Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury (DCoE) Webinar Series

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Literature Review on Resilience in the Military

Operator: Welcome and thank you for standing by. For the duration of today's conference, all participants will be in a listen only mode. I would like to inform all parties that today's conference is being recorded and if you have any objections, you may disconnect at this time. Now, I would like to turn the conference over to your host. Dr. Vladimir Nacev. Thank you sir, you may begin.

Dr. Nacev: Thank you very much and good afternoon and thank you for joining us today for the DCoE Psychological Health February Webinar. My name is Dr. Vladimir Nacev. I'm a Clinical Psychologist and Senior Program Manager for the Deployment Health Clinical Center here at DCoE. I will be your moderator for today's webinar. Before we begin, let us review some webinar details like close captioning is available through Federal Relay Conference Captioning. Please see the pod beneath presentation slides. Should you experience technical difficulties, please visit dcoe.mail/webinars and click on troubleshooting the link, under the monthly webinars heading. There may be an audio delay as we advance the slides in this presentation.

Please be patient as the connection catches up with the speaker's comments. Today's presentation and resource list are available for download from the files pod below. This continuing education activity is provided through collaboration between DCoE and Professional Education Services Group. All who wish to obtain continuing education credit or certificate of attendance and who meet eligibility requirements must complete the online CE evaluation. After the webinar, please visit dcoe.cds.pesgce.com to complete the online CE evaluation and download or print your CE certificate or certificate of attendance.

The evaluation will be open through Thursday, March 10th, 2016. Throughout the webinar, you're welcome to submit technical or content related questions via the Q and A pod located on the screen. All questions will be anonymous. Please do not submit technical or content related questions via the chat pod. Participants are encouraged to chat amongst each other during the webinar, using the chat pod but please refrain from marketing or promoting your organization or product in the chat pod. I will now move on to today's webinar. Resilience and Thriving Among Military Personnel. In an attempt to define resilience, researchers have examined adaptation and growth and capacity versus demonstration.

Findings have shown that positive adaptation is influenced by factors both outside and

inside the work setting. When examining the resilience in high-stress occupations, the process includes appraisal of adversity, coping with adversity, and seeking help from others in order to achieve positive adaptation. To address the challenges of positive adaptation for these, for those deploying to war zones or other high stress environments, the Department of Defense implementation, pre-deployment training on ... implemented pre-deployment training on resilience.

The training is based on literature that identified several predictors of resilience in military personnel, including quality of sleep, higher unit morale and positive leader behavior. At the conclusion of today's webinar, participants will be able to define the distinct elements of resilience. Describe how adverse conditions affect resilience and narrate the potential benefits of resilience in high stress occupations. I would like to take, now, to introduce you to our presenter, Dr. Thomas Britt. Dr. Britt is a professor of psychology at Clemson University. He received his PHD from the University of Florida in 1994, before entering active duty as a research psychologist in the US Army.

He left active duty in 1999 and move to Clemson University in 2000 where he was promoted to full professor in 2007. He has published over 70 empirical articles and multiple book chapters and has been an editor for 2 books and 4 volumes series in the area of military psychology. His current research programs investigate how stigma and other barriers to care influence employees in high-stress occupations, seeking mental health, treatment and the identification of factors that promote resilience among employees in high-stress occupations. Dr. Britt has a bachelors degree in psychology and a masters degree in psychology and a PHD in social psychology. Welcome Dr. Britt.

Dr. Britt: Thank you Dr. Nacev. I appreciate the good introduction and I'm excited to talk about my recent work on resilience with such a diverse group of individuals. Right now, I'm just making sure that my ... Okay, I'm moving along. What I would like to encourage the audience to do, I know you're not speaking on the phone but please post comments because I really think that we're just beginning to understand how we should study resilience among military personnel and their families. At different points, I'm going to ask your opinion for how resilient should be defined and how adversity should be defined and what you all have found, predicts resilience among military personnel.

I recognize that we have a number of mental health providers here so I'll probably also talk a little bit about the danger of overemphasizing resilience in terms of military personnel, getting mental health treatment when they're suffering from symptoms. Clemson University likes us to use standard Power Point templates and whenever I'm talking to military audiences, I always select the template that has this fierce looking tiger on it and the tiger looks pretty resilient to me. What I'd like to do is start off with basically asking the question of what is resilience.

Let me see if I'm ... Okay, and so if you could type your response to basically, how do you define resilient, how have you seen resilience in your interactions with service members. That's great. Okay, I think we have a number of good definitions here. Let me make sure I can get back to the ... Can I get back to the presentation? Okay, all right, great. Well, you all gave a number of good definitions of resilience and most of the responses from just my brief examination really has to do with the ability to bounce

back or snap back in response to adversity.

