traumatic Brain injury: a call for interdisciplinary research. *Journal of Family Violence*, 32(5), 471–480. <https://doi.org/10.1007/s10896-016-9854-7>
- Intimate partner violence & brain injury*. (2022, July 25). Brain Injury Canada.
<https://braininjurycanada.ca/en/issues-advocacy/intimate-partner-violence/>
- Iverson, K. M., Dardis, C. M., & Pogoda, T. K. (2017). Traumatic brain injury and PTSD symptoms as a consequence of intimate partner violence. *Comprehensive Psychiatry*, 74, 80–87. <https://doi.org/10.1016/j.comppsy.2017.01.007>

- Jackson, H., Philp, E., Nuttall, R. L., & Diller, L. (2002). Traumatic brain injury: A hidden consequence for battered women. *Professional Psychology: Research and Practice*, 33(1), 39–45. <https://doi.org/10.1037/0735-7028.33.1.39>
- Jacques, L. (2021, October 6). *Domestic Violence vs. Intimate Partner Violence*. Abuse Refuge Org. <https://abuserefuge.org/domestic-violence-vs-intimate-partner-violence/>
- Jones, L. (2007). The distinctive characteristics and needs of domestic violence victims in a Native American community. *Journal of Family Violence*, 23(2), 113–118. <https://doi.org/10.1007/s10896-007-9132-9>
- Karakurt, G., Whiting, K., Jones, S. E., Lowe, M. J., & Rao, S. M. (2021). Brain Injury and Mental health among the victims of intimate partner Violence: a Case-Series Exploratory study. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.710602>
- Kay, T., Adams, R., Anderson, T., Berrol, S., Cicerone, K., Dahlberg, C., Gerber, D., Goka, R., Harley, P., Hilt, J., Horn, L., Lehmkuhl, D., & Malec, J. (1993). Definition of mild traumatic brain injury. *Journal of Head Trauma Rehabilitation*, 8(3), 86–87. <https://doi.org/10.1097/00001199-199309000-00010>
- Kemble, H., Sucaldito, A., Kulow, E., Ramirez, R., Hinton, A., Glasser, A. M., Wermert, A., & Nemeth, J. M. (2022). How CARE Tools Are Being Used to Address Brain Injury and Mental Health Struggles With Survivors of Domestic Violence. *Journal of Head Trauma Rehabilitation*, 37(1), E39–E47. <https://doi.org/10.1097/htr.0000000000000745>
- Kontos, P., Miller, K., Colantonio, A., & Cott, C. (2014). Grief, anger, and relationality. *Evaluation Review*, 38(1), 29–67. <https://doi.org/10.1177/0193841x14531260>
- Knollman-Porter, K., Brown, J., Wallace, T., & Spitz, S. (2021). First-Line health care providers' reported knowledge of and referrals to Speech-Language pathologists for

- clients with mild traumatic brain injury. *American Journal of Speech-language Pathology*, 30(5), 2214–2227. https://doi.org/10.1044/2021_ajslp-20-00373
- Kranick, L. (2020, November 9). *Domestic violence and intimate partner violence: what's the difference?* Edge. <https://amuedge.com/domestic-violence-and-intimate-partner-violence-whats-the-difference/>
- Krug, H., & Turkstra, L. S. (2015). Assessment of Cognitive-Communication Disorders in Adults with Mild Traumatic Brain Injury. *Perspectives on Neurophysiology and Neurogenic Speech and Language Disorders*, 25(1), 17–35. <https://doi.org/10.1044/nnsld25.1.17>
- Kulkarni, S., Bell, H., & Wylie, L. (2010). Why don't they follow through? *Family & Community Health*, 33(2), 94–105. <https://doi.org/10.1097/fch.0b013e3181d59316>
- Kurz, D. (1987). Emergency Department responses to battered Women: Resistance to medicalization on JSTOR. *Social Problems*, 34. <https://www.jstor.org/stable/800730>
- Kurz, D. (1990). Interventions with Battered Women in Health Care Settings. *Violence & Victims*. <https://doi.org/10.1891/0886-6708.5.4.243>
- Kwako, L. E., Glass, N., Campbell, J. C., Melvin, K. C., Barr, T. L., & Gill, J. (2011). Traumatic Brain Injury in Intimate Partner Violence: A Critical Review of Outcomes and Mechanisms. *Trauma, Violence, & Abuse*, 12(3), 115–126. <https://doi.org/10.1177/1524838011404251>
- Langlois, J. (2018, April 25). *Breaking the Silence: Violence as a cause and a Consequence of Traumatic Brain Injury* | BrainLine. BrainLine. <https://www.brainline.org/article/breaking-silence-violence-cause-and-consequence-traumatic-brain-injury>

