

Measuring the Effect of the iLs Dreampad with Ten Veterans Diagnosed with Post-Traumatic Stress Disorder (PTSD)

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Associate

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Organization

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Clients

Ten veterans diagnosed with post-traumatic stress disorder were included in this study. Four subjects were veterans of the Vietnam War; three were veterans of the Gulf War or were from the Gulf War era; two were veterans of Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF) wars; one had served for a number of years spanning the Gulf/OEF/OIF wars.

Medical Background

All participating veterans were diagnosed with post-traumatic stress disorder (PTSD) by either a psychologist or psychiatrist at the Veterans Healthcare System (VA) or a social worker at the Veteran Center (a community-based counseling center for veterans and their families). Five of the participants reported chronic pain. See 'War Histories' below for a bio on each participant.

Study Design

Each participant recorded their sleep habits and pain symptoms for two weeks prior to using the Dreampad and two weeks while using the Dreampad. Their journals included usage, sleep habits and other comments. Study participants were interviewed after initial Dreampad use and again three months later.

Results

Initial interviewing indicated that ten out of ten veterans were helped by the Dreampad. Three months later, eight out of ten veterans reported continued, improved sleep with the Dreampad with reported reduction in, or complete absence of, nightmares while using the Dreampad. The Dreampad did not seem to improve perceived pain, but it did help with measured pain factors.

The Dreampad appeared to work in three ways:

- Help veterans initially fall asleep faster
- Help veterans fall back asleep after a nightmare or even change the pattern of the recurring dream
- Help reduce the PTSD symptoms of the nightmare, such as sweating, heart pounding

Individual Client Interviews Three Months Later

C.S. “I use the pillow three times a week. It helps me get back to sleep within 10 – 15 minutes instead of hours like it used to.”

C.D. “I use the pillow 3 – 7 times a week. I am still restless, but it helps reduce the nightmares.”

J.S. “I LOVE that pillow! I am sleeping almost all night, every night for six hours!” (Before that she was sleeping less than three hours a night. She reports having nightmares five out of seven nights, but her PTSD service dog will alert her she’s having a nightmare, and then she puts her head back on the pillow and falls right back to sleep.)

G.L. “I am using the pillow every night. It helps me get to sleep in about 15 – 20 minutes but due to back pain I will wake up after three hours...”

G.B. “That pillow is great! I’d recommend it to anyone! I am using it every night and it helps me fall asleep. I have nightmares 3 – 4 times a week and the Dreampad helps me get back to sleep sooner than before.”

B.K. “I use the Dreampad every night. It’s reduced the time it takes to fall asleep. It is calming and reduces my anxiety! I have less frequent nightmares and it helps in falling back to sleep.”

L.J. “I use the pillow 2 – 3 times a week. If I am in a nightmare I get up and turn on the lights and get the pillow. It helps to break the pattern of the same nightmare, some of the time, and helps me get back to sleep.”

L.T. No three-month follow up report

T.S. “I often start projects and then don’t continue. Your phone call was a good reminder to try the pillow again since I am still having nightmares.”

B.A. “I use the Dreampad almost every night. I fall asleep faster and stay asleep longer, feeling more refreshed in the morning. After having a nightmare it takes me 10 – 15 min. to fall asleep and my nightmares are less in number and less in intensity. Pain level is about the same but is not getting worse, and I have less days with pain than before. My pain comes and goes with the amount of activity that I do. I feel ‘good’ more often.”

“I have gone through lots of counseling, treatment and groups for pain, PTSD and sleep. Having the Dreampad is a useful tool to help drown out the noise and ringing in my head. I think the vibration in the pillow helps my brain relax.”

Comments from iLs Clinical Director, Ron Minson, MD

This present case study on 10 veterans is remarkable in several ways; the Dreampad helped to improve sleep onset and sleep quality in those with long standing sleep disturbances, to decrease nightmares and interrupted sleep and to reduce symptoms of PTSD in 80% of the participants without the use of medication. This is highly important in light of another study released in February of this year from the American Academy of Sleep Medicine (AACM) entitled “*Poor*

sleep quality linked to reduced brain gray matter in Gulf War vets". The research team conducted analysis of imaging and clinical data of 144 Gulf War veterans.

The lead author of the study, Dr. Linda Chao, remarked, "The surprising thing about this study is that it suggests poor sleep quality is associated with reduced gray matter volume throughout the entire frontal lobe and also globally in the brain". The study may help to explain the link between poor sleep quality and impaired psychosocial, physical and occupational functioning.

I think we can be optimistic that further and expanded use of the Dreampad can result in improved sleep and thereby may improve brain function in the millions of those suffering from disturbed or inadequate sleep, as well as in those who are returning from the ravages of war.