I'm a big fan of this cartoon which probably describes how a lot of us feel at the end of a long work week but this cartoon really characterizes resilience as a capacity residing in the individual. Therefore, it's kind of something that people differ in and once it's used up, it's problematic. As you all indicated, resilience is also often defined in more behavioral terms and that is the ability of individuals to demonstrate resilience following significant adversity. The fact that we have so many different definitions of resilience, perhaps, it should not be surprising.

As you see in the slide here, Meredith in RAND Publication basically came up with 104 different definitions of resilience and noted a couple of important distinctions. The first one that I'd like to call attention to is, for someone to be classified as resilient, does he or she have to just return back to baseline functioning after a trauma or severe adversity or does the individual have to show signs of growth and moving beyond baseline as some authors have indicated? However, I think an even more important distinction and is also highlighted in the definitions that the audience members gave, is the distinction between resilience as a capacity residing within the service member versus a demonstration of adaptation.

You see the classic definition here by Masten and Narayan that really highlights that resilience can be defined at the level of individual or the group or even a community. You see here this emphasis on being able to recover following severe challenges to the viability of the particular system of interest. I am not seeing my screen here. Okay, all right, great. One of the things that we did when we edited a book on military resilience is emphasize ... we looked at this hundred definitions and what many people had written and what we saw is that there were 2 key elements. The first is that they ... the individual has to have demonstrated positive adaptation and the second is following significant adversity.

Therefore we define resilience as the demonstration of positive adaptation in the face of this adversity, experienced during military service. We feel it's important to distinguish between the demonstration of resilience versus the capacity a service member have to be resilient. When we talk about a service member's capacity for resilience, we're really talking about biological personality factors. The unit and leadership that the service members embedded, their family support, their civilian and military community. All of these factors can serve to enhance these service member's capacity for resilience. Within our framework, we argue that all of these factors are better seen as antecedent to the demonstration of resilience.

What I want to spend a little bit of time now is kind of talking about these 2 major components of the definition of resilience. That is what constitutes significant adversity and then also, what constitutes positive adaptation. Obviously, military personnel encounter significant adversity in a lot of different domains and I wanted to open the question up, for the audience in terms of what they consider to be significant adversity that is safe by military personnel. Okay, great. We're getting a lot of possible examples of significant adversity. Many of these have to do with deployment related events and the experience of trauma.

Many people are also mentioning basic stressors such as military boot camp, significant negative life events that happened to the person such as divorce or some other kind of major life event. Then, many of you are doing an excellent job of pointing out that it really is a range of everyday life events continuing all the way up to traumatic events that happened during combat and work related stressors can constitute significant adversity. Okay, great. When we look at significant adversity that's been studied outside of the military and ... for resilience researchers who have looked at the, studied resilience in civilian settings, we see a number of pretty severe advance that have happened to the individuals who were studied.

We see having a schizophrenic or alcoholic parent. Severe disadvantage, significant life events. Again, in the military, we're talking about combat exposure and typically what happens in these studies is that individuals we're either put at risk or not at risk, based upon their experience of this adverse event. One of the things that I'd like to highlight, that you all have pointed out as well, and that in the military, there really are many possible sources of adversity. Here I'm focusing on the deployment related adversity that comes with combat exposure as well as just the malevolent deployment environment.

One of the things that I highlight when we talk about resilience in employees outside of the military is that frequently when resilience is studied in normal occupational settings, the authors do not demonstrate that the employees have been through a significant adversity. One of the challenges to study these among military personnel is most of the research and theory outside of military settings, really focuses on isolated events and examines how people respond to these isolated events. Whereas in the core, in the context of military personnel, they frequently experience multiple traumas in a row and often times these traumatic experiences or the malevolent environment is not removed.

Okay, the second important part of that definition is when military personnel experience this adversity, they demonstrate positive adaptation. I'd like to throw that question out to the audience. What do you all consider positive adaptation? Here, I'm seeing a lot of people are mentioning, developing healthy coping skills, growing and recovering from the trauma, being able to maintain a positive work-life balance, keeping core values, having offensive control. Again, near or greater than base line so many of you are highlighting the fact that service members might return to an even higher level of functioning.

Okay, these are great, thank you. Outside of military settings, usually positive adaptation has been studied in terms, from the developmental literature, in terms of meeting key physical, cognitive mental, moral developmental milestones, even though the child has grown up in a severely but disadvantaged environment. Within clinical psychology, the emphasis is really focused on the absence of mental health symptoms as an indication of positive adaptation in a real heavy emphasis. Sometimes, these symptoms are judged by the individual's spouse or partner. Nevertheless, there is an emphasis on the absence of mental health symptoms. Within developmental psychology, there is a focus on positive performance on school related task for the children.