- Langlois, J., Rutland-Brown, W., & Wald, M. M. (2006). The epidemiology and impact of traumatic Brain injury. *Journal of Head Trauma Rehabilitation*, 21(5), 375–378.
<https://doi.org/10.1097/00001199-200609000-00001>
- Leemis, R., Friar, N., Khatiwada, S., Chen, M., Kresnow, M., Smith, S., Caslin, S., & Basile, K. (2022, October). *The National Intimate Partner and Sexual Violence Survey 2016/2017 Report on Intimate Partner Violence*. CDC.
https://www.cdc.gov/violenceprevention/pdf/nisvs/NISVSReportonIPV_2022.pdf
- Lefevre-Dognin, C., Cogné, M., Perdrieau, V., Granger, A., Heslot, C., & Azouvi, P. (2021). Definition and epidemiology of mild traumatic brain injury. *Neurochirurgie*, 67(3), 218–221. <https://doi.org/10.1016/j.neuchi.2020.02.002>
- Levin, H. S., & Diaz-Arrastia, R. (2015). Diagnosis, prognosis, and clinical management of mild traumatic brain injury. *Lancet Neurology*, 14(5), 506–517. [https://doi.org/10.1016/s1474-4422\(15\)00002-2](https://doi.org/10.1016/s1474-4422(15)00002-2)
- Liang, B., Goodman, L. A., Tummala–Narra, P., & Weintraub, S. R. (2005). A theoretical Framework for understanding Help-Seeking Processes among survivors of Intimate Partner violence. *American Journal of Community Psychology*, 36(1–2), 71–84.
<https://doi.org/10.1007/s10464-005-6233-6>
- Lifshitz, J., Crabtree-Nelson, S., & Kozlowski, D. A. (2019). Traumatic Brain Injury in Victims of Domestic Violence. *Journal of Aggression, Maltreatment & Trauma*, 28(6), 655–659.
<https://doi.org/10.1080/10926771.2019.1644693>
- Linton, K. F., & Kim, B. J. (2014). Traumatic brain injury as a result of violence in native American and black communities spanning from childhood to older adulthood. *Brain Injury*, 28(8), 1076–1081. <https://doi.org/10.3109/02699052.2014.901558>

