



Defense Health Agency

Defense and Veterans Brain Injury Center “Clinical Updates in Brain Injury Science Today [CUBIST]” Podcast

“Depression, Gender and Traumatic Brain Injury”

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Don Marion: The views, opinions, and findings contained in this podcast are those of the host and subject matter experts. They should not be construed as official Department of Defense positions, policies, or decisions unless designated by other official documentation.

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Hi and welcome to Clinical Updates In Brain Injury Science Today, or CUBIST, a biweekly podcast for health care providers about current research on traumatic brain injury, also known as TBI. This program is produced by the Defense and Veterans Brain Injury Center, otherwise known as DVBIC. And I'm your host, Don Marion, filling in today for our regular host, Inbal Eshel. I'm a neurosurgeon and senior clinical consultant here at DVBIC and you may remember me from previous episodes of CUBIST where I frequently joined Inbal to talk about current concussion research. In today's episode, I'll be talking with Dr. Anne Bunner. Dr. Bunner is a biologist and program analyst at DVBIC with broad clinical and laboratory research experience. In today's episode, Anne and I will be discussing a study entitled “Depression in Men and Women One Year Following Traumatic Brain Injury: A TBI Model Systems Study.” This article was recently published in Frontiers in Psychology by Lavoie and colleagues. So, Anne, what is the key finding of the study or what is the real take home message?

Anne Bunner: So the objective of the study was to compare depression rates in men and women one year after moderate or severe TBI. They found that both men and women reported mild levels of depression, which is consistent with previous work showing that risk of depression increases after TBI. But there were no significant gender differences in depression symptom levels. They did find that men and women showed different patterns with regards to the specific symptoms they endorsed. Men reported more trouble concentrating and women reported more sleep problems.

Don Marion: Okay. So more trouble concentrating in men, more sleep problems in women. Who were these participants, Anne? And specifically what is the TBI Model System?

Anne Bunner: So these were patients recruited from a U.S. level one trauma center, 175 moderate or severe TBI patients, 131 males and 44 females. The TBI Model Systems study is a large, federally funded, multi-center, longitudinal observational study of U.S. persons who were admitted to in-patient TBI rehab which is offered to people with moderate or severe TBI mostly. The goal of this study is to improve care by determining what factors influence positive outcomes.

Don Marion: Are there gender differences for depression in the population as a whole?

Anne Bunner: Yes. Depression is more common among women in the general population across nations.

Don Marion: Okay. But they didn't find a difference in depression among men and women in this particular study with moderate to severe TBI?

Anne Bunner: That's true.

Don Marion: How did they assess for depression?

Anne Bunner: So they assessed the participants one year after their injury using a self-report scale called the Patient Health Questionnaire Nine or PHQ-9. It's a brief questionnaire specifically developed for depression that incorporates the Diagnostic and Statistics Manual, or DSM, criteria for diagnosis.

Don Marion: Do you think PHQ-9 was the best test to use for depression?

Anne Bunner: So there are a few studies that have compared the PHQ-9 to another popular depression screening tool called the Beck Depression Inventory-II and found that the results are highly correlated. So the PHQ-9 is as good as anything in terms of self-report scales.

Don Marion: How are these results different from previous studies on mild TBI or concussion? I know there are a number of studies that have been done.

Anne Bunner: Exactly. And there have been some that have shown that men have a greater risk of depression than women after TBI, some that show the opposite, some that found no difference. So the data are not consistent. That said, a recent meta-analysis showed that women have just under twice the risk of developing major depression after TBI. That calculation was made based on eight studies, including over 700 individuals with TBI of any severity. So when you're talking about a group of people with TBI of any severity, there's going to be many with mild TBI. And this study only included those with moderate or severe TBI, so it's not surprising the results don't agree.

Don Marion: Just so I'm clear, do you think data as a whole suggests in concussion that there might be gender differences, but not in moderate or severe TBI?

Anne Bunner: I don't think we can conclude much of anything given how all over the place various studies have been.

Don Marion: What's the key message then that you would like the practitioner to take away from this study?

Anne Bunner: Well, I do think that these findings confirm that depression is an important risk factor after TBI. And 25 to 50 percent of people who sustain TBI will experience depression in the year following. So these results suggest that patients and providers should take a proactive approach to identifying and treating mood disorders in both genders after TBI.

Don Marion: Alright, and finally, are there more resources our listeners could access to learn more about gender differences, Anne?

Anne Bunner: Absolutely. Thank you for asking. Actually, myself and the deputy director of DVBIC, Ms. Kathy Helmick, will be giving a free webinar with continuing education credit on Tuesday, September 19th at 11 a.m. Eastern Time. This is part of a three-day, Defense Centers of Excellence in Psychological Health and Traumatic Brain Injury Summit, or DCoE Summit, featuring almost 30 expert speakers on a variety of issues related to TBI and psychological health. To register, go to dvbic.dcoe.mil and click on the banner that says, "2017 Summit Register Now." That's D-V-B-I-C-dot-D-C-O-E-dot-M-I-L.

Don Marion: Thank you so much, Anne, for your interpretation of the Lavoie paper on gender differences in TBI. That's all we have time for today. We hope you enjoyed this quick literature update. You can stay up-to-date on future episodes of CUBIST by subscribing to CUBIST on iTunes, Stitcher, or wherever you listen to podcasts where you can also find links to the articles we discussed and other relevant resources. If you have any questions about the podcast or about DVBIC products or programs, or if you have feedback for us, please feel free to email us at info@dvbic.org. That's I-N-F-O at D-V-B-I-C dot O-R-G.

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CUBIST is produced and edited by Deborah Bailin and was hosted today by me, Don Marion. It is a product of the Defense and Veterans Brain Injury Center led by Acting National Director Dr. Thomas DeGraba, and the Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury, led by Acting Director Dr. Richard Stoltz.

Thank you for listening. We'll be back in two weeks to explore current concussion research that has received significant media attention.

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