Running Head: POST-TRAUMATIC STRESS DISORDER

Post-traumatic Stress Disorder: Healing the Body and Mind

Ann Galgano

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Lynne Sanders, Ed.D.
Chairman of Thesis

Dawn McKay, MS.N.
Committee Member

Mark Schmidt, Ph.D.
Committee Member

James Nutter, D.A.
Honors Program Director

21 April 2006
Date

Abstract

Each day hospitals strive to provide optimal care for physically traumatized patients. While the word "trauma" is often associated with the physical injuries of patients in an emergency room or an intensive care unit, the meaning may be significantly different to the one who has been traumatized. At a glance, a patient who enters the hospital as a victim of sexual assault or a motor vehicle accident (MVA) may appear to have sustained only a severe physically traumatic event. If one looks closer and uses other senses such as hearing, touch, and personal, intimate eye-to-eye communication, then one would discover that the injuries penetrate much deeper. Nurses play an essential role in healing not only bodily trauma, but also emotional and cognitive trauma. This research seeks to convey the emotional and mental state of traumatized patients and to discover what the nurse can do to help heal the whole person, not just the physical wounds of their patients.

Post-traumatic Stress Disorder: Healing the Body and Mind

Studies show that more than 100 million Americans seek emergency medical treatment each year for traumatic physical injuries (LiveScience, 2005). Trauma is defined as "Any physical damage to the body caused by violence or accident or fracture etc.; An emotional wound or shock often having long-lasting effects" (WordReference, 2005, para. 1). While the word "trauma" is often associated with the physical injuries of patients in an emergency room or an intensive care unit, the meaning may be significantly different to the one who has been traumatized. Trauma can be a severe, long-lasting emotional wound which can be as disabling as a physically traumatic event. What can nurses do for their patients to promote mental peace and healing? This research seeks to assist health care professionals who are directly involved in patient care to develop an understanding of post-traumatic stress disorder and to assume a role in the prevention and/or treatment of this disorder. The purpose of this research is to determine: 1) the relationship that physical trauma has on emotions; 2) factors that contribute to the development of post-traumatic stress disorder; 3) the effect that trauma has in male versus female patients; and 4) the ways that nurses can assist healing emotionally traumatized patients. Interviews by this researcher will provide antidotal evidence to support the conclusions of the research findings. The subjects will be referred to in the masculine form to avoid gender stereotyping or labeling.

Three types of trauma will be discussed: sexual assault, motor vehicle accidents, and ICU acquired post-traumatic stress disorder (PTSD). PTSD will be defined shortly. At a glance, a patient who enters the hospital as a victim of intense bodily insult may

appear to have sustained only a severe physically traumatizing event. If one looks closer and uses other senses such as hearing, touch, and personal, intimate eye-to-eye communication, one may discover that the injuries penetrate much deeper than physical wounds. Invisible injuries penetrate the mind, heart, and soul of many patients.

Post-traumatic stress disorder (PTSD) is defined as "an anxiety disorder caused by exposure to an intensely traumatic event; characterized by reexperiencing the traumatic event in recurrent intrusive recollections, nightmares, or flashbacks, by avoidance of trauma-associated stimuli, by generalized numbing of emotional responsiveness, and by hyperalertness and difficulty in sleeping, remembering, or concentrating " (Saunders, 2004, p. 11). Many studies have been performed to determine the effect of sexual assault and other factors on the severity of PTSD symptom development. This information is useful in predicting one's response to a traumatic event and subsequently prepares the support provider to aid in the recovery process of these victims.

History

Post-traumatic stress disorder has probably been in existence throughout history. In the medical profession, it has been most often acknowledged when treating men fighting in wars such as in Vietnam. It was first noted in the 1800s and was mistaken as "exhaustion" and "mental shutdown" following a battle (Murray, 2003, p. 1). The treatment for this "exhaustion" was to give the men a break from the fighting by temporarily placing them in the rear. The severity and duration of this stress caused men to become extremely fatigued. In Britain, a syndrome similar to PTSD became

recognized and known as "railway hysteria" (Murray, 2003, p. 1). It was exhibited in persons who had been in railway accidents. In 1876, "soldier's heart" was established as a diagnosis by Dr. Mendez DaCosta for war veterans who experienced hyper-vigilance, arrhythmias and other symptoms associated with what is referred to today as post-traumatic stress disorder (Murray, 2003, p. 1). During WWI the word "shock shell" was developed and followed in WWII by the term "combat fatigue", describing veterans who exhibited stress and anxiety as the result of combat trauma (Murray, 2003, p. 1). "Post-traumatic Stress Disorder" was the term officially designated to these symptoms in 1980 when the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) was published (Murray, 2003, p. 1). It was a subcategory of anxiety disorders. During the time of war, treatment was rarely sought. Murray (2003) concludes his survey, the history of PTSD, with an affirmation that some sort of treatment is essential for the rehabilitation of affected individuals.