I think when we look at positive adaptation for military personnel, we really have to take a broad approach. I've kind of carved out these 4 different domains that I feel are important to examine. The first is work related outcomes so is the service member able to maintain normal or higher levels of morale and performance. Obviously the absence of mental health symptoms are important but also, the presence of positive well being. Many of you mentioned in your indications of positive adaptation, the importance of meaning and offensive control and offensive purpose. Soldiers could be not showing mental health symptoms but still suffering from a real lack of meaning or purpose or moral integrity from things that have happened to them.

Finally, and this is recognized with military psychologists, the importance of the family. In addition to ensuring that the soldier has shown reduced symptoms, good performance, high well being, we also want the same for the service members, family members, spouse and children and we see multiple studies illustrating how traumatic events affect not only the service member but also the service member's spouse and children. It really becomes a pretty complicated process if we want to really examine how the different types of adversity that military personnel experience, how do military personnel positively adapt not only in terms of not showing mental health symptoms but also in these other domains that are important for the service member and the family unit.

Another way that researchers had defined resilience and I just want to highlight this because there are a fair number of studies out there and they're starting to be used with military personnel and that is with self-report measures of resilience itself. I put up 3 popular self-report measures of resilience here. You can see that most of these basically assess the individual's perceived ability to bounce back following adversity. There is evidence that people who score higher on these types of resilience scales do report stronger mental health.

One of the cautionary notes that George Bonanno and others make is that, it can really be circular to argue that these measures are resilience and in terms of the distinction that I made earlier between the demonstration of resilience and the capacity for resilience, my sense is that these measures probably reflect, could be seen as an indicator of the individual's capacity for resilience and it's important to actually show that people who report higher scores on these measures actually do adapt positively when faced with severe adversity. We've done some recent research on the Smith et al Brief Resilience Scale and have some initial evidence that people who score higher on these scale are actually less likely to show symptoms following combat exposure.

A lot of work needs to be done on using these self report measures of resilience. Okay, so I hope you can see this. I borrowed this figure from Masten and Narayan. This is a popular approach for studying resilience in general. That is to basically follow individuals over time. Document typically a single trauma or negative, severely negative experience that happens to the individual and then simply chart their functioning over an extended period of time. These different trajectories, represent different categories for how people might respond. You see trajectory A is someone who doesn't show any effects of the trauma.

Section B or trajectory B is more of someone who shows an initial dip but then returns to normal after a period of time. C represents the notion of post traumatic growth or actually returning to above functioning at some point after the event. Then, E and D represent more negative dysfunctional responses to trauma. I think another figure here that the authors used to address what happens if individuals are exposed to severe adversity for a long period of time and then this adversity is removed, what are the different trajectories that the individuals can show after that. These might actually better characterized resilience among military personnel.

If someone is on a deployment where they have, had significant ... been exposed to significant combat events for an extended period of time, it could be debated whether the actual adversity stops specially when there are multiple deployments. Individuals can either return to base line functioning after the adversity has ended or a portion of individuals are going to show maladaptive functioning after the adversity has ended. Recent research in the field of resilience has often used complex statistical techniques of latent class analysis in order to study people over time and look to see what is the trajectory ... what's the most dominant trajectory that exist.

What I'd like to do as this question now before addressing the research within military personnel and that is how common is resilience among military personnel? Is it the norm? Is it rare? Is it most, service members? How common is resilience among US service members? Here, we're seeing specific percentages so their ... although one common response is more common than people give credit for the majority of service members are resilient. More frequent than we often investigate. This is a good point. Okay, this is an interesting point. Everyone has some degree of resilience, it's not black and white.

What's interesting is that this trajectory approach really forces it to be black or white in terms of classifying someone as resilient or not and I'll highlight that. That is one possible criticism with this approach to study resilience. All right, great. Thank you. Before giving specific percentages, I just wanted to highlight here again that typically when resilience is studied outside of military settings and is evaluated with this statistical procedure of trying to identify latent classes of functioning, and it is the case in this research that resilience is the most common trajectory.

It used to be thought that following death of a spouse, there was a long period of grief and many people did not recover but George Bonanno really provided evidence to dispel that myth and really show that the vast majority of people are resilient in the face of single isolated events. When we talk about military personnel though, they are certainly exposed to more frequent and severe trauma than civilian personnel who have a single traumatic event. These are just some statistics that you all are aware of, in terms of the percentages of service members returning from combat who demonstrate significant symptoms and these are only the service members who are admitting the symptoms.

There is a common belief that the mental health impact is greater than our measures pick up. What's interesting is that Bonanno and colleagues did a study a couple of years

ago with military personnel, and studied them from before the deployment, pre-deployment to the first follow up after deployment and then 3 years after that and then examine the trajectory using the methods that we talked about. Even for military personnel, this graph is for military personnel who had been on multiple deployments and 83.1% were classified as resilient and that they reported low PTSD symptoms before their deployment. They reported low after their deployment and then 3 years later, they reported low symptoms again.

