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Chair

Mr. Robert Oliphant

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● (1105)

[*English*]

The Chair (Mr. Robert Oliphant (Don Valley West, Lib.)): Good morning, everybody. I call the meeting to order.

Welcome to the 14th meeting of the Standing Committee on Public Safety and National Security.

We are continuing our study on operational stress injuries and post-traumatic stress disorder in public safety officers and first responders. We welcome our guests and witnesses.

Colleagues, I just want to mention that at noon we will be joined by another witness, Dr. Paul Frewen. Because we have only three witnesses today as opposed to our usual four, I suggest we plan on ending the meeting 15 minutes early, at about 12:45. Then we would ask the subcommittee on agenda and procedure to stay for about 15 minutes to go over the witness list for the next few sessions, get that done, and still be out by one o'clock today.

Is that agreed as a kind of working plan? If it turns out that you want more time with the witnesses, absolutely we will do that, but I think we probably should have sufficient time.

Dr. Zul Merali will be our first witness to speak. Each witness has about 10 minutes, so we'll have 20 minutes for presentations, members will ask questions, and then Dr. Frewen will come in after that.

Dr. Merali, welcome. I appreciate your taking the time, and I look forward to your enlightening us.

Dr. Zul Merali (President and Chief Executive Officer, The Royal's Institute of Mental Health Research and the Canadian Depression Research and Intervention Network, As an Individual): Thank you very much.

It's a real honour to be presenting and discussing this issue with you. Rather than making a major formal presentation, I'm going to leave some room for a dialogue, because I know that over the course of your deliberations you have had a lot of presentations that tell you about the scourge of depression and PTSD affecting people of all stripes, including first responders and people in uniform as well as first nations populations. I'm sure you have been well briefed on the immense suffering of their comrades, their families, and their friends, but I'm here today to tell you why I believe the situation is not getting better.

I hear a lot of unsettling statistics about how, as the population returns from Afghanistan, there is going to be a higher rate of PTSD, that the cost of medical marijuana is projected to increase to something like $30 million, and that the rates of suicide are not decreasing and if anything are on the rise.

I would like to share my views on how we could collectively try to correct the course trajectory of these kinds of statistics. I think my plea would be that we need to take research and innovation much more seriously than we have to date, because if we do business the same way as we have always been doing, we cannot expect different outcomes. The different outcomes are really going to come through research and innovation.

Let's do a bit of a reality check. We are successfully treating only about a third of the people suffering from depression and post-traumatic stress disorder—only a third. Another third are really not responding too well, so they are not ready to go back to work. The last third will not respond no matter what you do. It doesn't matter what treatment regimes we have.

Our treatments are taking far too long to kick in and, when they do kick in, they're not very enduring. Why? It's because the way we diagnose and treat medical conditions leaves a lot to be desired. There's much need for improvement.

Let us first talk about the treatments, or I'd say lack of adequate treatments.

As I said, we only bring about a third of people into remission, and the other two-thirds are doing poorly. Even in the third who are showing a positive response, many will relapse within the first year. If you had a situation like this for heart disease or for diabetes, we would not accept it. Why do we accept this for mental illness? It really boggles my mind. We need to move ahead on this front.

One of the problems is that we continue to diagnose mental illnesses by symptoms. People ask you how you feel, and then you may describe your symptoms, and there's a checklist that people go through. Then they say, "You pass the threshold, we give you this diagnosis."

However, you all know and we all know that there is a huge amount of variability in the symptoms that people express, either symptoms that affect people or the symptoms that affected people want to communicate to you and talk to you about. There's a lot of variability. There can be a variety of emotional symptoms, for example, including depression, worry, intense feelings of guilt, and emotionality. There are intrusive thoughts of various kinds, including memories and sleep disturbances. As well, there are a variety of physical symptoms: neurological, respiratory, musculoskeletal, and cardiovascular.

The symptoms may manifest themselves within months of a traumatic event or years after a traumatic event. They may appear after a single episode of stressure or they may appear after a protracted series of traumatic experiences, as with multiple combat situations.

● (1110)

The point I'm trying to make is that there's a huge amount of variability in the factors that precipitate things such as depression and post-traumatic stress disorder, and the ways in which people express those symptoms are variable.

Then we have these diagnostic scales that are entirely based on the symptoms. We have no blood tests. We have no brain scans. These are the kinds of tests that we have come to expect for heart disease, cancer, and other things, but not for mental illness. We don't have those. As a result, two people can have extremely different symptom expressions, yet they'll both be given the same diagnosis and they'll both possibly end up getting the same kind of treatment. No wonder our treatments don't work well.

Why are we in this predicament? Why is this so different from other medical conditions? After all, this is a medical condition. I think we have to begin to focus a bit more on biology, because our diagnostics right now are agnostic of biology. It's all based on symptoms. Also, we need to develop biomarkers through blood tests and brain scans.