- Liu, L. Y., Bush, W. S., Koyutürk, M., & Karakurt, G. (2020). Interplay between traumatic brain injury and intimate partner violence: data driven analysis utilizing electronic health records. *BMC Women's Health*, 20(1). <https://doi.org/10.1186/s12905-020-01104-4>
- Maas, A. I. R., Menon, D., Manley, G. T., Abrams, M., Åkerlund, C., Anđelić, N., Aries, M., Bashford, T., Bell, M. J., Bodien, Y., Brett, B. L., Büki, A., Chesnut, R. M., Citerio, G., Clark, D., Clasby, B., Cooper, D., Czeiter, E., Czosnyka, M., . . . Zemek, R. (2022). Traumatic brain injury: progress and challenges in prevention, clinical care, and research. *The Lancet Neurology*, 21(11), 1004–1060. [https://doi.org/10.1016/s1474-4422\(22\)00309-x](https://doi.org/10.1016/s1474-4422(22)00309-x)
- MacDonald, S. (2021). The Cognitive-Communication Checklist for Acquired Brain Injury: a means of identifying, recording, and tracking communication impairments. *American Journal of Speech-language Pathology*, 30(3), 1074–1089. https://doi.org/10.1044/2021_ajslp-20-00155
- Martin, M., Kendall, S., & Uveges, M. K. (2023). Traumatic brain injury, dysphagia, and the ethics of oral intake. *AACN Advanced Critical Care*, 34(3), 255–262. <https://doi.org/10.4037/aacnacc2023789>
- McFarlane, J., Soeken, K. L., & Wiist, W. H. (2000). An evaluation of interventions to decrease intimate partner violence to pregnant women. *Public Health Nursing*, 17(6), 443–451. <https://doi.org/10.1046/j.1525-1446.2000.00443.x>
- McLeer, S. V., Anwar, A. R., Herman, S., & Maquiling, K. (1989). Education is not enough: A systems failure in protecting battered women. *Annals of Emergency Medicine*, 18(6), 651–653. [https://doi.org/10.1016/s0196-0644\(89\)80521-9](https://doi.org/10.1016/s0196-0644(89)80521-9)

- McLeod, A. L., Hays, D. G., & Chang, C. C. (2010). Female Intimate Partner Violence Survivors' Experiences With Accessing Resources. *Journal of Counseling and Development*, 88(3), 303–310. <https://doi.org/10.1002/j.1556-6678.2010.tb00026.x>
- Mechanic, M. B., Weaver, T. L., & Resick, P. A. (2008). Risk factors for physical injury among Help-Seeking battered Women. *Violence Against Women*, 14(10), 1148–1165. <https://doi.org/10.1177/1077801208323792>
- Menon, D., Schwab, K., Wright, D. W., & Maas, A. I. R. (2010). Position Statement: Definition of Traumatic Brain Injury. *Archives of Physical Medicine and Rehabilitation*, 91(11), 1637–1640. <https://doi.org/10.1016/j.apmr.2010.05.017>
- Mikton, C., Maguire, H., & Shakespeare, T. (2014). A Systematic review of the effectiveness of interventions to prevent and respond to violence against persons with disabilities. *Journal of Interpersonal Violence*, 29(17), 3207–3226. <https://doi.org/10.1177/0886260514534530>
- Minsky-Kelly, D., Hamberger, L. K., Pape, D. A., & Wolff, M. (2005). We've had training, now what? *Journal of Interpersonal Violence*, 20(10), 1288–1309. <https://doi.org/10.1177/0886260505278861>
- Monahan, K. (2018). Intimate Partner Violence, Traumatic Brain Injury, and Social Work: Moving Forward. *Social Work*, 63(2), 179–181. <https://doi.org/10.1093/sw/swy005>
- Monahan, K. (2019). Intimate Partner Violence (IPV) and Neurological Outcomes: A Review for Practitioners. *Journal of Aggression, Maltreatment & Trauma*, 28(7), 807–825. <https://doi.org/10.1080/10926771.2019.1628154>
- Monahan, K., & O'leary, K. (1999). Head injury and battered women: An initial inquiry. *Health & Social Work*, 24(4), 269–278. <https://doi.org/10.1093/hsw/24.4.269>

