Psychoeducational Outcomes: Cognitive Skills in PTSD

By

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May, 2003
To the faculty of Washington State University:

The members of the Committee appointed to examine the project of Carrie E. Holliday find it satisfactory and recommend that it be accepted.

Michael Rice, Ph.D., ARNP
Bobbi Emerson, Ph.D., MSN
Mary Moller, ARNP, CS, MSN
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Mary Moller and Dr. Bobbi Emerson, thank you for your help and agreeing to be on my committee. Thanks especially for all the words of wisdom and believing that I could do this when I doubted myself.

My Father for providing me with support in every way, I can never thank you enough. Your unconditional love and the sacrifices you have made will never be forgotten.

My Mother for her love and caring and to Casey and Sydney for being a constant reminder about what is truly important in life.

Aric, thank you for all your support and love. You were able to ground me when nobody else could. I think you are amazing. We’re finally out of limbo and headed for the future.
Psychoeducational Outcomes: Cognitive Skills in PTSD

By
Carrie Holliday RN, BSN
Washington State University
May 2001

Abstract

The purpose of this project was to examine the effects of a psychoeducational group on the cognitive skills of individuals with Posttraumatic Stress Disorder (PTSD). The symptoms associated with PTSD may be so severe that they are disabling. Medication and individual therapy have proven to help with PTSD symptoms, but a combination of treatments should be used for the best overall outcome. Group participants were asked to score a cognitive assessment scale at week 2 and week 12 of the psychoeducational group. The results of this project indicate that the total cognitive scale scores increased at week 12. Participants’ cognitive symptoms worsened after the psychoeducational class. There was also a relationship between symptom duration, intensity and frequency of cognitive symptoms and the total cognitive scale score for week 12. Studies on treatments for PTSD should be continued in order to find the most effective treatment. The results of this pilot study indicate that a psychoeducational group is one type of therapy that may be a cost effective means to reach the best outcome for these victims.
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Psychoeducational Outcomes: Cognitive Skills in PTSD

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May 2003
Introduction

Scientists have studied stress and the effects of stress on the mind and body for centuries. Yet it wasn’t until 1980 that the American Psychiatric Association recognized Posttraumatic Stress Disorder (PTSD) as a diagnosis. The existence of PTSD is now widely accepted by the mental health field and the general population. The diagnostic criteria for PTSD are outlined in the Diagnostic and Statistical Manual (DSM IV-TR) (American Psychiatric Association, 2000). The diagnosis of PTSD should be considered when an individual is exposed to a traumatic event in which they believe they will suffer death or serious injury, and the response involves intense fear, horror and/or helplessness combined with the other criteria (Table 1). Perhaps the reason for such interest in PTSD is the identifiable etiological component, the traumatic event, which is difficult to identify in other psychiatric disorders (Schnurr, Freidman, & Bernardy, 2002). Examples of traumatic events that can lead to PTSD, include, but are not limited to; rape, assault, child molestation and incest, domestic violence, witnessing murder, involvement in combat and kidnapping.

The psychological consequences of PTSD are extensive. Panic, anxiety, depression, difficulty in concentration, and memory problems are just a few of the difficulties PTSD victims may encounter. The level of psychological comorbidity with PTSD victims is high and some researchers estimate that 88% of men diagnosed with PTSD have a comorbid DSM IV-TR diagnosis (Schnurr, Friedman, & Bernardy, 2002).

While psychiatric comorbidity complicates the diagnosis of PTSD, the medical complications resulting from PTSD confuse the picture even further. PTSD often impacts
and presents as cardiovascular, digestive, endocrine and nervous system problems. These long-term medical consequences of PTSD mask the psychological consequences of PTSD and, PTSD often goes unrecognized or undiagnosed (Brunello, Davidson, Deahl, Kessler, Mendlewicz, et al, 2001).

