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The Intersection between Sexual Assault and Mental Illness: Psychiatric Nurse's Role

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The Intersection between Sexual Assault and Mental Illness:
Psychiatric Nurse's Role

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An evidence scholarly paper submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

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ABSTRACT

The Intersection between Sexual Assault and Mental Illness: Psychiatric Nurse's Role

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Background: Mental illness (MI) affects one in five Americans. Individuals with severe MI are frequently victims of crime, which includes sexual assault (SA). It is well established that individuals with severe MI are more vulnerable for SA victimization. What is not recognized is if this vulnerability for SA extends to other less serious types of MI.

Aim: To identify and synthesize findings from the literature for any connections between having a MI and increased vulnerability for SA victimization, specific mental or physical negative consequences, and ascertain any recommendations for PMH nurses to improve the standard of care offered to those with a MI who have been sexually assaulted and utilize risk reduction strategies.

Methods: Results were synthesized from 43 published studies (2013-2020) identified from a multi-database search (MEDLINE, CINAHL, CINAHL Complete, and PsycINFO).

Results: Pre-existing MI increases vulnerability to SA victimization, and SA victimization leads to negative sequela, such as suicidality, new onset or worsening MI, substance abuse, and chronic disease development.

Conclusion: Psychiatric mental health (PMH) nurses should screen all patients with any type of MI for history of SA and educate them about increased vulnerability for SA to reduce incidence of future sexual trauma. SA victims should receive timely and appropriate care to reduce negative consequences from a SA.

Keywords

Mental illness, sexual assault, nurses, healthcare providers, screening, prevention

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Background

Mental illness (MI) affects one in five individuals in the United States (National Institute Health [NIH], 2019). Frequently MI develops during a person's adolescent years and continues as a chronic disease that requires life-long management of symptoms (Collins & Muñoz-Solomando, 2018). Having a MI increases a person's vulnerability to be a victim of a crime, which includes the crime of sexual assault (SA) (Latalova et al., 2014).

Frequently, there are several negative personal consequences after one experiences a SA, which can include post-traumatic stress disorder (PTSD), suicidality, substance abuse, and early onset of MI (Brooker & Tocque, 2016; Dworkin et al., 2017). Severe MI is defined as a mental, behavioral, or emotional disorder that interferes with the capacity to participate in major activities of living (i.e. provide self-care, maintain relationships, or pursue a career) (NIH, 2019). Research has demonstrated that individuals with severe forms of MI (such as schizophrenia or debilitating depression) have a higher vulnerability for SA victimization in comparison to individuals who do not have a severe MI (Khalifeh et al., 2015; Latalova et al., 2014). Teplin et al. (2005) found that over 25% of individuals with severe MI were victims of a violent crime in the prior year compared to 2.8% in the general population. This vicious cycle of violent re-victimization for those with a severe MI, Latalova et al. (2014) found was statistically significant ($P < 0.05$). While it is well established that those with severe MI are more vulnerable to being violently victimized, what is unknown is if people with less severe forms of MI also have increased vulnerability for SA victimization.

After experiencing SA, some individuals may cope negatively by one or both of the following ways; internalizing behaviors, such as depression and anxiety, or externalizing behavior, such as drug abuse, resulting in a strong association between SA and onset of a

psychiatric disorder (Combs et al., 2014). When SA and MI are a part of a person's reality, the outcome is often continued mental health concerns and chronic physical health disorders (Sachs-Ericsson et al., 2014, Santaularia et al., 2014). It is clear that there is a negative connection between SA and MI. Therefore, it is imperative that psychiatric mental health (PMH) nurses take a screening and prevention approach for patients vulnerable to the negative sequelae resulting from the intersection of MI and SA.

Aim

Research has established a strong association between severe MI and SA victimization. The purpose of this integrative review was to: 1) identify and synthesize findings from the literature any connections between having any type or severity of MI and increased vulnerability for SA victimization; 2) ascertain specific negative consequences in an effort to improve the quality of care delivered to individuals vulnerable to SA victimization; and 3) encourage PMH nurses to actively screen, treat, and educate individuals with MI to utilize risk reduction strategies.

Methods

Search Strategy

Utilizing the EBSCOhost platform, a search was performed using the databases MEDLINE, CINAHL, CINAHL Complete, and PsycINFO. Search terminology included: "sexual assault" OR "rape" OR "rapes" AND "mental health" OR "mental illness" OR "depression" OR "anxiety" OR "stress" OR "bipolar" AND "risk". Years 2013-2020 were selected to make sure up-to-date research was presented as relevant for current practicing standards of care. In total, 314 articles were located using the identified search terms with 121 duplicate articles. Forty-seven were selected for intensive review with 43 articles being selected

as relevant to the purpose for this review article. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart shows the process by which the articles were selected (see Figure 1). Two researchers with extensive career work in psychiatric mental health nursing and one with expertise as a sexual assault nurse examiner (SANE) assisted in examining articles for rigor and quality. Articles retained for this review explored the relationship between SA victimization and major categories of MI. Among these 43 relevant studies, 14 were cross-sectional, 5 were meta-analysis/systematic reviews, 10 were longitudinal, 2 were literature reviews, 6 were prospective, 4 were retrospective studies, and one was a randomized-controlled trial (RCT). A large set of unpublished retrospective data from a professional contact with primary researchers was also utilized for this review. Non peer-reviewed, non-English language studies were excluded.

Johns Hopkins nursing evidence-based practice: Model and guidelines (Dang & Dearholt, 2017) were used to assess the level of evidence and quality grading of each study. Four studies received a level II rating and all other studies received a level III. The RCT received a level I/A rating. All five systematic reviews received a quality A-B rating. Thirty-eight studies received an A grade for quality, and the remaining five received a B quality grading. Miles et al., in press was not graded.

Study Setting

Most of the studies were conducted in the United States (Angelone et al., 2017; Baker et al., 2016; Breiding et al., 2014; Breslau et al., 2012; Carey et al., 2018; Combs et al., 2014; Conley et al., 2017; Culatta et al., 2017; Gilmore et al., 2019; Hannan et al., 2017; Karlsson, & Zielinski, 2018; Littleton, & Ullman, 2013; Lowe et al., 2014; Miles et al., in press; Mokma et al., 2016; Moreland et al., 2018; Parr, 2020; Rosellini et al., 2017; Sachs-Ericsson et al., 2014;

Santaularia et al., 2014; Schuyler et al., 2017; Short et al., 2020; Ullman, 2016; Wadsworth et al., 2013; Walsh et al., 2014; Yalch et al., 2018).