- Morse, D. S., Lafleur, R., Fogarty, C. T., Mittal, M., & Cerulli, C. (2012). “They Told Me To Leave”: How Health Care Providers Address Intimate Partner Violence. *Journal of the American Board of Family Medicine*, 25(3), 333–342.
<https://doi.org/10.3122/jabfm.2012.03.110193>
- Muenchberger, H., Kendall, E., & Wright, J. J. (2013). *Health and Healing after Traumatic Brain Injury: Understanding the Power of Family, Friends, Community, and Other Support Systems*. Bloomsbury Publishing USA.
- Munn, Z., Peters, M. D. J., Stern, C., Tufănaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, 18(1).
<https://doi.org/10.1186/s12874-018-0611-x>
- Murray, C., Lundgren, K., Olson, L. N., & Hunnicutt, G. (2015). Practice update. *Trauma, Violence, & Abuse*, 17(3), 298–305. <https://doi.org/10.1177/1524838015584364>
- National Academies Press (US). (2010). *Introduction*. Women’s Health Research - NCBI Bookshelf. <https://www.ncbi.nlm.nih.gov/books/NBK210143/>
- Nemeth, J. M., Mengo, C., Kulow, E., Brown, A. C., & Ramirez, R. (2019). Provider Perceptions and Domestic Violence (DV) Survivor Experiences of Traumatic and Anoxic-Hypoxic Brain Injury: Implications for DV Advocacy Service Provision. *Journal of Aggression, Maltreatment & Trauma*, 28(6), 744–763.
<https://doi.org/10.1080/10926771.2019.1591562>
- New Zealand Guidelines Group. (2006). *Traumatic brain injury: Diagnosis, Acute Management and Rehabilitation*.

- Nicol, B., Adhikari, S. P., Shwed, A., Ashton, S., Mriduraj, A., Mason, K., Gainforth, H. L., Babul, S., & Van Donkelaar, P. (2023). The Concussion Awareness Training Tool for Women's Support Workers Improves Knowledge of Intimate Partner Violence-Caused Brain Injury. *Inquiry*, 60, 004695802311693. <https://doi.org/10.1177/00469580231169335>
- Nnawulezi, N., & Sullivan, C. M. (2013). Oppression within safe spaces. *Journal of Black Psychology*, 40(6), 563–591. <https://doi.org/10.1177/0095798413500072>
- Norman, R., Shah, M. N., & Turkstra, L. S. (2019). Language comprehension after Mild Traumatic Brain injury: The role of speed. *American Journal of Speech-language Pathology*, 28(4), 1479–1490. https://doi.org/10.1044/2019_ajslp-18-0203
- O'Brien, K., Wallace, T., Kemp, A., & Pei, Y. (2022). Cognitive-Communication complaints and referrals for Speech-Language pathology services following concussion. *American Journal of Speech-language Pathology*, 1–18. https://doi.org/10.1044/2021_ajslp-21-00254
- Occupational therapy scope of practice. (2021). *American Journal of Occupational Therapy*, 75. <https://doi.org/10.5014/ajot.2021.75s3005>
- Overstreet, N., & Quinn, D. M. (2013). The Intimate Partner Violence Stigmatization model and Barriers to Help seeking. *Basic and Applied Social Psychology*, 35(1), 109–122. <https://doi.org/10.1080/01973533.2012.746599>
- Oyewuwo-Gassikia, O. B. (2016). American Muslim Women and Domestic Violence Service seeking. *Affilia*, 31(4), 450–462. <https://doi.org/10.1177/0886109916654731>
- Palm LaGrange, E. (2022). The relentless hurt of trauma [Dataset]. In *The ASHA Leader*. <https://doi.org/10.1044/leader.ftr3.27052022.trauma-informed-care.24>

- Patton Foushee, J. (2017). Domestic Violence, Concussion Injuries, and the Imaging Professional's Role in Identifying Traumatic Brain Injury. *Radiologic Technology*, 89.
- Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71. For more information, visit: <http://www.prisma-statement.org/>
- Petersen, R., Moracco, K. E., Goldstein, K. M., & Clark, K. A. (2005). Moving Beyond Disclosure: Women's perspectives on barriers and motivators to seeking assistance for intimate partner violence. *Women & Health*, 40(3), 63–76.
https://doi.org/10.1300/j013v40n03_05
- Pierre, K., Dyson, K., Dagra, A., Williams, E., Porche, K., & Lucke-Wold, B. (2021). Chronic Traumatic Encephalopathy: Update on current clinical diagnosis and management. *Biomedicines*, 9(4), 415. <https://doi.org/10.3390/biomedicines9040415>
- Plichta, S. B. (2004). Intimate partner violence and physical health consequences. *Journal of Interpersonal Violence*, 19(11), 1296–1323. <https://doi.org/10.1177/0886260504269685>
- Pugh, E. N. (2012). Introducing the viewpoint. *The Journal of General Physiology*, 140(6), 579. <https://doi.org/10.1085/jgp.201210924>
- Ragavan, M. I., Garcia, R., Berger, R. P., & Miller, E. (2020). Supporting intimate partner violence survivors and their children during the COVID-19 pandemic. *Pediatrics*, 146(3), e20201276. <https://doi.org/10.1542/peds.2020-1276>
- Riedeman, S. K., & Turkstra, L. S. (2018). Knowledge, Confidence, and Practice Patterns of Speech-Language Pathologists Working With Adults With Traumatic Brain Injury.