The argument was that the vast majority of military personnel are characterized by this resilient trajectory. You see the other types here in this figure, there is a very small percentage, 2% that have high symptoms all along. In this particular study of a large sample of military personnel, really only 6.7% demonstrating the classic post traumatic stress disorder response to severe adversity. One of my notes about this study, actually appears on the slide here in terms of ... I do think we get into trouble when we only look at the absence of symptoms in order to classify military personnel as resilient or not.

As we know, even if military personnel believed that their responses to these assessments are anonymous, there still is a tendency to often times service members don't want to admit to themselves that they're experiencing these symptoms. I worry a bit about using these kinds of data to suggest that there are really only a small minority who are experiencing mental health problems and who are not resilient. This is what the data speaks to in terms of this method of approaching resilience. I see some very good comments that people are making in terms of not only examining 3 years out but what happens 5, 10 years out in terms of the trajectory.

What I'll ... In the interest of time, I will go ahead and just move in to what predicts resilience. I really like the different categories of resources that Meredith et al proposed. We actually are ... Let's go ahead and let the audience members indicate, what do you feel are the main factors that predict whether military personnel demonstrate resilience or not. Just looking at these responses, we see a combination of personnel coping strategies as well as interpersonal factors, social factors, social support, relationships, high functioning prior to the exposure to the trauma, that is a big one. Social support. Okay, great. Thank you. These are all ... all of these factors are important and we developed a heuristic model to kind of separate these into different categories.

The categories at the bottom were ones that were highlighted by Meredith et al. In this figure, we basically include a model that, a comprehensive approach to examining resilience among military personnel, would ideally address all of these factors. We would need to know information about the adversity itself. How did the individual appraise and cope with the adversity that was experienced including potentially seeking health from other people. Again, this multiple component indicator of positive adaptation in terms of the service member's performance, low symptoms, high sense of purpose and then healthy relationships with family and children. I do believe that many of the factors that the audience members indicated could be put under these different types of resources.

There is research suggesting that certain genetic or biological markers are out there that

can potentially indicate resilience following trauma, personality variables, many of you mentioned unit related resources in terms of the importance of effective leadership, unit cohesion and social support. Family resources that can serve to enhance resilience among military personnel. Also, community resources that can potentially help service members deal better with the types of traumatic events that they encounter. Many of the factors that you all mentioned have been examined as predictors of resilience in military settings.

We know that soldiers that get better sleep are better able to handle the rigors of combat and are less likely to report symptoms following high combat exposure. A couple of years ago, we showed that soldiers who had high morale after a deployment were less likely 3 months later to report PTSD symptoms under ... when they had experienced high levels of combat. A number of studies have looked at unit cohesion and social support and as well as positive leader behaviors. I'm seeing a couple of folks have talked about spiritual beliefs and those have been studied in the past, typically in the context of coping. In terms of soldiers indicating that they rely on their spiritual beliefs in order to cope with the demands of combat. We recently looked at resilience among soldiers who are participating in basic training.

One of the things that we found important was what we call acceptance coping. By acceptance coping, we meant accepting that the demands that are present are basically necessary as you move into the identity of being a service member. Specially when soldiers are in situations like basic training when they have low control and low autonomy, basically accepting that the demands are necessary turns out to be a pretty effective strategy for addressing these demands. Whereas not surprisingly denying that the demands exist are maladaptive and are related to higher stress. Another thing that we found we studied the soldiers before basic training and then at 3 points during basic training and looked at the slope in terms of did they tend to increase in their use of acceptance coping.

What we found was that those who increase in their use of acceptance coping, the slope of the use of acceptance coping was negatively related to the slope of symptoms. I'm really noticing a lot of very good points about other potential factors that could confer resilience to military personnel. I see people talking about intelligence. That's one factor that has not really been studied to a great extent. I know that intelligence is a huge factor in terms of job performance, that would be interesting to examine as a factor that might confer resilience among military personnel. This also relates to what I like to highlight here in terms of gaps in the literature.

Most of the time when researchers look for factors that are associated with the demonstration of resilience, there is typically only 1 factor examined. The research is very piecemeal in terms of, well, I might look at morale as a factor. Someone else might look at social support, someone else might look at religious coping and there is really a need to bring multiple factors together and see which ones are most important, which ones cancel each other out. I think a lot can be said for really trying to develop a capacity for resilience index based upon a thorough understanding of all of the resources that a particular soldier have.

If a particular soldier has certain personality traits, strong unit cohesion and leadership, strong family ties, good community connections, then that soldier would be classified as having a high capacity for resilience and then would therefore be more likely to demonstrate resilience when faced with traumatic events or multiple deployments. I also think we need to assess the mechanisms better for what is it about these factors that influences resilience. There is a real tendency to assess resilience merely as the absence of mental health symptoms. I would like to see us move towards an assessment of the meaning that military personnel assign to their work in their lives and their ability to derive meaning in an existential way. As well as a greater emphasis on looking at the individuals who are close to the service member.