Physiological Effects

There are multiple neuroendocrine systems involved in the development and severity of PTSD. The systems involved include the opioid, glutamatergic, noradrenergic, serotonergic, and neuroendocrine. The effects are described as:

> In the short term this [opioids] can produce analgesia. Prolonged stress can lead to a kind of "opiate withdrawal state". Glutamate and GABA [gamma amino butyric acid] are both involved in encoding memory, and excessive activation of the glutamate system may be involved in the development of traumatic memories. By contrast, alcohol and benzodiazepines, which enhance GABA effects and are

"amnestic" agents, may be used by those with PTSD to try to avoid unpleasant memories. The noradrenergic system is involved in symptoms such as anxiety, insomnia, and an excessive startle response. People with PTSD show more NA activation than controls. This may result in decreased receptor sensitivity to NA. Administration of NA can increase PTSD symptoms and cause panic attacks. NA uptake inhibitors (eg tricyclic antidepressants) have been shown to be effective in treating PTSD. The serotonergic system may become dysregulated in PTSD. SSRIs have been shown to be effective in treating PTSD (Murray, 2003, para. 10).

Diagnosis

According to Foa and Riggs (1995) diagnostic criteria for PTSD include at least one re-experiencing symptom, three avoidance symptoms and two hyperarousal symptoms lasting for greater than one month. Re-experiencing symptoms may include intrusive recollections, nightmares about the experience over and over, persistent flashbacks and becoming upset with reminders. Avoidance symptoms include avoiding thoughts about the accident, having amnesia for parts of the accident, having a decreased interest in activities and people and having decreased positive feelings toward others. Hyperarousal symptoms include sleeping difficulty, increased irritability and temper, decreased ability to concentrate, increased state of restlessness, hyperalertness and physiological reactivity. These symptoms, among many others, depict the torturous mental state of those experiencing PTSD. As previously stated, if the symptoms endure for longer than one month, then PTSD is suspected (Foa & Riggs, 1995).

Sexual Assault

The type of trauma that will be discussed first is sexual assault. Sexual violence may be defined as involving "physical force to compel a person to engage in a sexual act against his or her will, whether or not the act is completed or attempted, and includes sexual acts involving persons unable to decline participation" (Koss, Bailey, &Yuan, 2003, p. 131). Ullman and Filipas (2001) examined the effect of traumatic event characteristics and post assault victim responses on the development of PTSD in college students, community volunteers and mental health agency victims. Three hundred and twenty-three adult female sexual assault victims were used for this research. Of these women, 85.9% reported completed rape, 8.4% experienced attempted rape, 4.4% experienced sexual coercion and 1.3% experienced non-consensual sexual contact.

Ullman and Filipas (2001) revealed that the extent of physical injury from sexual assault is not a significant predictor of PTSD symptom severity, inferring that rape may be uniquely traumatic because of its personally intrusive nature. The victim's perception of greater life threat at the time of the assault, however, may be related to greater symptom severity while the victim-offender relationship, whether they were acquaintances or stangers, has little impact on the development of symptoms (Ullman & Filipas, 2001).

When the victim tells others about their traumatic experience as a rape victim, the victim may receive positive or negative social reactions. Negative social reactions are strongly related to increased PTSD symptom severity, while positive social reactions may decrease symptom severity. Discussing the assault is therapeutic for the victim as it

particularly decreases the development of avoidance symptoms, effects that can be negated by any negative reactions received from others by the patient (Ullman & Filipas, 2001). Gavranidou and Rosner (2003) states that, "Rape and sexual abuse are experiences that touch the inner core of the personality and are subject to heavily negative social sanction, and moreover there is substantial evidence in the literature that shows these experiences to be highly pathogenic" (p. 132). Ullman and Filipas (2001) identified five negative social reactions including: 1) taking control of the victim's decisions; 2) blaming the victim; 3) treating victims differently, or providing a stigmatizing response; 4) telling the victim to move on with their life (distraction); and 5) egocentric behavior, or responses where the support provider focuses on their experiences and needs rather than the victim's. Positive social reactions are identified as: 1) tangible aid/informational support; 2) emotional support including expressions of love, caring and esteem for others; and 3) validation/belief, or being nonjudgmental of victim's experience. This study was the first to find that negative social reactions have a significant impact on PTSD symptom severity (Ullman & Filipas, 2001).