American Journal of Speech-language Pathology, 27(1), 181–191.

https://doi.org/10.1044/2017_ajslp-17-0011

Rivara, F. P., Anderson, M. L., Fishman, P., Bonomi, A. E., Reid, R. J., Carrell, D., & Thompson, R. S. (2007). Healthcare Utilization and Costs for Women with a History of Intimate Partner Violence. *American Journal of Preventive Medicine*, 32(2), 89–96.

<https://doi.org/10.1016/j.amepre.2006.10.001>

Rivas, C., Ramsay, J., Sadowski, L. S., Davidson, L. L., Dunne, D., Eldridge, S., Hegarty, K., Taft, A., & Feder, G. (2015). Advocacy interventions to reduce or eliminate violence and promote the physical and psychosocial well-being of women who experience intimate partner abuse. *The Cochrane Library*, 2015(12).

<https://doi.org/10.1002/14651858.cd005043.pub3>

Robinson, L., & Spilsbury, K. (2007). Systematic review of the perceptions and experiences of accessing health services by adult victims of domestic violence. *Health & Social Care in the Community*, 16(1), 16–30. <https://doi.org/10.1111/j.1365-2524.2007.00721.x>

Robinson, S., Ravi, K. E., & Schrag, R. V. (2020a). A Systematic review of barriers to formal help seeking for adult survivors of IPV in the United States, 2005–2019. *Trauma, Violence, & Abuse*, 22(5), 1279–1295. <https://doi.org/10.1177/1524838020916254>

Rodriguez, M., Valentine, J., Son, J. B. A., & Muhammad, M. (2009). Intimate Partner Violence and Barriers To Mental Health Care for Ethnically Diverse Populations of Women.

Trauma, Violence, & Abuse, 10(4), 358–374. <https://doi.org/10.1177/1524838009339756>

Rousseaux, M., Vérigneaux, C., & Kozlowski, O. (2010). An analysis of communication in conversation after severe traumatic brain injury. *European Journal of Neurology*, 17(7), 922–929. <https://doi.org/10.1111/j.1468-1331.2009.02945.x>

- Royal College of Speech and Language Therapists. (2023, July 12). *Domestic abuse and speech, language and communication | RCSLT*. RCSLT. <https://www.rcslt.org/speech-and-language-therapy/guidance-for-delivering-slt-services/domestic-abuse/>
- Schollenberger, J., Campbell, J. C., Sharps, P., O'Campo, P., Gielen, A. C., Dienemann, J., & Kub, J. (2003). African American HMO enrollees. *Violence Against Women*, 9(5), 599–618. <https://doi.org/10.1177/1077801202250451>
- Schuyler, M. (1976). Battered wives: an emerging social problem. *Social Work*. <https://doi.org/10.1093/sw/21.6.488>
- Setnik, L., & Bazarian, J. J. (2007). The characteristics of patients who do not seek medical treatment for traumatic brain injury. *Brain Injury*, 21(1), 1–9. <https://doi.org/10.1080/02699050601111419>
- Sharma, T. L. (2022). Returning to work after Mild Traumatic Brain Injury—Considering the impact of Employer support. *JAMA Network Open*, 5(6), e2219454. <https://doi.org/10.1001/jamanetworkopen.2022.19454>
- Sheridan, D. J., & Nash, K. R. (2007). Acute injury patterns of intimate partner violence victims. *Trauma, Violence, & Abuse*, 8(3), 281–289. <https://doi.org/10.1177/1524838007303504>
- Short, J., McCormack, J., & Copley, A. (2014). The current practices of speech-language pathologists in providing information to clients with traumatic brain injury. *International Journal of Speech-Language Pathology*, 16(3), 219–230. <https://doi.org/10.3109/17549507.2014.882413>
- Silver, J., McAllister, T. W., & Arciniegas, D. B. (2009). Depression and cognitive complaints following mild traumatic brain injury. *American Journal of Psychiatry*, 166(6), 653–661. <https://doi.org/10.1176/appi.ajp.2009.08111676>