Heerde, & Hemphill's (2016) study was conducted in the U.S. (United States) and Canada. Other studies were conducted in Denmark (Elklit, & Christiansen, 2013), Germany (Krahé, & Berger, 2017), South Africa (Mgoqi-Mbalo, Zhang, & Ntuli, 2017), South Korea (Jeon et al. 2014), United Kingdom (Brooker, & Tocque, 2016; Khadr et al., 2018; Khalifeh et al., 2015; Manning et al., 2019), Netherlands (Christ et al., 2018; de Waal et al., 2017), and Sweden (Källström et al., 2017; Tiihonen Möller et al., 2014). Cividanes et al. (2019), Dworkin et al. (2017), Latalova et al. (2014), Kessler et al. (2017) included multiple nations within their studies' samples.

Multiple studies were conducted with college and university students (Angelone et al., 2017; Baker et al., 2016; Carey et al., 2018; Combs et al., 2014; Conley et al., 2017; Culatta et al., 2017; Hannan et al., 2017; Mokma et al., 2016; Parr, 2020; Walsh et al., 2014). This group was important to include as they are in the young adult age range that is more prevalent for SA.

Patient Sample Characteristics

Collectively the studies represented a large collective total ($N=508,424$). Not all studies (i.e. review studies: Heerde, & Hemphill, 2016, and Karlsson, & Zielinski, 2018) offered the number of participants, so they were not included in the total sample size. When provided, ages ranged from 12 to 85 years old. Females were more represented than males in the study samples due to lack of exclusive studies of male victims. The smallest sample was comprised of 100 females (Mgoqi-Mbalo et al., 2017). The largest sample was 238,623 from a meta-analysis (Dworkin et al., 2017).

Results

MI is a Vulnerability

Several studies on the intersection between MI and SA identified strong evidence that any severity type of MIs is a vulnerability to SA victimization. Rates of pre-existing MI varied widely between studies from a high of 68.9% (Manning et al., 2019); 46% (Miles et al., in press); 35.5% (Christ et al., 2018); 22% (Culatta et al., 2017); and with the lowest rate of 12% (de Waal et al., 2017).

In a large retrospective study (N = 5426), Miles et al. (in press), collected demographic information as part of the sexual assault forensic medical examination (SAFME) and found that 46% of SA victims reported the following pre-existing MI and symptoms: depression, anxiety, bipolar, PTSD, attention-deficit hyperactivity disorder (ADHD)/attention-deficit disorder (ADD), psychotic disorders, drugs and alcohol, and eating disorders. Self-reported medication use was utilized as another indicator of pre-existing MI. Rates of usage of different classes of psychotropic medications (atypical antipsychotics, antianxiety, antidepressants, bipolar medications, sleep aids, stimulants or ADHD/ADD medications, and typical antipsychotics were more than double in comparison to the general population data (Miles et al., in press).

It is problematic to try and categorize MIs by “severe” and “less severe.” Symptoms are more or less “severe” in MI, depending on how they impact the person. For example, depression symptoms vary widely in severity on the impact MIs have on a person’s daily functioning. Other researchers concluded that persons with MI are more vulnerable for SA victimization due to the inability to control situations or convey an attitude of negativity towards a potential perpetrator (Latalova et al., 2014). Depression, bipolar disorders, and anxiety were categorized as being just as limiting as severe MIs, such as schizophrenia which impedes a person’s ability to prevent

potential harm (Latalova et al., 2014). It is apparent from these findings that there is strong evidence that many MIs, not just those that are severe, increases an individual's vulnerability for SA victimization (Christ et al., 2018; Culatta et al., 2017; Dworkin et al., 2017; Krahe & Berger, 2017; Latalova et al., 2014; Manning et al., 2019; Miles et al., in press).

A review of the literature revealed a strong correlation between different MIs and increased vulnerability for SA (Dworkin et al., 2017; Krahe & Berger, 2017; Latalova et al., 2014; Manning et al., 2019; Miles et al., in press). The vulnerability of MI for violent victimization (which includes SA at 12% of the *N*) appears to increase even further when a victim struggles with two comorbid MI disorders (de Waal et al., 2017). Depression was found to be a vulnerability ($P < .001$) for SA re-victimization in young adults who were raped during their adolescent years (Culatta et al., 2017).

Depression (13%) and anxiety (17%) were prevalent conditions for first semester female college students prior to their SA (Carey et al., 2018). Pre-existing MI also appears to be a predictor of vulnerability for developing PTSD following a SA with 39% of victims developing the disorder (Tiihonen Möller et al., 2014). Krahe & Berger (2017) found higher rates of depression in SA victims in a longitudinal analysis of pre-existing MI and SA. For adolescent victims, 88% and 71% were at risk for depressive disorders and anxiety disorders, respectively, in the 6 months prior to being sexually assaulted (Khadr et al., 2018).

The literature is mixed about SA victims with pre-existing MI time frame from SA to reporting to formal sources, healthcare providers, and law enforcement. Manning et al. (2019) found a slight delay (50% of victims waited 24 hours or longer after the event); while Miles et al., in press, a larger study found no statistical difference from time of SA to treatment.

Culatta et al. (2017) postulated that the outward expressions of depression may be identifiable by predators. They explained this phenomenon as an example of the routine activity theory, which identifies the vulnerabilities (i.e. depression) that led to the first SA as the same vulnerabilities for re-victimization. There are several possible explanations for this vulnerability: 1) MI causes deficits in functional alertness, decreasing the ability to recognize and avoid dangerous predators or situations; 2) predators target victims because their capacity to perceive them as harmful is diminished; and 3) compromised faculties as a result of substance use, which leads to interactions with potential predators (Dworkin et al., 2017). These scenarios could be further complicated with a history of childhood sexual abuse (Dworkin et al., 2017). However, previous research has shown such an association for other forms of violent victimization: the severely mentally ill are vulnerable to post-traumatic stress disorder (PTSD), and PTSD may cause behaviors that convey vulnerability and inability to self-protect (Grubaugh et al., 2011).

Negative Sequelae of SA and MI

After a SA several negative mental health effects have been identified: suicide ideation and attempts, onset or continuation of MI, PTSD, poor role performance, substance abuse, and medical conditions (Angelone et al., 2017, Carey et al., 2018; Dworkin et al., 2017; Jeon et al., 2014; Sachs-Ericsson et al., 2014; Santaularia et al., 2014). These results correlating subsequent medical conditions after SA trauma further supports the Adverse Childhood Events study findings (Felitti et al., 1998). Victims who report feeling worthless after experiencing a serious trauma (where SA is defined as a serious trauma) have more than a 37% increased lifetime risk of suicide attempts (Jeon et al., 2014). Similarly, Brooker et al. (2016) found that rape victims have a high rate (23%) of lifetime suicide attempts. Dworkin et al. (2017) substantiated this increased risk of suicide ideation and attempts among SA victims in their meta-analysis of the

literature, in which the corrected effect size ($g=0.74$) of SA was the highest for suicidality, exceeding other negative mental health outcomes.