Of the five negative social reactions, stigmatizing responses and distraction were found to have the greatest impact on the development of PTSD symptoms. Negative social reactions may be elicited more prevalently in victims that are considered an ethnic minority, have experienced severe sexual victimization, provide fewer details about the experience, and tell more persons about the event. When a support provider stigmatizes or distracts the victim, the victim lacks an outlet for expression and may internalize their feelings, increasing PTSD symptom severity. This also may cause victims to feel as

though they have been transformed by their experience and to feel that they should expect to be treated differently. This indicates that there is therapeutic value in emotional disclosure concerning traumatic events. Positive social reactions are most often elicited when there is less sexual victimization, greater depth of disclosure while retelling the event, and telling of more persons about the assault. Extensive communication of the event, therefore, is therapeutic and receives mostly positive social reaction from others (Ullman & Filipas, 2001).

The research depicted above solely examines the effect of sexual assault and other contributing factors to the development of PTSD concerning female victims. It is imperative to also examine male victims. This has been a difficult group to study as males are less likely to seek help following their assault. Like female victims, the symptoms that males exhibit post assault may vary depending on the circumstances surrounding the assault. The long term effects that sexual assault has on male victims include increased anger, irritability, conflicting sexual orientation, sexual dysfunction and shock. They, like females, may also have flashbacks, intrusive thoughts, sleep difficulties, depression and suicidal ideation (Rogers, 1997).

A case has been examined in which a man living in a homeless shelter was forcibly anally penetrated by three residents with the assault lasting approximately 20 minutes. The victim was too shocked to give a police statement or to press charges and he suffered with chronic symptoms of PTSD. He experienced flashbacks and intrusive memories seven times a day, each time feeling as if he was being raped again. He had nightmares, he no longer masturbated or entered into relationships and he avoided men at

all costs. While bathing, he repeatedly scrubbed his anal region and would avoid eating big meals to inhibit defecating which reminded him of the rape. His help-seeking behavior centered on the depression that he experienced from the assault. He resorted to alcohol and anger as emotional outlets, mainly when his fear was triggered (Rogers, 1997).

Collaborative Nursing Care

While forensic nurse examiners and psychiatric nurses play the primary roles in the treatment of sexual assault victims, it is imperative for all nurses to be prepared to assist patients who are victims of all types of trauma. Through knowing the effects that PTSD has on victimized patients, factors that contribute to the development of PTSD, and the ways in which different genders react to trauma, it becomes easier to help these victims who have been traumatized, body and mind, in life changing ways.

Forensic Nurse Examiners (FNEs), or Sexual Assault Nurse Examiners (SANEs), play a crucial role in beginning to rehabilitate of the mind of a victim immediately after the assault. Long-term effects of this traumatic event comprise the symptoms associated with PTSD including fear, depression, anxiety and difficulty trusting others. The nurse is the next person after the rapist to have close, intimate interaction with the victim and can set the course for healing and recovery if the victim seeks this form of medical attention. It is imperative that the nurse builds a trusting relationship with the victim and believes their statement concerning the event that took place. They must provide reassurance that he or she is not at fault to any degree. Nurses must remember that they need to approach each victim's case with a non-judgmental perspective without projecting any accusing

speculations that they were at fault. These actions are consistent with avoiding any negative social responses such as stigmatization and distraction, which may increase the severity of PTSD symptoms (Girardin, 2005).

Girardin (2005) provides research concerning sexual assault examination. In the history of sexual assault examination, it is evident that the efficiency and quality of care provided for sexual assault victims in the emergency department (ED) was compromised by short staffing and by overcrowding with urgent, critically ill patients. While it is imperative to tend to the immediate needs of patients with life-threatening injuries, it is almost equally imperative to tend to the visible and invisible injuries of a rape victim. A delay in caring for these individuals may result in a loss of evidence. There is also a risk that the victim may become discouraged and withdraw their complaint and simply return home. His or her experience in the ED may also be considered a "second assault" or cause "compounded traumatization" if they are not treated in a timely manner and with dignity.