This is obvious from the studies that we talked about but it's important to use longitudinal designs where a personnel are assessed prior to combat and then at multiple points, following exposure. You all had mentioned in your online questions about really extending the time periods soldiers are examined beyond 2 or 3 years to monitoring them throughout their career. I would add for those who leave the military, developing a mechanism to monitor them once they've reintegrated back into their civilian communities. I thought I would briefly ask this question. There is a lot of focus on resilience in the military and resilience training and how might this emphasis on resilience actually be a negative factor for military personnel?

I am seeing a variety of responses in terms of the answers. Both ones that I expected as well as ones that I did not ... that I had not thought of. One of ... I do see one of the major concerns that I've had with this emphasis is what many of you are mentioning in terms of the expectation, that everyone bounces back, the idea that they shouldn't get help if they needed because it would reflect the failure to be resilient. I see here under recording a problems, specially stigma on recruiter evaluations and a lot of great points here. Thank you. One of the areas that I'm particularly interested in is the importance of military personnel, getting treatment early for mental health problems.

I didn't have time to incorporate at this into this presentation but recently Mark Zamorski has shown in the Canadian military that those soldiers who get treatment earlier when their symptoms are less severe are less likely to get medically discharged than when soldiers get treatment later. There is a demonstrated finding that getting treatment for symptoms when they're mild is better than waiting for them to become severe. One of the things that we pointed out is that there is ... this culture of resilience can really deter soldiers from getting health when they're experiencing mental health problems.

This can be seen in terms of stigma and treatment, really being the last resort that the soldier tries to initiate after all other coping strategies have failed. Sometimes soldiers can use self reliance to address mental health problems but when this self reliance involves maladaptive coping, they could really benefit from getting mental health treatment. One of the things that I feel is important is to really highlight mental health treatment as the contributor to resilience in terms of addressing problems when they're mild and getting the service member back into the unit in a more mentally fit posture and not to be seen as a failure of resilience.

I think that many leaders certainly senior leaders within the military are promoting the receipt of mental health treatment. I remain convinced that at the small unit level there is still is a lot of work to be done in terms of creating a culture of support for military personnel experiencing mental health problems and not stigmatizing them and failing to be resilient. Okay, so what I'd like to conclude with or spend in the last probably 10 minutes or so is this idea that service members might not only be resilient and return to base line functioning after trauma but could also experience growth or benefits. This is kind of a worthy question but I would ... let's focus on the bottom question, what benefits might military personnel experience from their exposure to adversity?

Upon seeing many possible benefits, personnel growth, success being able to cope better, a greater appreciation for life, increase self efficacy, you adapt better when you are faced with future trauma, greater mastery in control, greater wisdom. These are all great. Thank you. Many years ago, when I was an active duty research psychologist and soldiers were coming back from their deployment to Bosnia, I ask an open ended question of how is this deployment impacted you and I was expecting a host of negative responses. In fact, my goal was to catalog the negative ways that the deployment had affected the service members but I was surprised to see many of the service members talking about positive benefits that they had received or proceed to received from their experience in the peace keeping deployment.

This just briefly highlights but according Masten & Narayan they believe that post traumatic growth is likely because they've added a whole trajectory that reflects this possibility of growth. I actually don't agree with this particular figure because the evidence suggest that people can experience both mental health symptoms as well as post-traumatic growth at the same time. It's not that one cancels out the other. It's more common that both types of responses occur which can't be indicated on this type of diagram. When I looked at the literature, after seeing all these responses from the soldiers, I was somewhat surprised to find that there is a really pretty large literature that has examined the benefits that can come from dealing with traumatic events.

There is ... many of you are probably aware of this, there is actually a post-traumatic growth inventory that was developed by Tedeschi and Calhoun that is a measure of the types of benefits, many that you pointed out in terms of new possibilities relating to others, personal strength. There is some evidence that the greater the amount of stress that the service member has been under the more benefits that are reported. I don't get in to just hear that much but there has been recent criticisms of the post-traumatic growth inventory measure because the measure ask the respondent to indicate how they change as a result of stressful event and there has been some criticism that people really aren't able to do the cognitive work of thinking about how they were before the event and how they are after the event and therefore, how they've grown from the event.

Nevertheless, there is still has been a lot of emphasis on documenting possible benefits of military service. This is the model that we came up with that was based on one of Nelson and Simmon's, just to indicate how traumatic events might both result in initial increased distress and symptoms but how it might indirectly be related to positive outcomes because of these benefits that military personnel experience as a result of

actually making it through difficult events and getting a chance to use their training. We study this issue. When you look at prior research, actually, authors have talked about soldiers reporting benefits ever since soldiers were examined following World War 2.