Three studies addressed the onset or continuation of MI struggles in SA victims. Clinically significant co-occurring depression and anxiety was reported by 25% of first semester college females after SA (Carey et al., 2018). Parr (2020) found higher rates of co-occurring depression (females 34%, males 27%) and anxiety (females 31%, males 20%) among college students. Additionally, a baseline prevalence of suicidal ideation (females 12%, males 10%) was found in this same cohort (Parr, 2020). Dworkin et al. (2017) found two strong associations between trauma and subsequent diagnosis of bipolar disorder ($g = 0.66$) and obsessive-compulsive disorder ($g = 0.71$). Elderly women between the ages of 57 to 85 years with a history of SA victimization continued to struggle with psychiatric issues, such as anxiety, depression, and substance use, despite the SA event occurring decades earlier (Sachs-Ericsson et al., 2014).

Several studies addressed PTSD symptoms after SA trauma. Military SA victims were more likely to struggle with statistically significant PTSD symptomology ($P < 0.05$) (Yalch et al., 2018). SA victims were found to have an increased risk (40%) for developing PTSD compared to exposure to other forms of trauma (Breslau et al., 2012). This increased risk is linked to pre-existing MI, which predisposes victims to PTSD (Breslau et al., 2012). These findings are supported by a longitudinal study indicating a bidirectional relationship in which assaultive trauma (i.e. SA) was associated with post-traumatic stress, and post-traumatic stress symptomology was more likely to increase the chances of potential exposure to future trauma (Lowe et al., 2014). This increased vulnerability to trauma is further supported by three studies (Cividanes et al., 2019; Hannan et al., 2017; Moreland et al., 2018), who found that the negative

impact of childhood sexual abuse often results in PTSD and increased vulnerability to being sexually assaulted as an adult.

There were limited objective studies on the negative impact on relationships and role performance other than the dysfunction caused by PTSD symptoms. For college-age females the mental anguish of SA victimization was associated with a declining grade point average and discontinuing college at a rate of 28% (Baker et al., 2016).

SA negatively effects the capacity to cope (Cividanes et al., 2019). Substance abuse appears to be a prominent negative outcome after a SA. Re-victimization is heavily associated with non-medical use of prescriptions drugs and illicit drug abuse among victims with one in five adolescents reporting substance abuse after SA re-victimization (Walsh et al., 2014). Angelone et al. (2017) found high rates of alcohol (72%) and illicit drug use (21%) among adolescent and college age (74% and 19%, respectively) female SA victims. Military SA victims were more likely to struggle with PTSD and substance abuse as co-occurring disorders (Yalch et al., 2018). Substance use is a method of coping after being victimized which produces the unfortunate situation where victims are targeted due to the inhibiting effects of mind-altering substances (Hannan et al., 2017; Heerde & Hemphill, 2016; Sachs-Ericsson et al., 2014), creating a vicious trauma cycle. Karlsson and Zielinski (2018) found that female inmates had disproportionately higher rates of SA victimization pre-incarceration, MI, and substance use in comparison to male inmates and community females (50–66% childhood SA, 28–68% adult SA, and 56–82% lifetime SA). It appears as though a large percentage of incarcerated females experienced SA and subsequent comorbid MI and substance abuse. Karlsson and Zielinski (2018) hypothesized that substances abuse was developed as a coping mechanism to deal with MI symptoms and past SA trauma.

Three studies found a connection between SA and subsequent medical conditions. Wadsworth and Records (2013) concluded that SA victims struggle with sexually related medical issues (sexually transmitted diseases, dyspareunia, dysmenorrhea, urinary frequency/urgency, and hematuria) that are related to their SA itself or risky health behaviors. Sachs-Ericsson et al. (2014) found that elderly women reported more ulcers (22%) and asthma (26%) at twice the rate of women who were not SA victims. Additionally, Santaularia et al. (2014) found that SA victims developed the following disorders at significantly higher rates than the general population: asthma (22.4% versus 9.1%), hyperlipidemia (49.8% versus 37.6), cancer (13.6% versus 8.5%), and physical disability (48.7% versus 23.5%). The development of these negative medical consequences could be explained as the result of trauma-related dysfunctions of the body's regulatory abilities and immune system (Santaularia et al., 2014).

Discussion

The purpose of this integrative review was three-fold: 1) identify the evidence linking MI with increased vulnerability for SA, 2) delineate any negative mental or physical issues post SA, and 3) make recommendations for PMH nurses to improve the quality of care and employ risk reduction strategies. Each of these areas will be examined.

MI as a Vulnerability

In the Miles et al., (in press) study, patients seen for a SAFME were not asked specifically about any pre-existing MI, which could have resulted in under reporting. Prominent societal views that MI is not a medical illness and negative stigma could have also contributed to nondisclosure. This literature review did not find a causal relationship linking SA and MI. However, SA survivors have an increased severity of MI in comparison to individuals that have

not endured SA trauma (Dworkin et al., 2017). The high rates of pre-existing MI among SA victims are significant in identifying MI as a vulnerability for SA (Miles et al., in press).

PTSD is a specific MI that occurs as a result of trauma that can be a pre-existing condition and/or negative consequence from the SA trauma that can have long-term detrimental effects. Pre-existing MI can be predicative of the onset of PTSD and future traumatic insults (Lowe et al., 2014).

Despite the evidence on the limiting effects of MI symptoms on perceiving and responding to threats, this issue was not thoroughly addressed in this collection of studies. Psychotropic medications effects, such as sedation or cognitive dulling may have an inhibiting effect on mentation and perception. These unintended side effects could be an unknown contributor to an increased vulnerability to SA. None of the evaluated studies offered any evidence how to mediate with impairing MI symptoms to decrease vulnerability to SA. Specific interventions to reduce vulnerability to SA by effectively treating MI is unknown.

Suicide & Self-harm

In 2017, the Centers for Disease Control and Prevention (CDC) reported that intentional self-harm is the tenth leading cause of death in the U.S. with more than 47,000 death per year. Suicidality is frequently a negative result of SA. Therefore, being a victim of SA could be contributing to this national public health crisis. The risk of suicide in the acute crisis phase following a SA is higher, and SA victims have higher lifetime rates of suicide attempts and completions (Jeon et al., 2014). Awareness of increased suicide and self-harm after the trauma highlights the need for suicide and self-harm prevention interventions. Community-based and national resources to prevent suicide are widely available. The American Foundation for Suicide Prevention *Let's Talk About It* campaign can be a good national resource (American Foundation

for Suicide Prevention, 2019). PMH nurses should also be aware of their state and local resources.