Prevalence estimates indicate that half of the general population will experience some sort of traumatic event. Approximately 15% of these individuals will develop chronic symptoms associated with PTSD. Estimates also suggest that PTSD is eight times more common than schizophrenia or cancer (Bremner, 02, p.19). “It has been estimated that, on average, a person with PTSD will endure 20 years of active symptoms and will experience almost 1 day a week of work impairment, perhaps resulting in a 3 billion dollar annual productivity loss in the United States” (Davidson, 2001, p. 584). PTSD is also reaching alarming proportions in violent countries. The prevalence of the disorder is certainly startling and warrants further scientific investigation. Despite the alarming statistics, PTSD can be treated successfully (Davidson, 2001).

Origins

Recent studies have provided a clearer picture as to the origins of the symptoms outlined in the DSM IV-TR. The psychological and physiological symptoms do not mysteriously appear for some unknown reason or because of some weakness in the personality structure of the individual. Instead, advancements in neurochemistry and brain imaging show that neurohormones released with stress can change the wiring in the brain (McEwen, 1992, Schwarz & Perry, 1994, Brewin, 2001). Psychologically, it has been proposed that symptoms of PTSD are present due to a person’s inability to come to terms with a traumatic event and the event has overwhelmed their ability to cope (Van
Der Kolk, 1996). Coping mechanisms and neurohormones both play a part in the development of PTSD and explain the presence of symptoms.

As explained in the DSM IV-TR, the traumatic event is replayed in the person’s mind, triggered by either external or internal stimuli. This process is often referred to as a flashback. Each time the trauma is replayed, the body reacts to the memory as if it is happening again (Van Der Kolk, 1996). The body reacts with hyperarousal, an exaggerated startle response and restlessness. The victims cognitively generalize this hyperarousal to the world around them and their world is thought of as an unsafe place. Victims of PTSD maintain the chronic hyperarousal because of their cognitive view of the world. They are unable to differentiate relevant from irrelevant stimuli independent of the nature of the environment. These cognitive changes make living a normal life difficult and resulting challenges arise with relationships, employment and activities of daily living.

Research confirms that adults with PTSD have difficulty with cognitive skills such as memory, learning and concentration (McNally, 1998). PTSD affects cognitive skills largely due to neuroendocrine changes involved in the stress response. The brain is constantly responding to a perceived threat rather than a real threat or the current reality of the environment. Although the neurohormonal and neurobiological systems involved and affected by a traumatic or stressful event are quite complicated, scientists are attempting to explain the physical reaction.

Extensive research is ongoing regarding the damage stress hormones have on the brain (Brewin, 2001, Gunnar & Barr, 1998, McEwin, 1992). Brewin (2001) describes the amygdala’s role in PTSD and the related cognitive problems. To simplify this complex
process, incoming stimuli trigger the amygdala to respond. The “amygdala is responsible for initiating a hard wired response to a threat including release of stress hormones, activation of the sympathetic nervous system and behavioral response such as fight/flight or freezing” (Brewin, 2001, p.377). This generates a conditioned fear response, which becomes a normal automatic response. It has been proposed that the hippocampus’s role is that of an inhibitor, i.e., it inhibits the amygdala’s response, interrupting this conditioned response. In addition the hippocampus is responsible for “the learning of context and learning the relations between incoming stimuli” (Brewin, 2001, p. 378). However, “hippocampal function is impaired with high levels of stress” (Brewin, 2001, p.378).

PTSD victims perceive extremely high levels of stress, and react with a stress response even when the original traumatizing event is absent. Repeated exposure to this stress response alters what was a normal hormonal response into a toxic hormonal response. The repeated exposure damages tissues exposed to the stress hormones. The body is essentially reacting to a stressor that is no longer physically present, but rather present as a conditioned cognitive memory. The therapeutic assumption is that (1) cognitively identifying the trigger helps to interrupt the chain of events, (2) this will then alter the way the person cognitively responds to the trigger, (3) which indirectly changes the body’s response. In essence one needs to rehabilitate the cognitive processes of the autonomic brain response.