Sometimes there is a relationship between the amount of combat exposure a military personnel have experienced and the number of benefits. One of the things that we noted was that the type of combat experience maybe important. In the combat exposure scale that's typically administered by the Walter Reed Army Institute of Research, some ... We noticed that some of these combat experiences are really the soldiers doing their job, such as fighting, clearing houses. Whereas other events are not as active and they're more passive, witnessing the destruction of war. One of the things that we predicted was that soldiers will be more likely to report benefits in response to combat experiences that were more ... where the soldier were more active in actually doing their job.

We study this in a group of military personnel who had been deployed to Afghanistan and we ... for the present paper, we're focusing on the fact that active combat experiences should predict higher levels of PTSD symptoms but also that, these kinds of active combat experiences would be related to higher levels of benefits, benefit finding. We basically have this kind of inconsistent mediation where a portion of the positive relationship between combat exposure and PTSD could be reduced because of the link between active combat experiences and benefits from the operation.

This is a model where we actually found, we divided the combat exposure categories into the active type that we talked about earlier or being on the receiving end of gun fire that was passive combat or just witnessing destruction caused by the war. What we found was the active combat experiences were positively related to perceived benefits from participating in the operation. These perceived benefits were negatively related to symptoms of PTSD 3 months later. One of the additional findings was that there was this inconsistent mediation.

One way to look at it is that active combat exposure was positively associated with PTSD symptoms at time 2 but benefit finding accounted for 18.5% of this relationships so 18.5% of that relationship was reduced because of the benefits that soldiers reported after ... as the result of being exposed to these more active forms of combat exposure. One of the things though that we're very careful to recognize is that you don't want to overemphasize the experience of benefits and kind of deny soldiers the reality of the negative effects that can also come from combat. One of the things that we're ... that's being investigated now is how can military personnel use these benefits they might be getting from exposure to traumatic events in order to enhance their resilience.

There is currently an attempt under way to try to incorporate these benefits into training military personnel to better respond to the rigors of deployments. Right now, the jury is out on whether benefit finding is something that just naturally comes to some people and not to others. I think we need to be careful in terms of communicating to military personnel that they should be experiencing these benefits and that something is wrong within up there if they're not noticing these benefits as a result of the operation. I was trying to get back my main screen. That is actually the conclusion of my

presentation. I think I might have ended a couple minutes early. I think now the moderator is going to be combining some of the questions that you all have asked throughout the talk.

Dr. Nacev: Thank you very much for your presentation Dr. Britt. It is now time to answer questions from the audience. If you have not already done so, please submit questions via the question pod located on the screen. We will respond to as many questions as time permits. One question, we'll start off with, is there data to support resilience programs in the military and their effectiveness?

Dr. Britt: Well, that is actually a very good question. There are attempts under way to evaluate the effectiveness specially of comprehensive soldier fitness. Some of the resilience training that has been carried out by the Walter Reed Army Institute of Research. One of the ... there have been a number of technical reports that have come out illustrating how the resilience training programs providing evidence for their efficacy. One of the findings is that the effects, perhaps understandably are relatively small. I noticed that one of the audience members was commenting on the fact that the resilience training is given to every single soldier whereas only a minority of the soldiers might actually need it.

The idea that the training has given to groups of people who might not need the training is kind of seen as one reason for why the effects of the training might, are not more pronounced in terms of when the functioning of military personnel is assessed.

Dr. Nacev: All right. The next question is, is there difference between resilience and stoicism?

Dr. Britt: Resilience and stoicism?

Dr. Nacev: Yes sir.

Dr. Britt: What I would say is that, my sense would be that stoicism ... it's interesting because, if the stoicism is the result of the lack of meaning of purpose that the soldier is experiencing. What I would argue is that, that soldier might not be showing mental health symptoms but if they're experiencing the sense of stoicism and possibly a lack of meaning or lack of caring, that would highlight to me the absence of positive well being. That's something that has been severely under investigated and as everyone knows the World Health Organization long ago emphasize that health is not simply the absence of symptoms but also the presence of positive factors that allow individuals to make sense of their experiences and feel sense of purpose in their life and in their goals and that what they do matters.

I think we honestly do not have any data or relatively little data on how exposure to trauma is related to resilience as assessed by the ability to really maintain the sense of purpose and positive well being as a result of trauma exposure.

Dr. Nacev: Very well. Another question. What steps can better instate to cope with post-traumatic stress disorders as it transition back into civilian life?