As previously stated, if the victim receives negative social reactions from support providers they are likely to develop more severe PTSD symptoms. Before the role of SANE nurses was developed in 1976, a victim may have had no choice but to have a male ED physician examine him or her, coerced against their will. He or she may have had to wait an extended period of time for the exam while feeling filthy, unable to drink or void and sitting with a police officer in an uncomfortable environment. The physician performing the exam may need assistance in reading the directions for the rape kit as forensics is not their area of expertise. They may stumble through the exam and may also

require a biomedical photographer to capture the wounds of this individual on camera, further invading his or her privacy. The physician perhaps may fail to call the victim by name and may speak loudly and may state that he does not believe his or her story. Their clothes are taken off for evidence and he or she is driven home in a police car wearing a patient gown (Girardin, 2005).

The SANE program was developed to avoid this "second assault" experienced in the ED. The SANE nurse collects evidence within forty-five minutes of the call from law enforcement and therefore relieves the ED staff of caring for these victim's needs. The SANE nurse acknowledges that while the physical injuries may not be life threatening, there is an urgent need for evidence collection, crisis intervention and emotional care. It is the job of the SANE nurse to assess for emotional and physical findings and to avoid providing any negative social reactions. They are also responsible for providing advocate support for the victims and to ensure that the victim feels safe. If they do not feel safe then the nurse may refer the victim for safe housing. The SANE nurses may also contact other nurses such as psychiatric nurses for the subsequent emotional and mental injuries that this patient has experienced. This identifies the need for collaborative nursing care and for nurses to work together and contact each other when there is a need that they alone cannot meet (Girardin, 2005).

Psychiatric Intervention

Concerning mental health and the role of psychiatric nurses in this area of trauma, it has been proven that cognitive-behavioral therapies that use imaginal and real-life exposure is helpful and is superior to other therapies. A priority for these victims is to

manage the risk of harm to self and others as they may become depressed and attempt suicide and have a difficult time controlling their anger, seen particularly male victims. Other mental health issues include somatization disorder, schizophrenia, panic disorder, social phobia, obsessive compulsive disorder, general anxiety disorder and depression. It is important to reduce the severity of depression, which may subsequently reduce the risk of suicide. A combination of medications and non-pharmacological treatment is needed. Pharmacotherapy such as antidepressants can be beneficial as they can relieve symptoms of PTSD and can subsequently aid the victim in participating in psychotherapy (National Center, 2005). Victims may attempt self-intervention using nonpharmacological approaches and defense mechanisms such as distracting themselves from thinking about the intrusions after they occurred and using cognitive avoidance (Bryant & Harvey, 1998). Women are more likely than men to experience PTSD and are therefore more likely to seek treatment (New & Berliner, 2000).

Treatment for PTSD related nightmares has been under study. Traditionally, nightmares are viewed as "uncontrollable processes that spring from the unconscious mind as a manifestation of unresolved conflict often resulting from earlier traumatic experiences..." (Krakow, Hollifield, Schrader, Koss, Tandberg, Lauriello, McBride, Warner, Cheng, Edmond, Kellner, 2000, p. 520). Although described as "unfinished business", some research states that nightmares can be useful in desensitizing victims to the traumatic experience. Nightmares, therefore, may represent a deeper problem, but some research states that nightmares are not a target for treatment of PTSD since they provide the benefit of assisting in desensitizing the victim to the traumatic event. Other

research states that increased exposure to the traumatic event can worsen symptoms or PTSD. There is, evidently, still some controversy in the therapeutic nature of nightmares (Krakow et al, 2000).

As previously stated, it is important to avoid negative reactions when interacting with the patient. If the nurse shows a surprised expression at the victim's account of the rape, this will reinforce negative reactions that the patient has previously received. Specific to male victims is the possibility that he ejaculated involuntarily during the rape and it is important to not allow this fact to cause the support provider to give a stigmatizing response. Female victims may also involuntarily experience pleasure, causing them to feel immense guilt and contemplate if they were at fault. It is important to be aware of the different ways that people are assaulted so as not to provide a surprise reaction to the victim. It is also important to note that male and female victims may specifically want to work with a female nurse and therapist (Rogers, 1997).