Substance Abuse

Several studies identified substance abuse as a negative behavioral outcome for SA victims and highlighted how SA is linked to poor self-care. It is possible that drug or alcohol abuse is a means to manage the crisis state that follows a SA. However, it would be amiss to not also consider it as a condition that may end the victim's life as either a suicide attempt or an accidental overdose. The later lethal option may be especially concerning depending on what substances are readily available to victims in their communities. Substances can be highly addictive and negatively impact multiple aspects of a person's life including physical and mental health effects, which may increase susceptibility to future SA.

Poor Role Performance

Though the impact of SA on role performance was only studied in a sample of college students (Baker et al., 2016), there is ample evidence that any trauma can negatively impact a person's relationships, jobs, and social functioning (Van Der Kolk, 2015). The inhibiting effects of MI or substance use can negatively complicate role performance and impact the ability to function at one's full capacity.

Medical Conditions

Several medical conditions specifically associated with higher rates in SA were identified in this review: asthma, dysmenorrhea, dyspareunia, hyperlipidemia, urinary tract issues, ulcers, physical disability, and sexually transmitted diseases. These findings are in alignment with the Adverse Childhood Events study (Felitti et al., 1998), which was pivotal in identifying the association of childhood SA with the development of unfavorable physical health outcomes that

impact individuals as adults. This association with negative health outcomes appears to be present regardless of when a SA occurred in a victim's life (Van Der Kolk, 2015).

Clinical Implications

This literature review found that individuals who struggle with any type of MIs are more vulnerable to future SA victimization. PMH nurses should screen all patients with a MI diagnosis for previous history of SA trauma. During routine patient office visits clinicians should inquire about past or recent SA events, especially if the patient has a MI diagnosis (Latalova et al., 2014). Since MI and substance abuse are prevalent in our society, screening for SA history should be a part of intake assessment.

History of SA should be considered a relevant crucial aspect of a patient's health history throughout the life span. Clinicians should be aware that SAs are more prevalent during adolescence and young adulthood (Breiding et al., 2014), which has implications for the timing of SA prevention methods and interventions.

Medically related disorders (i.e. gastrointestinal, respiratory, and genitourinary) may appear after a SA which highlights the importance of making SA screening a routine standard for high quality patient care. Trauma-informed care (TIC) is also a way to mitigate concerns about re-traumatizing and should be provided to all patients, especially when considering the increasing number of SA victims in the general population (Dworkin et al., 2017). All PMH nurses should be educated about providing TIC in their interventions with patients. Palmieri and Valentine (2020) offer a TIC framework to facilitate the process of identifying and treating patients with traumatic life events. Also, SAMHSA's (Substance Abuse and Mental Health Services Administration, 2014) Concept of Trauma and Guidance for a Trauma-Informed Approach is national resource available to all mental healthcare providers.

If a recent SA is discovered during a patient interview, the provider must include in the patient's plan of care interventions to assist the patient with taking precautions to self-protect and care for themselves. A patient should be encouraged to receive a SAFME by a SANE if the assault has been in the last seven days so that appropriate medical care and documentation of evidence can be provided, as well as linking the patient to a victim advocate and appropriate services.

Collaborating with mental health services for treatment is crucial. This review was not focused on evidenced-based treatment for SA, however appropriate therapies were identified in the retrieved literature. Cognitive-Behavioral Therapy (CBT) and Cognitive Processing Therapy (CPT) were identified in the reviewed literature as beneficial for patients who have been victimized. These interventions are designed to provide symptom relief within months and be an efficient use of provider time and patient finances (Dworkin et al., 2017; Latalova et al., 2014). Though not mentioned in the studies obtained for this literature review, eye movement desensitization and reprocessing (EMDR) is a noteworthy therapy proven to be effective for treating SA victims struggling with PTSD (Edmond et al., 2016). Best practice in treatment of mental health disorders associated with SA should be left to the expertise of mental health experts familiar with these therapies.

An unexpected finding was the identification of specific personality types and character traits (negative affectivity and global self-blame) as a risk factors for SA and risk predictors for developing PTSD (Elklit & Christiansen, 2013; Mokma, et al., 2016). Current therapies that take into consideration the victim's personality and aimed at preventing internalizing negative sequelae, such as anxiety and depression, and externalizing negative sequelae, such as drug abuse, may be of value. Addressing these issues in therapies could possibly be successful

methods to aid in preventing re-victimization (Combs et al., 2014). A large study on military SA victims supports early intervention for best outcomes (Rosellini et al., 2017). In patients who were treated for depression to remission, their risk of violent victimization (where SA is included as a type of violence) was no different than that of the general population (Christ et al., 2018). This reduction of risk for SA highlights the importance of effectively treating MI to reduce future vulnerability.

For some victims training in self-defense and assertiveness was found to have a positive effect and prevent re-victimization (Ullman, 2016). Support for self-defense and assertiveness training is generally not supported by advocates as it places the burden of re-victimization on the victim when it should be on the perpetrator. Onset of depression following a SA can continue as a chronic MI and is also a predictor for SA re-victimization (Culatta et al., 2017). With re-victimization rates as high as 40% for some populations, all intervention approaches to prevent re-victimization should be individualized and implemented to prevent future victimization (Conley et al., 2017; Littleton, & Ullman, 2013).

MI symptoms can reduce the ability to identify and avoid situations that increase the risk of SA vulnerability. With knowledge of vulnerabilities for SA victimization, PMH nurses perform a critical role to educate the patients they treat about this increased risk and counsel them on methods to decrease their susceptibility (Dworkin et al., 2017). This should include aiding patients in preventing negative sequelae associated with substance misuse and new onset or worsening of MI symptoms (Walsh et al., 2014). It would also be appropriate for communities to implement evidenced-based prevention methods (i.e. adequate treatment of depression, ensuring victim support is accessible, assertiveness training, and the Safe Dates program) (Breiding et al., 2014; Christ et al., 2018; Mgoqi-Mbalo et al., 2017; Ullman, 2016). All states

may find it beneficial to include questions on the annual behavioral risk factor surveillance system to collect data on SA victimization as a method of providing a needs assessment for programs aimed at preventing SA and supporting victims in their local communities (Santaularia et al., 2014).

Recommendations

The following clinical recommendations were obtained from this integrative review: (a) all patients with MI should be screened for SA (past and recent); (b) SA should be considered as a possible traumatic trigger for declining physical and mental health; (c) PMH nurses should all be proficient in providing TIC; and (d) patients should be educated on vulnerabilities and prevention strategies.

There are limited studies on effective treatments post-SA. In a randomized-controlled trial, SA victims with a prior history of SA who received pleasant imagery and relaxation instruction (PIRI) via video were significantly less likely to abuse prescription opioids in comparison to victims who received treatment as usual ($P=0.02$) at 1.5 months post-assault (Gilmore et al., 2019). Angelone et al. (2017) suggested that prophylaxis against SA should be initiated for all adolescent girls as a prevention intervention, which includes education on the various SA types and avoidance of victim blaming by encouraging seeking out help if a SA occurs. Short et al. (2020) found that PTSD can be prevented by implementing treatments before the onset of PTSD symptoms.