Dr. Britt: Well, I think that one of the important, first important points is that if the ... if the military personnel have post-traumatic stress disorder and they go to see someone on active duty, there is probably a better chance of continuity of care once the soldier returns back to their civilian community, if the soldiers waits to get treatment until after they've left the military, my understanding is that it can be more difficult. Now, in terms of the coping strategies, once the soldier leaves so that, perhaps to prevent the development of PTSD, following their ... leaving the military. Many of the coping strategies that were mentioned in terms of reaching out to other people, basically seeking social support.

There is some emerging research indicating that veterans who were able to get more reintegrated into the community that they return to are better off in terms of that potentially buffering them from the development of post-traumatic stress disorder. I always encourage military personnel, if they're starting to experience this symptoms that there is nothing wrong with reaching out to the resources that are available to them, in order to get help when these symptoms are not severe so that the secondary effects of the more severe symptoms such as alcohol, alcohol abuse, family problems don't happen.

Dr. Nacev: Okay, another question that came up is while it is important to first understand what is limp with resilience, what is known about how to build those factors in individuals in order to increase their chances of, for resilience?

Dr. Britt: Well, that's a very good question. That's what ... so the whole emphasis behind the comprehensive soldier fitness approach was to look to the academic world for what types of training had been developed, what types of skills had been associated with resilience in terms of what times of coping skills, what types of cognitive behavioral skills and that really guided the US Army's development of the comprehensive soldier fitness. They selected a resilience training program that had been shown to be effective in the civilian world and try to modify that for the military and to try to teach those skills that had been associated with positive adaptation under severe stress.

I think it's a continuing process, as we learn about those factors that contribute to resilience, how do we train military personnel to be higher on those factors so that they don't develop mental health problems. I think because of the large number of people in the military, there has been more of a train to trainer approach. Train NCOs on these resilient skills, they become master resilience trainers and then they go back to their units and train their soldiers on this resilience skills. That's the current approach towards trying to increase those coping strategies that have been found to be effective.

Dr. Nacev: Okay. Thank you. The next question is how does one integrate successfully into civilian life if PTSD is not well-known by civilian service providers in their region?

Dr. Britt: That's a great point. If ... One of the things that I know the Department of Veterans Affairs is doing and to a certain extent, the Department of Defense is to try to engage in programs that educate the civilian health system about what they can expect from military personnel who maybe presenting in their hospital with what is combat related PTSD. It's a valid point. The only thing that can be done is to try to educate the civilian

health providers on the experience as a military personnel and how those might influence how they present with symptoms.

I know here at Clemson, we've instituted program where training is done for employees who want to get a better sense of the nature of military culture and the types of experiences that military personnel might have for students here at Clemson who are former military. There really is a need to reach out to all members of the community in order to educate them on what they can expect from veterans who are transitioning out of the military.

Dr. Nacev: All right. I just wanted to let the audience know that we have a good stream of questions coming in and we'll try to answer as many as we can. We do have a few extra minutes so please be patient as we go through some of the question. The next question is, how does one integrate successfully into civilian life ... I'm sorry, I just finished that one. The next one is for the more holistic organizational psychology approach, is there more that can be done from a unit level to increase what they would see as resilience in their soldiers?

Dr. Britt: That's actually a great question. One of the important factors is to ... that's been shown to be a buffer against the negative effects of stress is unit cohesion. In terms of an organizational psychology approach, anything that can be done to enhance the cohesiveness of the unit, would be associated with increased resilience in their soldiers. The other area that's taken from organizational psychology is the importance of leadership. There is an emerging body of research on behavioral health leadership within the military and that is training leaders to be aware of signs of mental health problems that service members might be experiencing.

How to appropriately talk with service members who are having problems and how to be a source of support for getting them to get the mental health care that they need. One of the things that we recently did was develop small unit training to enhance the support that unit members give soldiers within their units who are experiencing mental health problems. One of the things that we found was that many soldiers reported not engaging in supported behaviors. What we did was to kind of highlight the important role the unit plays in creating a climate of support for soldiers, getting help and remaining in therapy and then welcoming them back when they're done with therapy as they're ready to contribute again to the mission of the unit.

Dr. Nacev: Okay. Thank you. Another question, what are the standard accepted metrics for measuring resilience?

Dr. Britt: Well, I would love to be able to provide those standard metrics to you but to my knowledge there are not standard metrics to measure resilience. Probably the closest standard measure that's been used in the largest number of studies is the PTSD checklist, either the civilian version or the military version. That has been employed pretty regularly but again, that only assesses the demonstration of resilience as defined by the lack of mental health symptoms for that particular disorder. I think that's another need for future research, is to do a better job of settling on a standard set of measures that are going to be used to assess the resilience of soldiers and their families and then

being sure that everyone uses these instruments so that we can get a better sense of the norms and kind of what constitutes a failure to be resilient. That's a great point.

Dr. Nacev: Very good. Another question was, are there any studies, are there any resilience studies under way in conjunction with large scale training exercises such as those occurring at the National Training Center?