**Conceptual Framework**

Callista Roy proposed that a person is an adaptive system with changing adaptation levels. An adaptation level is the combination of stimuli, which positively affects the
person’s ability to cope in a changing environment (Lutjens, 1991). An “adaptation level sets up a zone or range within which stimulation will lead to adaptive responses. Stimuli falling outside this adaptive zone lead to ineffective responses” (Lutjens, 1991, p.14). Coping is defined as the “use of behavior in response to stimuli”, and can also refer to “the use of new behaviors in response to unusual or drastic situations wherein accustomed responses are ineffective” (Lutjens, 1991, p.15). A person responding to a traumatic event is coping and using coping mechanisms.

Roy divided coping mechanisms into two types or processes. The first process is the regulator mechanism, which copes with physiological stimuli. This involves the activation of the neural, chemical, and endocrine response by the body in response to a stimulus. The second is the cognator system, which copes with psychosocial stimuli. This process uses four cognitive emotive processes to cope: learning, judgment, emotion, and perceptual information processing. The cognator and regulator systems overlap and are interdependent. They combine to form behavior. Although the processing of the stimuli through the cognator and regulator systems is not observed, one can observe the behavioral outcomes of the stimuli. The behavioral outcome of the stimuli will either be (a) ineffective, such as responding with anxiety, guilt, powerlessness, and shame or, (b) adaptive, such as behaviors that promote growth and mastery (Roy & Andrews, 1991).

Intervening at the regulator and cognator systems can change the cognitive perceptions and/or behavioral outcomes of the person. Roy’s adaptation model proposes that one can positively adapt to challenges by learning coping skills.
Adaptation occurs through understanding the internal and external stimuli with which the person is attempting to adapt.

Figure 1. Adaptation model as proposed by Roy.

In PTSD, a person’s internal and external stimuli pathways, including physiological and psychosocial responses, have been altered because of a traumatic event. In PTSD, stress is triggered from either relevant or irrelevant stimuli. The individual responds with the hormonal response that is now ineffective because of its overuse (ineffective regulator process response). The individual also responds with behaviors that are ineffective because of inadequate coping behaviors (outcome from the cognator process).

Figure 2. PTSD Adaptation using Roy’s conceptual framework.
A psychoeducational group can influence and affect those pathways in a positive way. The psychoeducational group alters the end response, which ultimately presents as PTSD symptoms, by influencing the cognitive input. For example, the ability to cognitively identify what external stimuli triggers traumatic memories is one important step. While one cannot completely control internal stimuli, one can influence other events in the adaptation model, and in the end, alter the response stimulated by internal stimuli.

As illustrated in the PTSD Adaptation model, learning is processed through the cognator system. Learning involves imitation, reinforcement and insight (Roy & Andrews, 1991). Using Roy’s adaptation conceptual framework, one could cognitively recondition or rehabilitate the brain by altering the pathway. Providing imitation, reinforcement and insight through a psychoeducational group alters the pathway. Learning new information is the goal of a psychoeducational group.

**Psychoeducational Groups**

Education and rehabilitation can improve the brain’s cognitive ability to compensate for past damage, which is the basis for the psychoeducational group (Moller & Rice, 2003). If one could educate the survivors of PTSD regarding their diagnosis and provide tools or specific skills to improve, then one could possibly change the way they view their mental health problem or the way they react to their symptoms (Roy & Andrews, 1991). Changing the input, specifically the cognitive perception of incoming stimuli, will alter the output, i.e., behaviors and endocrine reactions. The goal of a psychoeducational group is to alter the input or cognitive perceptions of the input so that the output, or behavior, will be different. Assuming that humans are adaptive animals, then a
psychoeducational group should have a positive effect on cognitive symptoms of people with PTSD.

**Literature Review**

There has been minimal research on the use of psychoeducational groups as a format for treating PTSD (Moller and Rice, 2003). Existing research regarding the treatment of PTSD does focus on the effectiveness of cognitive behavioral therapy and anxiety management in regard to the reduction of PTSD symptoms (Davidson, 2001, Bryant, Sackville, Dang, Moulds & Guthie, 1999). While these treatments have proven to be somewhat effective, the investigators suggest that a combined treatment might be more beneficial.