Personal Encounter

This researcher interviewed a rape victim to provide antidotal evidence to support the conclusions of the research findings. The assault occurred early in the summer of 1994 and the interview took place on January 26, 2006. This was the first time the subject experienced trauma of this magnitude. He states that he had a professional relationship with the man that raped him. The victim was quitting his job and he was told that there would be a "going away" dinner for him. His co-worker, the attacker, picked him up for the "dinner" and proceeded to drive until they arrived at the attacker's home. When they arrived, the victim became very suspicious and alarmed. He was told that they were going

to a restaurant to meet with their other co-workers for dinner. Soon after arriving to the house, the subject was violently raped in the bedroom and describes this experience as terrifying. He was in fear of his life.

After the assault, the attacker brought the victim to a building unfamiliar to the victim and threw him on the ground. He then threw a piece of paper with his phone number on it on the victim's body and said "call me when you get where you are going". After the attacker left, the victim walked a few blocks to find a telephone to call his friend who quickly came to pick him up and brought him back to the friend's home. The friend encouraged the victim to go to the emergency department (ED) for help as the bleeding from the trauma persisted. Upon entering the ED, the victim wrapped a sweatshirt tightly around his face so that no one would see who he was. The first ED nurse he encountered was described by the victim as being "cold". She soon brought in a sexual assault nurse examiner (SANE) who was very positively perceived by the victim and was described as compassionate and empathetic.

Something that had a positive impact on the victim was that the nurse asked permission to touch the victim and to give him a hug. This made the victim feel respected and dignified. The nurse thoroughly explained everything that she would be doing throughout the examination, which also made him feel comfortable. The nurse continuously reassured the patient, telling him that he did the right thing by going to the hospital and telling him that he is not at fault for the occurrence of this event. The nurse took her time and did not make the victim feel that she was in a hurry to get through the exam. The nurse made the victim feel like he was worth her time and was very important

to him. She also asked the victim if he wanted her to contact his Pastor. This made the victim feel supported and empowered.

When the exam was completed, the victim asked to take a shower. During that time the nurse stood outside the door and talked to him the entire time. This was therapeutic for the patient. The nurse gave the victim her phone number and the phone number of another support provider. The next day the victim called the nurse to ask some medical questions about what he is experiencing. In addition to answering the victim's questions, she also asked if he slept well, if he talked about his experience with others, and if he felt safe. Again, this was therapeutic for him.

He experienced many symptoms that are characteristic of PTSD. One of these symptoms is nightmares. He says that he experienced nightmares for about the first year following the event. He would envision the event occurring over and over and would feel guilty again and think about what he could have done differently to prevent it. He had multiple flashbacks while having an impaired memory and recollection of events. The day after this happened he tried to sit down and journal about his experience and noticed that pieces of the night were missing until about four days after the event. He experienced an impaired level of concentration, impaired ability to learn, hypervigilence, a difficult time trusting people and occasional violent outbursts expressed by throwing things. He also experienced depression, shame from feeling invaded and feeling like he couldn't protect himself or others, low self-esteem while overcompensating by being a perfectionist, and an inability to feel love for himself.

One of the most difficult times was going through the court process. He didn't win the case against the rapist and the rapist went free, making him feel infuriated. A stimulus that brought back memories of his experience was the "smell" of black people. His rapist was black, and he would be reminded of the experience each time he smelled perhaps the self-care products mainly used by the black population. He was very frustrated when he got married and felt that he was terrified to open up to his spouse sexually. Complete healing didn't come until approximately nine years after the event. At this time he felt compelled to go find his attacker and tell him that he forgives him. He didn't want the attacker to have mental control over him anymore. He was not able to find the attacker but still possessed mental peace and forgiveness. For a long time the subject would hate the dark, sit in the house with a knife by his side and not trust others. Nine years later it was time to be released from these tormenting thoughts. It was time to forgive and to heal.

When asked the question, "What suffered more, your body or your mind?" he said that his mind did and that "he would have rather been run over by a car than raped." Perhaps this confirms that mental anguish is more painful than physical anguish. When asked, "Is talking about the experience more therapeutic or more painful?" he stated that it was more therapeutic. The subject received many positive social reactions in response to the event that he experienced. He anticipates that his PTSD symptoms would have been intensified if the reactions that he received from others were negative ones. Evidently, a strong support system, extensive communication about the experience and positive social responses are crucial to protect the victim from the symptoms of PTSD.