A lack of screening of SA victims for MI could be as a major barrier to providing appropriate interventions. Therefore, developing a standard of care would be helpful for PMH nurses to routinely monitor all patients with MI for SA (Manning et al., 2019). To provide an adequate response, patients should be asked specifically about sexual abuse predicated by family

and acquaintances as the latter group more frequently victimizes youth (Källström et al., 2017). If a patient has had a decline in progress in MI therapies, PMH nurses should consider a history of SA, since frequently victims do not report immediately or at all. Further justification for screening stems from data that 70 % of the world's population has been exposed to some form of trauma and SA is categorized as a common form of trauma (Kessler et al., 2017).

Research Implications

Although evidence from the literature has elucidated the connection between MI and SA, there are still many unanswered questions. Studies are limited on effective strategies that potential victims can utilize to protect themselves. Research focused on what is beneficial will be influential on patient education that aims to positively impact care by decreasing vulnerabilities for SA. Depression and anxiety are the most widely studied pre-existing MIs prior to SA. The TIC approach in SA victims has been shown to be an effective therapeutic method to help victims overcome the crisis from SA and not re-traumatize or worsen MI symptoms. Clinical standards for treatment should be developed by governing bodies with subject matter experts for implementation by community PMH nurses. Understanding the experience of patients using qualitative studies is an important factor to identify potential facilitators and barriers to treatment. Longitudinal research on the impact of the bidirectional relationship between MI and SA may aid in identifying reproducible patterns to support efforts to decrease the incidence of SA and the associated negative physical and mental outcomes.

Public Policy Implications

From this review, PMH nurses can have an impactful role in decreasing SA among patients by screening for previous or recent SA, providing treatment for negative sequela by collaborating with other health care professionals, and advocating for evidenced-based

treatments. The literature suggests that SA victims who were victimized while in the military may have better health results if treated in a timelier manner before they are discharged from their military duties (Schuyler et al., 2017). Military policies and procedures would need to address the necessity for treatment before release. Appropriate evidenced-based interventions post-SA could also achieve improved health outcomes.

According to the Institute of Medicine (2011), nurses have been strongly encouraged to participate and collaborate with others in improving the quality of healthcare in the U.S. by working to address public health issues with effective prevention interventions and improving care provided. PMH nurses are well positioned to lead efforts to disseminate this new knowledge about the risk of MI and SA into their practice and collaborate with other disciplines, including sexual assault nurse examiners (SANE), emergency room providers, victim advocates, law enforcement, and primary care providers. Additionally, an often-overlooked partner in this effort would be state agencies that oversee victims' reparation funding to authorize payment for evidenced-based treatment for victims of SA.

Limitations

Several limitations were identified in this literature review on how SA and MI intersect. First, researchers varied in their inclusion criteria for MI and did not differentiate between severities of MI. In some studies, major depression and bipolar disorder were included alongside schizophrenia. Additionally, the search method employed may not have identified all relevant studies including grey studies in process.

Furthermore, there is a lack of an evidence-based method for interviewing a patient to elicit previous history of SA and no clinical standard for interventions for a SA in reducing the vulnerability for SA in those patients with MI. Although researchers noted the one sure way to

prevent SA is to stop would be offenders from committing such offenses (Conley et al., 2017), the literature reviewed did not produce any effective intervention methods aimed at the offenders.

Conclusion

SA is a major public health issue in our communities and especially in those struggling with MI. The increased vulnerability from MI for sexual violence has not been addressed for screening or prevention strategies. Best practice is screening for history of SA in all patients. Developing an evidence-based screening tool for clinical practice (mental health & general practice) to assist with identifying those vulnerable to SA victimization offers an opportunity for future work.

If those with MI are screened for history of SA and receive appropriate mental health treatment coupled with the implementation of prevention strategies, the risk for sexual victimization could be reduced. Providing these basic services may avert a SA and prevent the onset or worsening of a MI for some individuals. Considering the negative sequelae that occurs from SA victimization, PMH nurses should ensure adequate interventions are offered to assist patients to overcome such a traumatic life event. Assisting patients to understand their vulnerability and consequences is one of the single most important services that PMH nurses can offer individuals in the communities that they serve.

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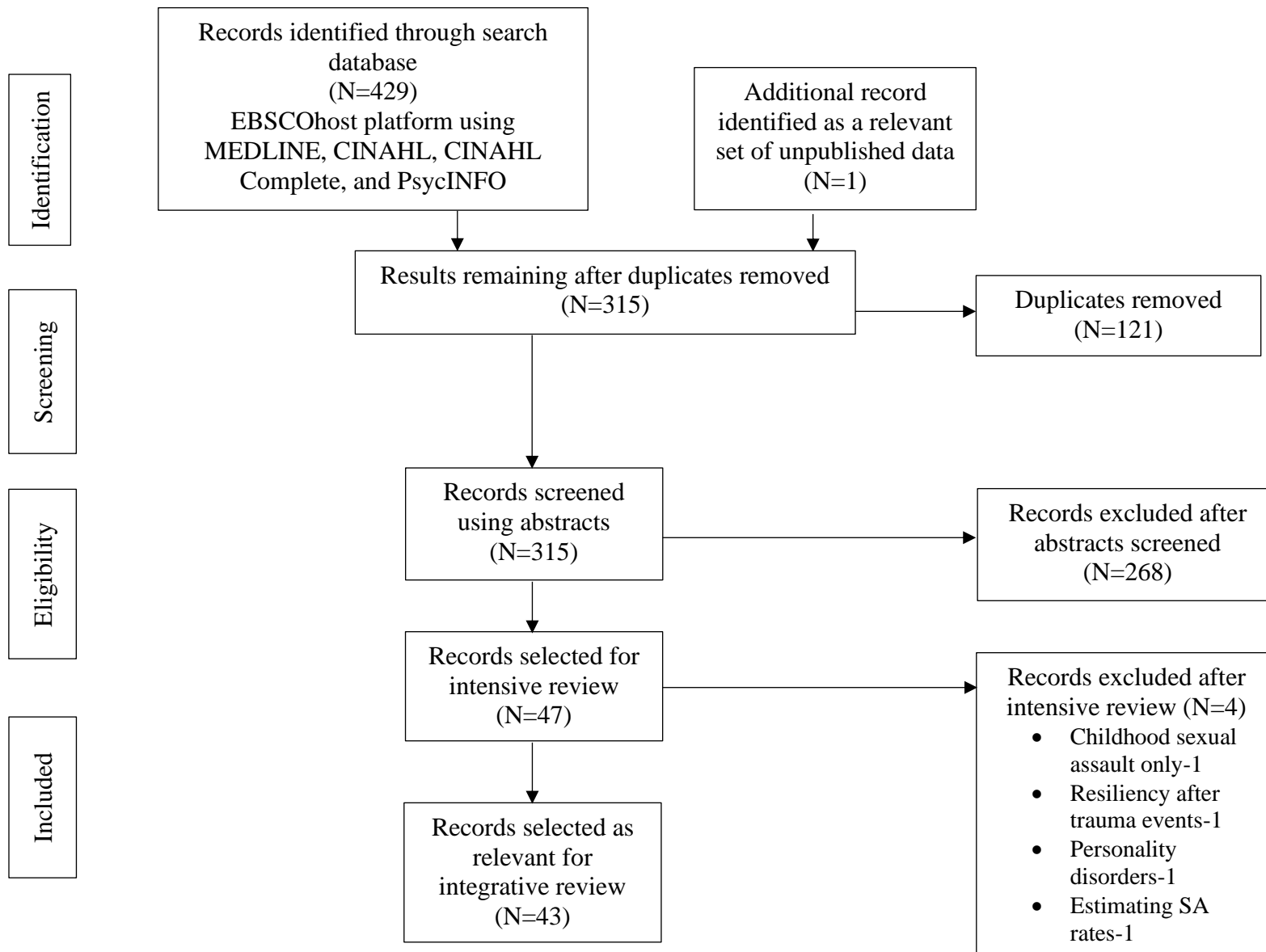