The National Center for PTSD recommends that treatment strategies should include a number of different modalities. The Center also recommends, in addition to other treatments, group therapy. A group provides an environment in which individuals can share their trauma story and discover that they are not alone in their suffering. A group is a safe and empathetic environment in which to share private and personal information (National Center for PTSD, 2003). “Overall the most highly recommended psychotherapy techniques are anxiety management, cognitive therapy, exposure therapy and psychoeducation. …. Psychoeducation although not considered a first line treatment, was suggested for all categories of symptoms as a secondary intervention” (Marotta, 2000, p 2).

Roberts, Shapiro and Gamble (1999) found that a psychoeducational group for depression was effective in increasing self-esteem. There has also been research done trauma focus group treatment. Ruzek, (2001) found that symptoms of PTSD do not
worsen with trauma focused group treatment, as he had hypothesized. However, in his particular study he found that the participants’ symptoms did not improve. Cole (1985) found that adult female survivors of incest, although not diagnosed with PTSD, found group treatment very rewarding and were able to learn new attitudes and skills. Lubin and Johnson (2000) developed a psychoeducational group therapy specifically designed for PTSD individuals with authority problems. The investigators believe that a psychoeducational group is the best means to treat the authority problems of PTSD sufferers.

In a comprehensive review of outcome research, Solomon and Johnson (2002) also found that the strongest support for PTSD treatments combined cognitive and behavioral techniques, which may include group treatment. Although the literature is minimal and the findings are questionable, if done properly, psychoeducational groups can foster developmental and cognitive growth and facilitate “affective and behavioral changes” (Furr, 2000, p.29). However, little research has been done on the effectiveness of psychoeducational groups with PTSD sufferers.

**Method**

**Purpose of the study**

PTSD is a prevalent disorder with many devastating effects on those suffering from it. Treatment for PTSD can be effective when using more than one modality. The purpose of this project was to determine if a psychoeducational group could affect the cognitive skill outcomes of people diagnosed with PTSD.
Design

The design used for this study was a simple interrupted time series design within a program evaluation model. This project is a small part of a larger project examining the effectiveness of the psychoeducational group. The larger project examines many different assessment tools using a number of groups over a period of years. Cognitive skills (dependent variable) were measured prior to the treatment (psychoeducational group) and then at the end of the treatment. However, using this design assumes some threats to validity as suggested by Burns and Grove (2001). The threats to validity that cannot be controlled are, history, seasonal trends, instrumentation and selection. The threats that are well controlled for are maturation and statistical regression.

Setting

The group met once a week for 3 hours in a seminar room at an outpatient psychiatric nursing clinic. The group continued for twelve consecutive weeks with each week addressing a specific set of content/topics. The material was presented and explained in a lecture format by the facilitator. The participants followed the lecture using workbooks. The workbook covered a wide range of content ranging from educational information regarding the effects of abuse on the brain/body to symptom management tools (Appendix A).

Sample

The sample was a convenience sample of those participants in the group who were willing to participate in the evaluation of the program. The participants of the group were clients of a private rural outpatient psychiatric center run by two psychiatric nurse practitioners. Participants were asked to participate in the psychoeducational group by
their therapist. The participants all had a diagnosis of PTSD. Other comorbid diagnoses included: Borderline Personality Disorder, Major Depressive Disorder, Anxiety and Bipolar Disorder. All the participants were on medications for their symptom management. The most common medications for the participants included Effexor, Topamax and Neurontin.

The subject inclusion criteria were that their mental health practitioner must have diagnosed participants with PTSD and deemed the participants intellectually able to learn the content from the class.

Procedure

The group participants filled out numerous assessment tools at the second session of the group and at the twelfth session of the group. These assessment tools included depression, trauma, anxiety scales and difficulties with activities of daily living scales. In addition, the participants filled out a cognitive skills assessment tool. The facilitator relayed to the participants that the scales were used to evaluate the effectiveness of the group as well as for each of them to mark their individual progress.