The nurse can play a crucial role in providing the support and positive responses immediately necessary for rehabilitating the troubled minds of these victims.

Motor Vehicle Accidents

Another form of trauma that is very common and is crucial to discuss is that of motor vehicle accidents (MVAs). Extensive research has been conducted to determine the effect of MVAs on both adults and children. McDermott and Cvitanovich (2000) conducted research concerning post-traumatic stress disorder in children following motor vehicle accidents, distinguishing the differences between child and adult responses to trauma. Adult symptoms of PTSD are characterized by nightmares, intrusive memories, flashbacks, emotional numbing and impaired social confidence. In addition to these symptoms, children may also experience diminished academic achievement and altered social interaction with family members. MVA victims of various ages may have a different attitude toward driving or riding in a vehicle, they may avoid all non-essential travel, and experience increased level of mood disturbance, anxiety, depression and impaired social and work-related functioning. Predicative of a poor psychological outcome for MVA victims is the extent of physical injury sustained. Also contributing to PTSD symptoms is whether or not the individual experienced a fear of death or perceived that their life was threatened.

Research Study

The patients used in this study were ages 8-13 and were involved in an MVA as either a passenger, pedestrian or bike rider. Upon consenting to this study, these patients were contacted three months after the MVA. The three month period was provided for

purposes of allowing sufficient time for natural resolution of distress and to decrease the rate of false positive diagnoses of PTSD. Results of this study indicate that most children were upset by the MVA, "things" sometimes made the children think it would happen again, the children were more jumpy and nervous than before the MVA, the event replayed in their mind, they had dreams about the MVA, they fought and swore more, and felt so scared, upset or sad that they couldn't talk or cry about it (McDermott & Cvitanovich, 2000).

Keppel-Benson, Ollendick, and Benson (2002) conducted research concerning children in MVAs. This research examined the occurrence of PTSD-related symptoms following MVAs, the co-occurrence of other psychiatric disorders, and a prediction of the number of PTSD symptoms using pre-trauma, trauma-specific and post-trauma variables. There were 50 participants in this study ages 7-16 in addition to one of their parents. These children were injured in automobile accidents either as passengers, pedestrians, or bicycle/moped riders. Accidents occurred 2-18 months prior to participation in the study. Parents and children were interviewed separately with consent obtained from both. 70% of children used for this study were passengers, 20% were on bicycles or mopeds and 10% were pedestrians.

Results reveal that the most frequently experienced symptom of PTSD is re-experiencing in which 56% of children report having at least 1 of these symptoms, 24% of the subjects experienced increased arousal, and 16% of children experienced avoidance symptoms. Seven children met PTSD criteria and 5 met criteria for specific phobias such as riding in a car. Concerning pre-trauma variables, it was discovered that

children who have been previously involved in an accident have fewer PTSD symptoms on subsequent accidents. Age and gender are not related to PTSD symptoms; however, injury severity and mode of accident are positively related to the number of PTSD symptoms. Bicyclers and pedestrians experiencing more symptoms than passengers. High levels of social support are strongly related to fewer levels of PTSD symptoms. Immediate support from doctors and nurses has decreased PTSD symptom severity, particularly diminishing the likelihood of developing avoidance symptoms. As the nurse talks about the experience with the victim, they are discouraging the victim from avoiding thoughts about the accident and helping them to work through their perceptions of the experience (Keppel-Benson, Ollendick, & Benson, 2002).

Gender differences

Bryant and Harvey (2003) examined gender differences in response to MVAs and also presented the idea of acute stress disorder (ASD) as being predictive of PTSD. ASD describes an acute trauma reaction that is associated with experiencing at least 3 dissociative symptoms. It is thought that ASD is preliminary to the development of PTSD. Dissociation in relation to trauma can be described as a "fragmented encoding" of the event, which may impede subsequent emotional processing and result in chronic psychopathology. Previous studies have aimed to determine the relationships that are presented here, but have found very mixed results between ASD and PTSD. This is thought to be from gender differences and this present study aims to define these relationships. Women have reported more peritraumatic dissociation than men and, as will be seen, women subsequently experience more cases of PTSD than men. For the

present study, 171 MVA patients admitted to the hospital were assessed for ASD within 1 month post trauma and 134 of them were reassessed 6 months post trauma. The resulting sample contained 79 males and 55 females.