War Histories

The following war biographies of each participating member was written either by the veteran or co-written with the study coordinator:

C.D. was 25 years old when he was mobilized in support of Operation Iraqi Freedom. He was deployed with the (Headquarters Headquarters Company) HHC 2-136th (Combined Arms Battalion) CAB as an E-4, supply specialist. He was stationed in Al Taqqudum, Iraq, from 2005-2007 as supply clerk, flying supply missions over Iraq. Total military service was from 2001-2011. He has experienced sleep disorders and chronic pain since 2007.

B.A. was 18 years old when he entered the military with a career spanning from 1985-2007. He was first deployed to the Persian Gulf in 1987 "Operation Ernest Will" with the United States Marine Corps as an Infantry Corporal. Duties included Helicopter Door Gunner during escort operations fighting the Iranians. He was later mobilized in support of Operation Iraqi Freedom from 2004-2005 with US Army National Guard as an E-8 (first sergeant). He commanded his infantry company, including cordon and search, IED route clearance, security patrols and training a battalion of the Iraqi Army. He was awarded the Bronze Star Medal for his actions in Iraq. He was also part of Team Spirit in South Korea where he witnessed the helicopter crash of 19 Marines who died, March 20, 1989. He has experienced chronic pain since 2005 after being hit by an IED in Iraq which caused prolapsed discs in his neck, and nerve and shoulder damage. He has had sleep disorders since returning from Iraq in 2006.

T.S. was 20 years old when she entered the military in 1989 and served until 1993. She did not deploy overseas during the Gulf War era but was stationed state-side as an E-4. She was assigned to the law enforcement side and served as security police. Her PTSD is related to an abusive domestic relationship she had while in the military. She has had a sleep disorder since 1990 and chronic pain since 1997.

L.T. was 22 years old when he entered the Vietnam War in 1969. He was deployed with the 173rd Air Borne Rangers as an E-5 (sergeant). His camp was called LZ North English, Vietnam, in which he did long range patrols going out with 7-13 rangers to do recon before the other soldiers arrived. He was overseas 20 months, and came back in 1971. He does not have chronic pain, but he has had a sleep disorder since the early 1970's.

B.K. was 19 years old when he entered the Vietnam War in 1968. He was deployed with the 1st Marine division as an E-4 (corporal). He was stationed in Da-Nang, Vietnam, functioning as a field radio operator (2531) carrying a radio on his back during search and destroy missions. He was overseas for two years, was deployed twice and came back in 1972. He does not have chronic pain, but he has had a sleep disorder for 42 years.

J.S. was 27 years old when she entered the Gulf War “Desert Storm” in 1991. She was deployed as active army as an E-4 (corporal). She was stationed many places in Saudi Arabia and ended up in Qatar as a water purification and light equipment maintenance soldier. She was gone one-and-a-half years from 1990-1992. She has been retired from the army since 1998. She has had chronic pain and sleep disorders since 1992. [J.S. had three children at the time of deployment: ages 5, 7, and 8. They were uprooted and stayed with grandparents during her deployment.]

L.J. was 20 years old when he entered the Vietnam War in 1969. He was deployed by the army as an E-4 (corporal). He was in the Plenku area in Vietnam. His job was as a combat infantryman doing search and destroy. He was gone one year. He has had chronic pain for 20 years, and a sleep disorder for 45 years.

G.B. was 19 years old when he entered the Vietnam War in 1964. He was deployed with the United States Marine Corps as a corporal and then later became part of the Army as a radio operator and driver. He was in Danag, Tamky, and other locations doing basic rifle (ground pounder traveled by foot doing recon and sweeps, radio operator [communicate with battalions, units, etc.], and driver for the colonel). He took two tours from 1964-1968 (23 months each). He has had chronic pain (since 1987) and a sleep disorder since the early 1970’s.

G.L. was 22 years old when he entered the Gulf War “Desert Storm” in 1990. He was deployed as active army as an E-4 specialist. He was stationed in Fort Hood, Texas, but was deployed to Desert Storm as a crewman on a M1A1 tank loading the main gun rounds. He was overseas seven months from 1990-1991 and has been retired from the military since December 1991. He has had a sleep disorder since summer of 1991 and chronic pain since 1992. He also suffers with tinnitus caused from the noise of the tank’s tracks, and shouting between tanks.

C.S. was 37 years old when she mobilized in support of Operation Iraqi Freedom. She was deployed with the 957 MRBC (Multi Roll Bridge Company) as an E-7 (Sergeant 1st Class). She was last stationed at the Forward Operating Base (FOB) Ridgeway in Iraq from 2003-2004 as a bridge crewmember and operation sergeant (built bridges such as the assault ribbon bridge) and did patrol as a secondary mission. She was gone 15 months and was in the military from 1985-2008. She has had chronic pain and a sleep disorder since 2004. [She had children ages 1, 13 and 14, at home when she was mobilized.]