Human Subject

The Washington State University Institutional Review Board and the Intercollegiate College of Nursing approved the retrospective program evaluation and the use of the instruments in this report for education. There were no psychological risks associated with filling out the cognitive assessment scale. The facilitator of the group and the clinic therapists managed any unforeseen psychological risks (as part of the group process) that occurred when the assessment scales were filled out. Names or other identifiable data were not placed on the tools to ensure confidentiality. The facilitator of the group
provided the demographic information. All data collected were kept in a locked file at
the Intercollegiate College of Nursing and were returned to the facilitator of the group
after being entered into the computer.

**Measurement**

The cognitive scales assessment scale is a subjective pen and paper tool. Murphy and
Moller (1993) designed the scale to measure cognitive difficulties. There are 15 questions
on the cognitive assessment scale (Appendix B). Each question on the scale has three
parts. The subjects rated each question on a scale of 1-4 as to the duration, the frequency
and the intensity of the symptom. If the subject was not experiencing the symptom they
marked 0 or the “no problem section”. Prior studies have established the reliability of
the cognitive scale as Crohbach’s alpha of .81 (Murphy & Moller, 1993). The tools were
administered during group session in the classroom setting. The facilitator and the data
collector each scored the scales in order to reduce errors in measurement.

**Results**

**Data analysis**

Data were analyzed using the Statistical Package for the Social Sciences (SPSS)
program. Thirteen participants voluntarily joined the psychoeducational group. Three
participants decided to drop out of the group halfway through the 12-week program
because of schedule conflicts. Two participants did not complete the cognitive skills
assessment tool but finished the program, leaving a total n=8. The group participants
were all Caucasian females. Three males were present at the beginning of the
psychoeducational group. Two males did not complete the group and the other one did
not finish an assessment tool at the end of the psychoeducational group. The average age of the participants of the class was 44.4 (+/- 5.29).

Frequency distributions reveal that most of the participants of the group had either a DSM IV-TR diagnosis of Major Depressive Disorder (MDD) or MDD and Borderline Personality Disorder (Figure 3, Appendix C).

In addition, mood stabilizers plus an antidepressant were the most common medication regimen that participants were taking (Figure 4, Appendix C).

Reliability

Reliability tests of the instrument for this project resulted in a Cronbach's alpha of 0.89 for the duration subscale, 0.82 for the intensity subscale and 0.78 for the frequency subscale. The reliability for the total scale, including all the subscales, was an alpha of 0.95. The validity of the cognitive assessment scale was based on face validity and expert content validity from two nurse practitioners in the field of psychiatric mental health.

Correlations

Spearman's rank-difference correlation coefficients (rho) were used to analyze relationships between the variables. The data revealed an inverse relationship between age and symptom duration (rho -.77). The data also reflected a relationship between the
total cognitive scale score for week twelve and the three different subparts, symptom intensity, symptom duration, symptom frequency (Table 2). The Spearman rank correlations for those variables range from .72 to .92. The correlations for the relationships were significant at both the .05 and the .001 levels (Table 2).

**TABLE 2: SPEARMAN’S RHO CORRELATIONS – 2 TAILED SIGNIFICANCE**

<table>
<thead>
<tr>
<th></th>
<th>AGE</th>
<th>DSM IV CODE</th>
<th>WEEK 2 TOTAL</th>
<th>SYMPTOM DURATION</th>
<th>SYMPTOM FREQUENCY</th>
<th>SYMPTOM INTENSITY</th>
<th>COGNITION WEEK 12 TOTAL</th>
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<tr>
<td>AGE</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
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<td>DSM IV CODE</td>
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<tr>
<td>COGNITION WEEK 2 TOTAL</td>
<td>-.73*</td>
<td>.040</td>
<td>1.000</td>
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<tr>
<td>SYMPTOM DURATION</td>
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<td>SYMPTOM FREQUENCY</td>
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<td></td>
<td>.92**</td>
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<td>SYMPTOM INTENSITY</td>
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<td></td>
<td>.061</td>
<td>.76*</td>
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<td>COGNITION WEEK 12 TOTAL</td>
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<td></td>
<td></td>
<td>.92**</td>
<td>.97**</td>
<td>.86**</td>
<td>1.000</td>
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*Correlation is significant at the .05 level (2-tailed)
**Correlation is significant at the .001 level (2-tailed)

The cognitive scale scores for week 2 and week 12 were significantly different, although not in the direction that was anticipated. The mean scores increased at week 12 meaning that cognitive impairment symptoms worsened (Table 3).