Figure 1. PRISMA Flow Chart of Selected Studies.

Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and MetaAnalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

Table 1. Integrative Evidence: Pre-Existing Mental Illness is a Vulnerability

First Author Year Evidence level/ Quality	Study Design	Sample and Setting	Key Findings		Limitations
			Pre-Existing MI	Conclusion	
Carey et al. (2018) III/A	Prospective	N=483 Freshman female college students from a private university in Northeastern U.S.	Anxiety Depression	1 in 6 reported anxiety and 1 in 8 reported depression at the start of college before any SA.	Self-reported data collection Prospective design may have affected the level of MI at the end of the term Sample was dependent on volunteers 13% failed to complete the follow-up assessment
Culatta et al. (2017) III/A	Longitudinal	N=1171 Females from Southeastern U.S. universities from 1990- 1995	Depression	Depression increases vulnerability for revictimization. Vulnerabilities for revictimization possibly related to first SA.	Length of time between waves may be too long Lack of diversity of sample Data used was from the early to mid-1990s Examination of SA does not take severity or frequency into consideration
Christ et al. (2018) III/A	Longitudinal	N=102 Females and males with depression N=140 Females and males with remitted depression in the Netherlands	Depression	Vulnerability appears to be associated with acute depressive state. Effective treatment to remission may decrease vulnerability to victimization.	Self-report questionnaire vulnerable to recall bias Power to detect predictors was impacted by low prevalence of victimization Cross-sectional design inhibits firm conclusions
De Waal et al. (2017) II/A	Cross- sectional	N=243 Females and males 18 years or older in the Netherlands	Anxiety Mood disorders Psychotic disorders	Severe psychopathology may inhibit the ability to effectively identify and manage threatening circumstances.	Generalizability is of concern due to baseline date from a randomized controlled trial Patients with lack of time or motivation did not participate Self-reported questionnaires subject to recall bias
Dworkin et al. (2017) III/A-B	Meta- analysis and review	N=238,623 from 204 sources international	Bipolar disorders Depression	Psychopathology could increase vulnerability to SA victimization.	Lack of assessment of victim characteristics may have affect heterogeneity Unable to make causal inferences due cross-sectional data Studies used single-item assessments of SA Unable to rule out bias due to self-reported data as a cause for effects All outcomes of SA were not assessed
Khalifeh et al. (2015) II/A	Cross- sectional	N=303 Females and males 18-59 years from 19 community health teams in the UK	Severe MI	Individuals with severe MI have a higher vulnerability for SA victimization compared to persons with no severe MI.	Lack of data on violence perpetration on control group Cross-sectional design and possible historical victimization inhibit sure conclusions about direction of causality Past year violence occurred after the onset of SMI Results may not generalize to those who do not require ongoing psych care
Khadr et al. (2018)	Prospective	N=491	Anxiety Depression	MI is a vulnerability for SA for adolescents. Youth either	South Asians and males under-represented Variation in timing of assessments

Table 1. (continued)

III/A		Adolescents 13-17 years in London, UK	Other psychiatric difficulties PTSD	reported or had risk factors associated with a diagnosis of a pre-existing MI six months prior to SA.	Possible overestimation or underestimation of MI severity Absence of psychological assessment before SA or a comparable control sample limit assessment of causality and generalizability
Krahé et al. (2017) III/A	Longitudinal	N=2425 students Females 1415 Males 1010 from Berlin, Germany universities	Depression	Depression should be acknowledged as a vulnerability factor for SA victimization.	Depression levels were measured as low, need to repeat with sample with high depression ratings Lack of inclusion of prior experiences that may cause depression or other causes for depression during the study period Lack of diversity in the sample
Latalova et al. (2014) III/A-B	Systematic review	N=11,083 females and males from 34 international research studies	Severe MI (Includes bipolar and depression disorders)	Severe MI increases the risk of violent victimization.	Methods varied widely among included studies Unclear definitions of severe MI and substance use Limited information in regard to the role of treatment in prevention Most studies were cross-sectional design
Manning et al. (2019) III/B	Retrospective	N=180 females and males, 18 years and older from St. Mary's Centre UK	Anxiety Depression	MI is a vulnerability for SA victimization.	Clients without MI were represented by a smaller sample of the population
Miles et al. In press	Retrospective	N=5426 from multi-sites in western U.S. state	Full spectrum of MI diagnoses.	Any MI is a vulnerability for SA.	