- Simmons, C. A., Farrar, M., Frazer, K., & Thompson, M. J. (2011). From the Voices of women. *Violence Against Women, 17*(10), 1226–1243.
<https://doi.org/10.1177/1077801211424476>
- Simpson, E., & Helfrich, C. A. (2014). Oppression and barriers to service for Black, lesbian survivors of intimate partner violence. *Journal of Gay and Lesbian Social Services, 26*(4), 441–465. <https://doi.org/10.1080/10538720.2014.951816>
- Smirl, J. D., Jones, K., Copeland, P., Khatra, O., Taylor, E. H., & Donkelaar, P. (2019). Characterizing symptoms of traumatic brain injury in survivors of intimate partner violence. *Brain Injury, 33*(12), 1529–1538.
<https://doi.org/10.1080/02699052.2019.1658129>
- Smith, T. J., & Holmes, C. M. (2018). Assessment and treatment of brain injury in women impacted by intimate partner violence and Post-Traumatic Stress Disorder. *The Professional Counselor, 8*(1), 1–10. <https://doi.org/10.15241/tjs.8.1.1>
- Sogoni, S. (2021). *The Challenges Experienced by Traumatic Brain Injury Survivors with Regard to Family Reintegration Post-Hospitalisation* [MA thesis, University of the Western Cape]. <http://hdl.handle.net/11394/9022>
- Sohlberg, M. M., MacDonald, S., Byom, L., Iwashita, H., Lemoncello, R., Meulenbroek, P., Ness, B., & O’Neil-Pirozzi, T. M. (2019). Social communication following traumatic brain injury part I: State-of-the-art review of assessment tools. *International Journal of Speech-Language Pathology, 21*(2), 115–127.
<https://doi.org/10.1080/17549507.2019.1583280>
- St Ivany, A., Bullock, L., Schminkey, D. L., Wells, K. J., Sharps, P., & Kools, S. (2018). Living in Fear and Prioritizing Safety: Exploring Women’s Lives After Traumatic Brain Injury

- From Intimate Partner Violence. *Qualitative Health Research*, 28(11), 1708–1718.
<https://doi.org/10.1177/1049732318786705>
- St Ivany, A., & Schminkey, D. L. (2019). Rethinking Traumatic Brain Injury from Intimate Partner Violence: A Theoretical Model of the Cycle of Transmission. *Journal of Aggression, Maltreatment & Trauma*. <https://doi.org/10.1080/10926771.2019.1632400>
- Taylor, C. A., Bell, J. M., Breiding, M. J., & Xu, L. (2017). Traumatic Brain Injury–Related Emergency Department visits, hospitalizations, and deaths — United States, 2007 and 2013. *Morbidity and Mortality Weekly Report*, 66(9), 1–16.
<https://doi.org/10.15585/mmwr.ss6609a1>
- Toccalino, D., Asare, G., Fleming, J., Yin, J., Kieftenburg, A., Moore, A. M., Haag, H., Chan, V., Babineau, J., MacGregor, N., & Colantonio, A. (2023a). Exploring the relationships between rehabilitation and survivors of intimate partner violence: a scoping review. *Trauma, Violence, & Abuse*. <https://doi.org/10.1177/15248380231196807>
- Toccalino, D., Haag, H., Estrella, M. J., Cowle, S., Fuselli, P., Ellis, M. A., Gargaro, J., & Colantonio, A. (2022). Addressing the Shadow Pandemic: COVID-19 Related Impacts, Barriers, Needs, and Priorities to Health Care and Support for Women Survivors of Intimate Partner Violence and Brain Injury. *Archives of Physical Medicine and Rehabilitation*, 103(7), 1466–1476. <https://doi.org/10.1016/j.apmr.2021.12.012>
- Togher, L., Wiseman-Hakes, C., Douglas, J., Stergiou-Kita, M., Ponsford, J. L., Teasell, R., Bayley, M., & Turkstra, L. S. (2014). INCOG Recommendations for Management of Cognition Following Traumatic Brain Injury, Part IV. *Journal of Head Trauma Rehabilitation*, 29(4), 353–368. <https://doi.org/10.1097/htr.0000000000000071>