**TABLE 3: COGNITIVE SCALE SCORES: DESCRIPTIVE STATISTICS**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Percentiles 25th</th>
<th>Percentiles 50th (Median)</th>
<th>Percentiles 75th</th>
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<td>Cognition Week 2</td>
<td>35.75</td>
<td>16.22</td>
<td>26.00</td>
<td>36.00</td>
<td>47.00</td>
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<td>Cognition Week 12</td>
<td>92.37</td>
<td>32.36</td>
<td>69.25</td>
<td>85.50</td>
<td>123.25</td>
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Due to the small sample size, a binomial sign test was used to determine if the difference between the mean scores for week two and week twelve were statistically significant. With a sign test a relationship can be established by using each subject as his/her own control for a pretest-posttest design, as is the case in this project. The sign test does show that there was a statistically significant difference between the total cognitive scale score for week two compared to the total cognitive scale score for week 12 ($z=-2.521$, $p \leq .012$). The increase in the week twelve symptoms scores over those for week two are statistically significant.

Comparing cognitive week twelve scores with the class of medication reveals that there is a significant relationship between medication class and cognitive week twelve total scores. The higher the cognitive scale total score, the more likely the participant was taking an antidepressant and a mood stabilizer (Table 4). To determine whether the relationship between medication class and cognitive scale score a lambda test was used. The relationship proved to be statistically significant (Table 5).

**TABLE 4: CROSSTAB COUNT FOR WEEK 12 AND MEDICATIONS**

<table>
<thead>
<tr>
<th>Score</th>
<th>Antidepressants</th>
<th>Antipsychotics</th>
<th>Mood Stabilizers</th>
<th>Anti+Mood stab</th>
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<td>Cognition Week 12 Total</td>
<td></td>
<td></td>
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<td>42.00</td>
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<td>138.00</td>
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<td>Total</td>
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TABLE 5:
MEDICATION AND COGNITIVE WEEK 12 SCALE SCORES

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<td>.429</td>
<td>.187</td>
<td>2.191</td>
<td>.028</td>
</tr>
<tr>
<td></td>
<td>.000</td>
<td>.000</td>
<td>3.651</td>
<td>.000</td>
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</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis

Discussion

The data did reveal a significant relationship between some of the variables. The data indicated that as the intensity, frequency and duration of symptoms increased, participants scores for the cognitive assessment scale increased. Consistent with the literature that has examined the long-term consequences of PTSD, the participants in this psychoeducational group had cognitive impairments that became worse with time. As the participants perceived the intensity, frequency and duration of their cognitive symptoms (impairment) getting worse, they scored the cognitive assessment scale higher.

In addition, there was a statistically significant difference between week two cognitive scale scores and week twelve scores. The mean scores for week twelve were significantly higher than that of week two. While it was proposed that the psychoeducational group would have made a significant impact on improving the cognitive scale scores, the data did not support this assumption. The participants perceived their cognitive symptoms to be worse at the end of the class. The total scores for cognitive week 12 reflect this. However, one cannot assume the class was the direct cause for this result.
The psychoeducational group participants knew very little about the diagnosis of PTSD. They also did not have much knowledge about the origin and treatment of their symptoms. With the knowledge obtained after completing the psychoeducational class, one explanation for the higher scores is that they were more aware of their symptoms and generated higher scores on the scale. If indeed the participants scored higher on the cognitive assessment scale because they were more aware of their symptoms, future projects should ask a different set of questions. If this project were to be replicated one may want to identify whether or not psychoeducational groups increase participants’ awareness of cognitive symptoms rather than improve symptoms.

Another explanation could be due to the time the group ended. The class ended around the Christmas holiday, which can be a difficult time for the mentally ill and the mentally healthy. They were asked to assess their cognitive impairment symptoms during this stressful time. The stressful time of the season could be one cause for the high scores at week 12.