There appeared to be no significant difference in this study whether the subject was a driver, passenger, motorbike rider, pedestrian or cyclist. More males reported more prior trauma than females and males had a higher injury severity score than females. Results of this study revealed that full criteria for ASD was met by fewer males than females and females had higher Beck Depression Inventory scores than males. Six months post-trauma, 57% of males and 92% of females were diagnosed with ASD and met criteria for PTSD. More females than males reported fear of the event, reduced awareness, derealization, recurrent images, and heightened startled response. A positive and negative predictive power was established for each ASD symptom such as fear, helplessness, numbing and derealization. A positive predictive power indicates a positive probability of PTSD developing when that particular ASD symptom is present. A negative predictive power is the probability of not developing PTSD when the ASD symptom is absent. Females reported more predictive power than males for all symptoms and clusters concerning re-experiencing. Males displayed stronger negative predictive power.

The conclusion of the matter is that ASD is a more accurate predictor of PTSD in females than males, as females display stronger dissociative reactions. Since males have experienced a greater amount and severity of trauma, the predictive power of ASD cannot be attributed to predicting these factors. They can predict, however, the presence of

dissociative symptoms and subsequent development of PTSD, particularly in females. This suggests that females are more likely than males to develop symptoms of PTSD after motor vehicle accidents (Bryant & Harvey, 2003).

Nursing Interventions

After discussing the impact that MVAs have on the mind, factors that contribute to the development of post-traumatic stress disorder in these individuals, the specific effects that MVAs have on children and the effect that they have in male versus female patients, it is imperative to discuss the nurse's role in preventing or inhibiting the development of these post-trauma symptoms. As previously stated, high levels of social support are strongly related to less symptoms of PTSD. Immediate support from doctors and nurses has proven to decrease PTSD and diminish the likelihood of developing symptoms of avoidance. Doctors and nurses are likely to be one of the next people that the accident victim interacts with after the accident and therefore play a big role in the immediate rehabilitation of the victim's mind. They play a key role in preventing or inhibiting the development of avoidance symptoms. Support from health care professionals may include words of reassurance, facilitating discussion about the accident and feelings that have surfaced for the victim, consulting other healthcare professionals such as psychiatric nurses if depression or anxiety is a concern and post-discharge outreach for patients who are at risk for developing PTSD (Keppel-Benson, Ollendick, & Benson, 2002). Ullman and Brecklin (2003) indicates that lowering the severity of PTSD will greatly decrease the occurrence of adult medical problems as it is associated with

poor physical health, especially if victimized at a young age. This may be attributed to the affects that PTSD has in debilitating physical, emotional and mental development.

Personal Encounter

This researcher interviewed a motor vehicle accident victim and more information was gathered concerning PTSD. This subject was in an MVA on December 18th, 2005. The date of the interview was January 21st, 2006. Prior to the accident, he never physically encountered a traumatic experience. The one visually traumatic experience that he witnessed was when he was thirteen years old and watched a motor vehicle accident occur between two vehicles and saw a man ejected from his car and land on the pavement. The man was disfigured and ultimately died. The subject was not involved in the accident in any way but merely witnessed it. It is still a very vivid memory for him but he says that it does not contribute to the way he responded to his recent motor vehicle accident.

On December 18th the subject was driving home in the dark and took his eyes off of the road momentarily. He felt a bump in the road and lost control of the car and drove into a ditch, an impact so powerful it totaled his car. He then could not open up the driver's side door and had to roll down the window to get out. He remembers the whole accident and did not experience any periods of amnesia. A fear of life was experienced with subsequent nightmares and flashbacks. He now gets nervous before car trips and is easily upset in the car. When he is a passenger, he feels compelled to tell the driver what to do and can become easily upset in cars. He also drives less than he used to. He feels that most people would feel the same way that he did after an accident. He sometimes

avoids driving as a passenger, driving on dark side roads, riding in particular seats, riding with certain drivers and driving in certain weather conditions, however, the accident has not impaired his ability to ride on a bus or to cross the street.

Symptoms of PTSD that he experienced after the accident include a startled reaction triggered by bumps in the road, loss of interest in activities especially during nighttime, avoiding the area where the accident occurred, and difficulty sleeping the night of the accident. These symptoms were most persistent during the first five days or so of the accident and they still intermittently persist from time to time. He is still very startled when he hears a loud noise or when there is sudden, intense stimulation.