Table 2. Integrative Evidence: Negative Sequelae of Sexual Assault

First Author Year Evidence level/ Quality	Study Design	Sample and Setting	Key Findings		Limitations
			SA Negative Outcomes	Conclusion	
Angelone et al. (2017) II/A	Cross-sectional	N=656 Female, adolescents and college age from a mid-sized public university in the northeastern (NE) U.S.	Substance abuse	High substance abuse among female SA victims with recommendation for SA prophylaxis be initiated in adolescence.	College convenience sample, Racial ethnic and sexual orientation specific to the college, Unclear how many SA events for participants, unclear why participants sought treatment
Baker et al. (2016) III/B	Longitudinal	N=338 female college students at a Midwestern U.S. public university	Poor academic college performance	The mental anguish of SA victimization was associated with a lower grade point average and 28% rate of discontinuing college.	Did not address all predictors of academic performance Lacked the recommended minimum of three time points Inclusion criteria of complete records limits generalizability Type, intensity, or duration of SA were not analyzed but may be more strongly related to academic performance
Brooker et al. (2016) III/A	Prospective	N=7403 Females and males 16 years and older in the UK	Substance abuse Suicidality	Rape is associated with increased risk for drug abuse, alcohol misuse, and suicide attempts.	National data that was examined limited the conclusions made.
Breslau et al. (2012) III/A	Prospective	N=34,653 Females and males, 18 years or older in the U.S.	PTSD	SA victims have an increased risk for developing PTSD above exposure to other forms of trauma.	Retrospective design decreases the accuracy of data collected PTSD measured using only one traumatic life event PTSD symptomology is not always a result of trauma Lack of study on all predispositions for PTSD
Carey et al. (2018) III/A	Prospective	N=483 Freshman female college students from a private university in a NE U.S. state	Anxiety Depression	MI symptomology was clinically significant following a SA among freshman college students. Anxiety P=.047 Depression P=.020	Self-reported data collection Prospective design may have affected the level of MI at the end of the term Sample was dependent on volunteers 13% failed to complete the follow-up assessment
Cividanes et al. (2019) IIIA/B	Systematic review	N=18,492 from 9 English language studies	PTSD	Sexual violence negatively effects the capacity to cope. Childhood sexual abuse predispose to adult SA revictimization which is linked to PTSD creating a triad	Lack of longitudinal studies Inability to assess childhood sex abuse and adult SA concurrently PTSD symptomology versus PTSD used by some researchers

Table 2. (continued)

Combs et al. (2014) III/A	Cross-sectional	N=750 College aged females from large public university in central U.S. state	Anxiety Depression Drug abuse	After SA, some individuals may cope negatively by one or both of the following ways: internalizing behaviors or externalizing behavior resulting in a strong association between SA and the onset of a psychiatric disorder.	Prospective predictions are made about the hypotheses Data does not reflect sequential prediction of a relationship between the variables Web-based self-report questionnaire for data collection Lack of diversity among sample
Dworkin et al. (2017) III/A-B	Meta-analysis and review	N=238,623 Females and males from 204 sources international	Bipolar and obsessive-compulsive disorder	MIIs are strongly associated as negative outcomes of SA.	Lack of assessment of victim characteristics may have affect heterogeneity Unable to make causal inferences due cross-sectional data Studies used single-item assessments of SA Unable to rule out bias due to self-reported data as a cause for effects All outcomes of SA were not assessed
			Suicide	Suicidality is more strongly associated with SA than other forms of trauma.	
Hannan et al. (2017) III/A	Longitudinal	N=1045 Females college age from a Midwestern U.S. university	Alcohol related problems PTSD	Childhood sexual abuse is associated with adult SA and PTSD both of which are related to alcohol misuse.	Due to sample compositions results may not be generalizable Retrospective reporting is subject to recall bias Unable to consider the severity and frequency of childhood abuse SA and PTSD only partially mediated the relationship between childhood sex abuse and adult alcohol related problems Did not assess child or adolescent alcohol use School shooting during study could have affected alcohol use by participants
Heerde et al. (2016) III/A-B	Systematic review	N=23 studies that included female and male homeless youth from English language studies published from 1990-2013 U.S. and Canada	Substance abuse	Alcohol misuse and substance addiction was identified as contributing factors in a large amount of SAs. Substance use is a method of coping after being victimized. Victims are targets due to the inhibiting effects of mind-altering substances.	Multiple forms of victimization may have been experienced, but only SA and sexual risk behaviors were evaluated Omission of studies with self-reported police contact of SA victimization Excluded non-peer reviewed literature
Jeon et al. (2014) III/A	Cross-sectional	N=12,532 Females and males 18 years or older from Korean households	Suicide	SA victims have an increased risk of lifetime suicide attempts.	Recall bias due to retrospective reports of cross-sectional design Associations made verses causality False negatives on the questionnaires may underestimate LSA and depression Non-responsiveness by participants with MI

Table 2. (continued)

					Lack of in-depth evaluation of causes of feelings of worthlessness
Karlsson et al. (2018) II/B	Literature review	N=32 SA focused articles N=11 MI focused articles From studies conducted in U.S. jails and prisons	Prison incarceration	Female inmates had disproportionately higher rates of SA victimization, MI, and substance use in comparison to male inmates and community females 50–66% CSA, 28–68% ASA, and 56–82% lifetime sexual assault	Some articles that may be appropriate for this study could have been missed due to the search terms utilized Used terms that may be outdated due to lack of inclusion in DSM-5
Lowe et al. (2014) III/A	Longitudinal	N=1360 Female and male adults 18 years or older from an urban Midwestern U.S city	Post-traumatic stress (PTS)	Assaultive trauma was associated with PTS symptomology. PTS more likely to increase the chances of exposure to future trauma.	Lack of in-depth information about traumatic event Unable to determine how personal characteristics influenced non-assaultive vs assaultive trauma Unclear how trauma and PTS relate over time Retrospective bias may increase correlations between PTS and trauma Instrument to diagnosis PTS has low sensitivity PTS symptomology may be the result of general stress and not just trauma PTS assessment was linked to the “worst” traumatic event
Moreland et al. (2018) III/A	Longitudinal	N=3614 Females adolescents from urban U.S. households	Alcohol and drug abuse PTSD	Child SA was associated with PTSD, alcohol use, and drug use.	Retrospective self-reported data Some measures that were to be repeated from previous studies were modified Unsure if PTSD symptoms have a direct link to childhood SA Substance use may not have been fully assessed Limited number of high-risk variables Excluded adolescents without household telephone numbers
Parr. (2020) III/A	Cross-sectional	N=50,438 college students from multiple U.S. colleges	Anxiety Depression Suicidality	SA victims have higher odds of co-occurring MI following the assault regardless of gender Depression females 34% males 27% Anxiety females 31% males 20% Suicidality females 12% males 10%	Cross sectional design limits determining causal effects of SA on MI

Table 2. (continued)