- Thomas, K. A., Goodman, L. A., & Putnins, S. I. (2015). “I have lost everything”: Trade-offs of seeking safety from intimate partner violence. *American Journal of Orthopsychiatry*, 85(2), 170–180. <https://doi.org/10.1037/ort0000044>
- Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., ... & Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Annals of internal medicine*, 169(7), 467-473 [doi:10.7326/M18-0850](https://doi.org/10.7326/M18-0850)
- Trzaska, L. R. (2022). *TBI Awareness and Online Resources* [Project, California State University]. <https://www.proquest.com/dissertations-theses/tbi-awareness-online-resources/docview/2784781677/se-2>
- Valera, E. M., Campbell, J. C., Gill, J., & Iverson, K. M. (2019). Correlates of brain injuries in women subjected to intimate partner violence: identifying the dangers and raising awareness. *Journal of Aggression, Maltreatment & Trauma*, 28(6), 695–713. <https://doi.org/10.1080/10926771.2019.1581864>
- Valera, E. M., Daugherty, J. C., Scott, O. M., & Berenbaum, H. (2022). Strangulation as an Acquired Brain Injury in Intimate–Partner Violence and Its Relationship to Cognitive and Psychological Functioning: A Preliminary Study. *Journal of Head Trauma Rehabilitation*, 37(1), 15–23. <https://doi.org/10.1097/htr.0000000000000755>
- Valera, E. M. (2020). When pandemics clash: Gendered violence-related traumatic brain injuries in women since COVID-19. *EClinicalMedicine*, 24, 100423. <https://doi.org/10.1016/j.eclinm.2020.100423>
- Valera, E. M., & Kucyi, A. (2016). Brain injury in women experiencing intimate partner-violence: neural mechanistic evidence of an “invisible” trauma. *Brain Imaging and Behavior*, 11(6), 1664–1677. <https://doi.org/10.1007/s11682-016-9643-1>

- Valera, E., PhD. (2022, March 17). *Intimate partner violence and traumatic brain injury: An invisible public health epidemic*. Harvard Health.
<https://www.health.harvard.edu/blog/intimate-partner-violence-and-traumatic-brain-injury-an-invisible-public-health-epidemic-201812132708>
- Van Gelder, N., Ligthart, S. A., Elzen, J. T., Prins, J. B., Van Rosmalen-Nooijens, K. a. W. L., & Oertelt-Prigione, S. (2021). “If I’d had something like SAFE at the time, maybe I would’ve left him Sooner.”—Essential Features of eHealth Interventions for Women Exposed to Intimate Partner Violence: A Qualitative study. *Journal of Interpersonal Violence*, 37(19–20), NP18341–NP18375. <https://doi.org/10.1177/08862605211036108>
- Vargo, M. M., Vargo, K. G., Gunzler, D. D., & Fox, K. W. (2015). Interdisciplinary Rehabilitation Referrals in a Concussion Clinic Cohort: An Exploratory analysis. *Pm&R*, 8(3), 241–248. <https://doi.org/10.1016/j.pmrj.2015.07.006>
- Verdejo, C., Tapia-Benavente, L., Schuller-Martínez, B., Vergara-Merino, L., Vargas-Peirano, M., & Dreyer, A. S. (2021). What you need to know about scoping reviews. *Medwave*, 21(02), e8144. <https://doi.org/10.5867/medwave.2021.02.8144>
- Waller, B., Harris, J., & Quinn, C. R. (2021). Caught in the Crossroad: An intersectional examination of African American women intimate partner violence survivors’ help seeking. *Trauma, Violence, & Abuse*, 23(4), 1235–1248.
<https://doi.org/10.1177/1524838021991303>
- Warshaw, C. (1989). Limitations of the medical model in the care of battered women. *Gender and Society*, 3(4). <https://doi.org/10.1177/089124389003004008>