Dr. Britt: That's a very ... That would be a very good place to examine the effectiveness of resilience training. To my knowledge, I'm not aware of any of those. I do know that the Walter Reed Army Institute of Research will frequently target units that have ... that might be going on a second deployment and their first deployment they had saw a lot of combat, there is a concern about the development of mental health problems. That's a great suggestion for a place where resilience training could be examined because as we know these training exercises can often be filled with very stressful events and at times traumatic events that the personnel experience. To my knowledge, I'm not aware that anyone is trying to examine resilience training within that particular context.

Dr. Nacev: Well, next question is have there been any studies looking at the neurocognitive underpinnings of resilience? For example working memory, mental flexibility and so on and can these cognitive functions be trained strength than prior to deployment?

Dr. Britt: That is another great point. I know that there is a program of research being initiated at Walter Reed and some of its auxiliary units on return to duty and basically ... in terms of cognitive functioning and assessment of whether the individual is ready to go back to duty. There is a small series of studies that I've looked at, a military personnel who experienced ... who participated in sear training and to examine what types of thoughts are associated with more adaptive physiological profiles following the training. To my knowledge these have not necessarily been linked with indices of adaptation that are normally examined in terms of lack of mental health symptoms. I noticed that someone's currently answering that question. There could be programs or research in this area that I'm unaware of.

Dr. Nacev: Okay, well, it's great to have an interactive audience. Another question, is there a role from mindfulness training to improve resilience in the military?

Dr. Britt: I know that there are a number of funded studies that are examining the use of mindfulness. There are ... from what I understand that there is some encouraging initial evidence that those strategies are effective. I know within the broader sphere of industrial organizational psychology that there have been meta-analysis showing that mindfulness training has benefits for the mental health of employees. This is one of those types of training that as more studies are done, it could be the case that mindfulness training ends up having a more prominent role in terms of being used potentially as a primary format for resilience training.

Dr. Nacev: Okay, next question is, is there some way to predict someone who may not have great coping skills prior to combat deployment, some survey that can predict to support resilience?

Dr. Britt: One of the difficult things associated with many of the surveys that are used are that, what they're intending to measure is pretty transparent. Military personnel could detect that this measure is designed to see if I have the coping skills in order to do well at combat. If the service member does not want to be prevented from going, they know the right response. There is a long history of difficulty of being able to identify those people who are going to be more likely to respond maladaptively to the events they encounter. Other than a prior history of mental health difficulties prior to the deployment.

In terms of specific coping strategies, that could be assessed and that would be shown to be predictive of a negative response to combat experiences, I'm not aware of any.

Dr. Nacev: Very well, and now for the last question, I'm sure you have a sigh of relief for yourself. Is there any information about organizational or unit resilience and how that factors in to individual resilience?

Dr. Britt: Great question to end on. One of the ... within the industrial organizational area, there is a recent emphasis on team resilience. Team resilience being equivalent to unit resilience and although it's pretty much in the very beginning stages. To my knowledge, there have not been studies that have ... that would be a great study to do to find a way to measure resilience of the unit level and then do some kind of multi-level modelling to show how being embedded within a resilient unit can have benefits for the employee's own resilience. One of the difficulties is that mental health symptoms don't really have ... there is not a unit level quality to those.

There is some evidence that these individuals are embedded within units that are highly cohesive then that could potentially serve as the protective factor for the individual level resilience of the soldiers who were embedded in those units. I see that as a very important area of research to show how the unit level properties can have effects on the individual service members.

Dr. Nacev: Very good. Thank you very much to all the participants for the outstanding questions and the great discussion generated from them. After this webinar, please visit dcoe.cds.pesgce.com. To complete the online CE evaluation and download or print your CE certificate or certificate of attendance. The online CE evaluation will be open through Thursday, March 10th, 2016. Thank you again to our presenter, Dr. Britt. Today's presentation will be archived in the monthly webinar section DCoE website. To help us improve future webinars, we encourage you to complete the feedback tool that will open in a separate browser on your computer.

To assess the presentation ... To access the presentation and resource list for this webinar, visit the DCoE website at dcoe.mil/webinars. A downloadable audio podcast and edited transcript of the close captioned text will be posted to that link. The current function ... the current touch function will remain open for additional 10 minutes, after the conclusion of the webinar to permit attendees to continue to network with each other. The next DCoE TBI webinar theme is management of sleep disturbances following acute concussion. It's scheduled for March 10th, 2016 from 1 to 2:30pm Eastern Time.

The next psychological health webinar theme is on State of the Science and Diagnosing and Treating co-occurring TBI and PTSD and is scheduled for March 24th, 2016 from 1 to 2:30pm Eastern Time. Thank you again for attending and have a great day.

Operator: That concludes today's conference. Thank you for participating and you may disconnect at this time. Speakers please stand by for your post conference.