Sachs-Ericsson et al. (2014) III/A	Cross-sectional	N=1228 Females and males 57-85 years old in the U.S.	Symptomatic physical and psychological health problems	Lifelong physical and mental health complications are associated with SA.	Cross-sectional design prevents chronology of results Cannot identify causality of SA on health late in life Psychometric limitations due to one-item question on physical health Low number of male participants Lack of inclusion of other life stressors in analysis
Santaularia et al. (2014) III/A	Cross-sectional	N=4886 Females 18 years or older in a Midwestern U.S. state	Chronic physical and mental diseases/disorders	SA victimization is associated with a high rate of physical and mental health disease and disorder development.	Limitations on survey questions prevented evaluation of specific details that may affect health outcomes of SA Underreporting due to self-reported data
Short et al. (2020) III/A-B	Meta-analysis	N=1353 from N=10 studies	PTSD	PTSD post SA can be prevented by implementing treatments before PTSD symptoms develop	Studies included varied in the methods used Small amount of available studies to include Not generalizable to chronic PTSD or other trauma
Tiihonen Möller et al. (2014) III/A	Longitudinal	N=317 Females 18 years or older from an emergency SA clinic in Stockholm, Sweden	PTSD	Pre-existing MI appears to be a predictor of vulnerability for developing PTSD following SA.	Bias due to 37% of participants not the follow up assessment Lack of information on women who do not seek help after SA
Wadsworth et al. (2013) II/B	Integrative review	N=171 articles in the U.S.	Dysmenorrhea Dyspareunia Hematuria Sexually transmitted diseases Urinary frequency/urgency	SA victims struggle with sexually related medical issues that are related to a SA itself or risky health behaviors.	Cross-sectional studies limit known literature Limited generalizability across populations
Walsh et al. (2014) III/A	Cross-sectional	N=1763 Female adolescents N=2000 Female college students N=3001 Females residing in households in the U.S.	Illicit drug abuse Prescription drug abuse SA revictimization	SA revictimization is heavily associated with non-medical use of prescriptions drugs and illicit drug abuse among adult victims; one in five adolescents report this type of substance abuse after revictimization.	Small size of some aspects of the data limit ability to make interpretations Cross-sectional design limits the temporal interpretation of the results Dose response between rape and substance was not examined
Yalch et al. (2018) III/A	Cross-sectional	N=407 Female veterans 18-70 years old from a Veteran's hospital in the U.S.	PTSD Substance abuse	Military SA victims are more likely to struggle with substance abuse and PTS as co-occurring disorders.	Cross-sectional design limits the temporal interpretation of the results Data collected via self-report

Table 3. Integrative Evidence: Implications for Practice

First Author Year Evidence level/ Quality	Study Design	Sample and Setting	Key Findings	Limitations
Breiding et al. (2014) III/A	Cross-sectional	N=6897 females N=5848 males 18 years or older in U.S. English and Spanish speaking households	SAs can follow similar patterns and characteristics such as high occurrences during adolescents or young adulthood which has implications for implementing prevention methods.	Low response rate at 33.1 % Self-reported data may underestimate the prevalence and is vulnerable recall bias Certain populations may not be well represented due to telephone survey Unable to assess the impact of specific violent behaviors inflicted on victims
Conley et al. (2017) III/A	Prospective	N=7603 First year incoming female and male college students from NE U.S. state university	SA revictimization can be as high as 40%. All approaches to stop future trauma are appropriate per victim needs.	Unable to generalize to all populations Data and measurements not designed specifically for this study Terminology may be interpreted differently by participants Possible overlapping on timeframe of data collection
Elklit et al. (2013) III/A	Prospective	N=148 females 12-71 years from Denmark	Personality types and character traits (negative affectivity & global self-blame) should be considered as risk factors for SA and as predictors for the risk of developing PTSD after a SA.	Sample limited only those who sought care which affects representation Follow up group was potentially more traumatized Single item used to measure support system potentially low in sensitivity Some terminology on questionnaire was possibly interpreted differently by each participant Data was self-reported unsupported by interviews
Gilmore et al. (2019) I/A	Randomized control trial	N=154 Females in a metropolitan U.S. city	SA victims with a prior SA who received pleasant imagery and relaxation instruction (PIRI) video were significantly less likely to abuse prescription opioids in comparison to victims who received treatment as usual (P=0.02) at 1.5 months post-assault	Does not include population from rural setting. Small sample size The intervention did provided data so that conclusion in regard to MI could be determined Limited to girls and women
Littleton et al. (2013) III/A	Longitudinal	N=217 European Americans N=272 African Americans Mid-west U.S. city	All efforts to prevent revictimization should be implemented as clinical interventions.	Representation may not be reflective of the population due to sample comprised of respondents to an advertisement Severity and chronicity of sexual violence events was variable Only obtained PTSD symptomology based on most serious events Self-reported data without follow-up interviews
Källström et al. (2017) III/A	Retrospective	N=2500 young Swedish adults born between 1987-1991	To provide an adequate response to abuse youth should be asked specifically about not only abuse predicated by family and peers but also by persons categorized as acquaintances or strangers as this later	Retrospective self-reporting subject to recall bias MI may be associated with other potentially traumatic childhood events Lack of longitudinal data

Table 3. (continued)

			group more frequently victimizes youth sexually.	
Kessler et al. (2017) III/A	Cross-sectional	N=68,894 Females and males from 24 countries international	Screening for SA is a justifiable assessment with over 70 percent of the world's population being exposed to some type of trauma, including SA.	Underrepresentation due to recall bias PTSD diagnosis is limited by retrospective reports of cross-sectional survey Predictors of PTSD are limited by exclusion of prior psychopathology
Mgoqi-Mbalo et al. (2017) III/B	Cross-sectional	N=100 Adult females from three South African provinces	Evidenced-based prevention methods should be supported by local communities.	Cross-sectional design inhibits causal and predictive relationship conclusions Generalizability is limited to one ethnic group Sample only includes victims who sought care and law enforcement which overrepresent the severity
Mokma et al. (2016) III/A	Retrospective	N=929 Female college students 18-22-year-olds college from a university in the state of Ohio in the U.S.	Self-blame with or without a history of childhood sexual abuse is associated with adult SA, SA revictimization, alcohol misuse, and PTSD.	Retrospective design effects conclusiveness of the results Only examined PTS symptomology vs PTSD Lack of focus on type of self-blame Lack of diversity in age, ethnicity, education, and socioeconomic status Small sample
Rosellini et al. (2017) III/A	Retrospective	N=4238 Female U.S. Army soldiers	Recommend early treatment interventions for SA victims to achieve the best outcomes.	Limitations on timeframe of data collected Unrestricted administrative records with limited representation of female SAs Generalizability may not be appropriate to all female Army soldiers Associations of SA victims being treated may be overinflated Excluded male victims
Schuyler et al. (2017) III/A	Cross-sectional	N=2208 Male N=327 Female Veterans in two Western U.S. counties	Military SA is associated with PTSD, substance abuse, and depressive symptoms. Victims should be assessed and treated for SA as soon as possible and before leaving duty.	Cross-sectional design inhibits temporal results Self-reported data Sample from one area of the country Data collection tool limited to one question about SA
Ullman. (2016) III/A	Longitudinal	N=1012 Females 18 years or older in a Midwestern U.S. metropolitan area	Training in self-defense and on being assertive was found to have a positive affect and prevent revictimization	Variations in participant's baseline for the timing of SA Reliability of tool used to assess problem drinking