In addition, the group participants were a very unique group and the facilitator felt that there were many issues going on in the group that other groups had not experienced. The combination of the following dynamics certainly influenced the outcome of the group; (a) borderline personality disorder participants caused a significant disruption because of their unique issues with relationships, (b) some members continued to be involved in emotional and physically abusive relationships during the class, (c) the presence of a male member triggered issues for some of the women participants. Group therapy will always be a dynamic process and have unique outcomes specific to the individual group solely on the mix of personalities involved. The psychoeducational
outcomes of this project certainly reflect this process. Concern regarding an increase in the severity of symptoms of PTSD with group therapy or education is not a new phenomenon and has been noted by Ruzek (2001). While his research did not show an increase in the severity of symptoms, it is still a consideration.

Another interesting finding was that those participants on a combination of an antidepressant and a mood stabilizer scored higher on the cognitive assessment scale at week 12. The clients who perceived their cognitive symptoms to be the worst were also those clients who needed two medications to control their psychiatric symptoms. Clients that need a dual therapy regimen to control psychiatric symptoms are often more impaired than those needing only a monotherapy to control their symptoms. The findings of this project support this position. Indeed they were more ill. They scored their symptoms much higher than those participants receiving only one medication.

The literature and recent studies on brain chemistry and PTSD indicate that cognitive impairment is a persistent symptom in PTSD. Symptoms of PTSD do not decrease as time passes, but instead, symptoms including cognitive impairment continue to remain a very real disturbance for these victims. If a victim of PTSD has their brain impaired from toxic exposure to stress hormones, perhaps it is naive to believe that twelve weeks of rehabilitation would make an impact. Indeed learning and rehabilitation in a psychoeducational group setting may need to be more extensive than initially thought.

If this project were to be replicated, it would be beneficial to repeat the cognitive assessment scale 1-3 months after completion of the class. This time lag would allow the participants time to process and practice what they learned. One might find the total score
for the cognitive assessment scale to be quite different given the time lag. Often in
treatment, regardless of the modality, psychiatric symptoms worsen before they improve.

Limitations

There are several limitations to this project. The findings cannot be generalized due to
the small sample size. The sample was not a randomized sample and this weakens the
generalizability of the findings. The participants of the group also received individual
therapy concurrently with the psychoeducational group. Any significant relationships
between the variables could be due to the confounding nature of individual therapy rather
than the group treatment. The content of the psychoeducational group may have been
triggering or exacerbating the participants symptoms. Depending on the frequency and
the quality of their individual therapy, those issues may or may not have been dealt with.

As with most people diagnosed with PTSD, there are other comorbid psychological
problems, such as depression, anxiety and personality disorders. This too may account
for any change. The design would have been strengthened if more than one method was
used to measure cognitive skills. Finally, if this project were to be expanded upon or
replicated, it would be interesting to examine participant’s perceptions of the
effectiveness of the class. The subjects may have had subjective feelings that the
psychoeducational group improved their symptoms or quality of life. The cognitive
assessment scale did not reflect this dimension however.

Summary

Treating PTSD with group therapy has not been widely studied. Even less research
has been done regarding the effectiveness of psychoeducational groups on PTSD
symptoms. Medication and individual therapy have previously been used to treat PTSD
although very little research has been done on the effectiveness of such modalities. A psychoeducational group is yet another way to treat PTSD and this project was a beginning point to judge the effectiveness of this approach.

This project does begin to examine the effectiveness of psychoeducational group treatment and offers alternative ways with which to treat PTSD. The prevalence of the disorder alone demands attention by researchers and practitioners.

**Nursing Implications**

The cost to society of treating PTSD is enormous. Psychiatric nurses, working with such clients, may find managing their symptoms difficult by individual therapy and medication management alone. Group treatment has often not been reimbursed by third party payers, as groups are not viewed as effective. Future research should be done regarding psychoeducational groups or other forms of group therapy to stimulate reimbursement for such therapy and support the effectiveness of a group approach. The psychoeducational group can be an efficient method in which to treat PTSD. Nurses should be aware of research-based treatments for clients with PTSD so that the proper referrals can be made to facilitate rehabilitation.
References


Table 1

DSM-IV diagnostic criteria for Posttraumatic Stress Disorder

I. The person has been exposed to a traumatic event(s) in which both of the following occurred:
   a. the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical person or self for another.
   b. The persons response involved intense fear, helplessness or horror.