This subject was able to hold an optimistic view concerning the accident and feels that he will now drive at a much safer speed and pay close attention to the road when he is driving. He battled with feelings of guilt that stemmed from the accident, feeling that it could have been avoided had he been more alert. It also put him in an adverse financial situation which adds to the guilt, but with his optimism he wants to take the experience and learn from it. He had a great deal of positive social support from others. It was decided that it was unnecessary for him to go to the hospital, which is unfortunate for this research, but he does testify to the fact that positive social support was a tremendous asset to decreasing symptoms of avoidance and to alleviating the guilt and loneliness associated with the traumatic experience. He also stated that it really helped to talk about the experience and to talk to people who may have experienced the same thing because he felt less lonely and less guilty. People were also nurturing to him and provided reassurance. The testimony of this victim supports that PTSD is very real and can be

produced by terrifying events. It also proves that positive social reactions can be extremely beneficial for rehabilitating the mind of the victims. After speaking with multiple people about the accident, this person felt more at ease and the psychological trauma did not seem as overwhelming. Nurses can play an important role and be a tremendous source of strength and positive social influence.

ICU Acquired PTSD

After discussing how PTSD can develop after an assault or a motor vehicle accident, it is imperative to briefly discuss how patients who entered the hospital without symptoms of PTSD can acquire them from their experience as a patient. This is especially seen in the intensive care unit. While nurses strive to implement life-saving and sustaining measures to keep patients stable, their efforts may cause these patients to develop symptoms of PTSD from stressful events in ICU and the recollection of those events. Some patients have more vivid recollections than others depending on the level of sedation and other factors. The most prevalent memories of stress and discomfort are associated with anxiety, pain, thirst, sleeplessness, disorientation, shortness of breath, inability to move, painful medical interventions, presence of endotracheal tube, suctioning and arterial blood gas sampling. Delirium may also develop, which may increase the risk of developing PTSD (Van de Leur, Van der Schans, Loef, Deelman, Geertzen, & Zwaveling, 2004).

From this information, it would seem that increasing the patient's level of sedation would decrease their memory of stressful events. However, not only will increasing sedation lead to prolonged ventilator dependency and increase the length of stay in the

hospital, it will also increase the amount of delusional memories acquired and subsequently increase symptoms of PTSD. It is best to balance sedation while allowing the patients to have factual recollection of events (Baxter, 2006).

What can the nurse do to prevent the development of these symptoms in their patients? Nurses need to manage anxiety, pain and sleeplessness using medication and by regulating environmental stimuli. They need to assess for thirst in their patients by being attentive to their request for a drink in verbal patients and inspect mucus membranes in nonverbal patients. It is important to orient patients to person, place, time and task regardless of whether it seems that they can hear you or not. One cannot truly know if patients can hear what is being said around them. Nurses need to help patients move their extremities and reposition them to avoid the stress of feeling that they are not able to move. Also, they should suction patients only as needed and inform them that they are doing this. Studies show that suctioning is one of the most frequently remembered stressful events in the ICU (Van de Leur, Van der Schans, Loef, Deelman, Geertzen, & Zwaveling, 2004).

Conclusion

The invisible, penetrating effects that a physically traumatizing event has on a victim's emotional and cognitive health are often overlooked in an effort to heal bodily injuries. A dimension of healing can potentially be neglected if a nurse is not informed about the risk factors and symptoms of PTSD. Research supports that avoiding negative social reactions, facilitating conversation about the traumatizing event, and being attentive to the needs of especially nonverbal patients in the ICU are just a few ways that

PTSD symptom severity can be lessened in victims of sexual assault, motor vehicle accidents and patients in the ICU. A collaborative nursing approach is crucial in situations where the nurse alone cannot meet the emotional needs of the victim. A psychiatric nurse, social worker, and forensic nurse examiner are just a few examples of healthcare team members that can be effective in the interdisciplinary effort to prevent or reduce symptoms of PTSD. Nurses need to be sensitive to this research because, after the victims' traumatizing event, nurses are likely to be next to initiate a physically and emotionally therapeutic relationship with the patient. They are also the ones who spend the most time with ICU patients and need to be aware of what the current research states about preventing or limiting the severity of PTSD in these patients. Sexual assault, motor vehicle accidents and ICU acquired PTSD are just three forms of trauma that deeply affect patients. Interventions should be sought after to prevent PTSD or reduce the severity of symptoms in other forms of trauma in addition to the ones examined by this researcher.

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