Williams-Butler, M. A., & Cantu, R. C. (2019). Concussion Practice Patterns among Speech-Language Pathologists. *Health, 11*(07), 880–895.

<https://doi.org/10.4236/health.2019.117071>

Wiseman-Hakes, C., Colantonio, A., Ryu, H. S., Toccalino, D., Balogh, R., Grigorovich, A., Kontos, P., Haag, H., Kirsh, B., Nalder, E., Mann, R. E., Matheson, F. I., Riopelle, R. J.,

Wilcock, R., & Chan, V. (2020). Research to Integrate Services for Individuals with Traumatic Brain Injury, Mental Health, and Addictions: Proceedings of a MultiDisciplinary Workshop. *Canadian Journal of Community Mental Health*.

<https://doi.org/10.7870/cjcmh-2020-001>

Wiseman-Hakes, C., Ryu, H. H., Lightfoot, D., Kukreja, G., Colantonio, A., & Matheson, F. I.

(2020). Examining the efficacy of communication partner training for improving communication interactions and outcomes for individuals with traumatic Brain Injury: a Systematic review. *Archives of Rehabilitation Research and Clinical Translation, 2*(1),

100036. <https://doi.org/10.1016/j.arrct.2019.100036>

World Health Organization: WHO. (2021, March 9). *Violence against women*.

<https://www.who.int/news-room/fact-sheets/detail/violence-against-women>

Wong, J., Choi, A. W., Wong, J., Ng, Z. L., Cheung, K., Lau, C., Kam, C., & Fong, D. G.

(2022). Impact of mild traumatic brain injury on physical, mental and cognitive functioning of abused women admitted to emergency units. *Health & Social Care in the*

Community, 30(2). <https://doi.org/10.1111/hsc.13218>

Wong, J. Y. H., Fong, D. Y. T., Lai, V. S., & Tiwari, A. (2013). Bridging intimate partner violence and the human brain. *Trauma, Violence, & Abuse, 15*(1), 22–33.

<https://doi.org/10.1177/1524838013496333>

- Wood, L., Backes, B. L., Baumler, E., & McGiffert, M. (2021). Examining the impact of duration, connection, and dosage of domestic violence services on Survivor Well-Being. *Journal of Family Violence*, 37(2), 221–233. <https://doi.org/10.1007/s10896-021-00298-x>
- 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. <https://doi.org/10.1089/neu.2016.4579>

APPENDIX: IPV Resources

Websites for IPV:

- <https://www.thehotline.org/>
 - Offers information regarding IPV resources, someone to call, text, or chat with on the website for help for survivors of IPV.
- <https://www.domesticshelters.org/>
 - Women's shelters near you.
- <https://www.cdc.gov/violenceprevention/intimatepartnerviolence/resources.html>
 - Federal and online resources for survivors of IPV.
- <https://tncoalition.org/>
 - Resources and information of women's shelter in Tennessee.

Phone numbers for IPV:

- 1-800-799-SAFE
 - 1-855-812-1001 for users that are deaf.
 - 1-844-7NATIVE for users that are Native American.
 - Nationwide IPV hotline.
- 88788 text SAFE
 - Nationwide text IPV hotline.
- 1-866-811-7473
 - Tennessee statewide sexual assault hotline.
- 1-800-356-6767
 - Tennessee hotline.

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