II. The traumatic event is persistently re-experienced in one or more of the following ways:
   a. Recurrent and intrusive distressing recollections of the event including images, thought or perceptions.
   b. Recurrent distressing dreams of the event.
   c. Acting or feeling as if the traumatic event were recurring. This includes a sense of reliving the experience or having illusions, hallucinations, and dissociative flashback episodes.
   d. Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.
   e. Physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event.

III. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness that was not present before the trauma as indicated by three or more of the following:
   a. Efforts to avoid thought, feelings, or conversations associated with the trauma.
   b. Efforts to avoid activities, places or people that arouse recollections of the trauma.
   c. Inability to recall an important aspect of the trauma.
   d. Markedly diminished interest or participation in significant activities.
   e. Feeling detached or estranged from others.
   f. Restricted range of affect such as not able to have loving feelings for others.
   g. Sense of a foreshortened future such as not expecting to have a career, marriage, children or a normal life span.

IV. Persistent symptoms of increased arousal that was not present before the trauma as indicated by two or more of the following:
   a. Difficulty falling or staying asleep.
   b. Irritability or outbursts of anger.
   c. Difficulty concentrating.
   d. Hypervigilance.
   e. Exaggerated startle response.

V. Duration of the symptoms in II, III, IV is more than one month.

VI. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of life functioning.
## Appendix A: Psychoeducational Group Content

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1</td>
<td>The aftermath of abuse/trauma/neglect</td>
<td>1</td>
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<tr>
<td>Chapter 2</td>
<td>The Murphy-Moller Wellness Model: A new approach to trauma recovery</td>
<td>17</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Developing a sense of self</td>
<td>43</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Effects of trauma on brain development</td>
<td>65</td>
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<tr>
<td>Chapter 5</td>
<td>Effects of trauma on information processing</td>
<td>86</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Coping with anxiety</td>
<td>108</td>
</tr>
<tr>
<td>Chapter 7</td>
<td>Successful management of responses to health triggers</td>
<td>133</td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Successful management of responses to environmental triggers</td>
<td>157</td>
</tr>
<tr>
<td>Chapter 9</td>
<td>Successful management of interpersonal triggers</td>
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</tr>
<tr>
<td>Chapter 10</td>
<td>Successful management of responses to attitude/behavior triggers</td>
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<tr>
<td>Chapter 11</td>
<td>Successful management of responses to spiritual triggers</td>
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<tr>
<td>Chapter 12</td>
<td>Building a base of social support</td>
<td>243</td>
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</table>
## Appendix B: Cognitive Assessment Scale

### Common Symptoms Occurring With Cognitive Difficulties (Thinking)

<table>
<thead>
<tr>
<th>Please circle the number in each category that applies</th>
<th>How Long?</th>
<th>How Often?</th>
<th>How Intense?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Month</td>
<td>6 Months</td>
<td>1 Year</td>
</tr>
<tr>
<td>1. I can't remember things</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>2. I get confused easily</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>3. I have a hard time writing</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>4. I have a hard time solving problems</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>5. I have a hard time understanding what people say to me</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>6. I have trouble doing easy math problems in my head</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>7. I have trouble spelling words correctly</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>8. I have been told my judgment is poor</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>9. I have trouble knowing if I get the right change back at the store</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>10. I have a hard time finding my way back home</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>11. I have trouble understanding jokes</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>12. My thoughts go too slow</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>13. My brain doesn't work right</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>14. I have trouble learning</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>15. I have trouble concentrating</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
<td>1 2 3 4</td>
</tr>
</tbody>
</table>

**Total**

**Comments:**

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Appendix C: Figures 3, 4

Figure 3

MEDICATIONS

Figure 4

DSMIV: 1 = MDD; 2 = Borderline, 3 = MDD + Borderline, 4 = Anxiety, 5 = Bipolar