In terms of technology, I think we are at a stage where there have been huge advancements in terms of both genetics and, for example, imaging. We recently invested a huge amount of resources into creating a brain imaging centre at The Royal. The reason we did it is that we wanted to provide a platform that could help us peer into the living brain.

How can you treat an organ that you can't see? You take your car to a mechanic because you know that he knows how the car works. He can see it, he can open your engine, and he can feel it. You can't do that to the brain. Your brain is locked away in the vault of your skull. There is no easy way to get to it. You can't get to it, you can't feel it, you can't pulse it, and you can't see a lump as you can for a cancer. You need to peer inside the living brain to see what is happening. You need to do a sort of non-invasive biopsy of the living brain so that you know what's going on.

In the case of mental illness, we know it's brain based. We need to peer in. It's not just a matter of looking into the brain for abnormalities that are anatomical. I don't think there will be anatomical abnormalities. What is happening is that some circuits within the brain are starting to malfunction. What we need to find out is which ones are the rogue circuits. Where is it that certain symptoms are expressing themselves? How can we use the technologies we have, and other means, to better diagnose—to diagnose early and diagnose precisely, and to know what is causing the illness so that we can specifically treat it in a personalized way, as we do for other illnesses?

For example, if you have a cancer, they'll do a scan. They'll tell you the regions in your body where they see growths. Then they'll do a biopsy and identify the cell type. Then they'll do a spectrum analysis on the cell and say what chemotherapy they think is very specific for that cell type, and that's what they'll put you on. This is all evidence based.

It's my dream that this is where we will get to in terms of mental illnesses. We need to become much more precise and individualized, because we have seen that “one size fits all” does not work. We cannot keep doing the same things over and over again and expect better outcomes. We may throw all the resources we want at these treatments, but we know what the success rates are. Why don't we invest in something that's going to change that?

I thought I'd come here not to tell you a pretty story, but rather to lay out the facts as they are, to tell you what some of the difficulties are in how we do business, to tell you about the lack of effectiveness in the treatments we're using, and to give you a bit of a solution as to how we can begin to find our way out of this pit-hole that we're in right now.

● (1115)

Really, I think investment in research and innovation will be our ticket to what we're looking for, a better quality of life for those who are suffering in silence. We can throw as much compensation at people as we want, and it will only keep on increasing if we don't stem the problem. We need to be able to figure out what goes awry so that we can begin not only to have customized treatments but also, further upstream, to prevent people from getting ill and getting into these situations.

I thought I'd stop at that and open up the floor to see what questions you might have on this front, because I think it is really a call for help.

The Chair: Thank you very much for that. I find it very interesting that we often have researchers who come to us telling us how wonderful their research is and how we should just add a little more funding to it, and they think we'll be impressed. Others come to say they that don't know and they need more funding for that. I find this very helpful. It's very much appreciated. Thanks for that honest assessment.

Ms. Aiken, we're going to hear you, and then we will ask questions.

Dr. Alice Aiken (Director, Canadian Institute for Military and Veteran Health Research): Thank you. I'm Dr. Alice Aiken. I'm the scientific director of the Canadian Institute for Miliary and Veteran Health Research and a professor at Queen's University.

I'm going to talk to you today about a model that I think works well and could potentially work to meet your needs, and that's the model we follow. I had the advantage of being at an earlier meeting held in Regina and talking about this very issue. TheHonourable Michel Picard was there as well.

I would really urge the committee to think beyond just post-traumatic stress disorder and encompass all mental health. The issue is that if you only focus on post-traumatic stress disorder, we're going to have a lot of people getting that diagnosis who don't have the problem, and, as we just heard from my esteemed colleague, we're already struggling with finding the correct treatments. It's not going to help if everybody is getting the wrong diagnosis in the first place, so I really urge you to think beyond just post-traumatic stress disorder to mental health more broadly.

One of the facts that supports this is our focus is in military and veteran health research. We know from very good epidemiological data that there are many influences on mental health disorders beyond simply our own biology. There are societal, cultural, and experiential influences on mental health, and one of the best examples of that was a very large-scale study done out of the U.K. on returning combat veterans with mental health issues. The number one diagnosis in the U.S. is post-traumatic stress disorder; in Canada it's a major depressive disorder; in the U.K. it's binge drinking. All three are related diagnoses, but there are obviously differences in culture that might explain those.

I just want you to keep that in mind: that perhaps just to focus on PTSD is not ideal.

As I mentioned, about seven years ago we started the Canadian Institute for Military and Veteran Health Research, and respecting what Minister Oliphant said, we started out with no money and we did it because it was the right thing to do and a good idea. I'm extraordinarily biased, because I am a veteran and I'm married to a veteran, so I thought it was extremely important.

We started this institute at arm's-length from, but in consultation with, National Defence and Veterans Affairs. They recognized that they needed independent arm's-length research to inform their health policies, practices, and programs as they moved forward. Both National Defence and Veterans Affairs recognized that. Their link-in was to the academic community. I would hope that we perceive in this country that a lot of our best and brightest researchers exist in our academic institutions and that it would be where government should be able to turn for these answers.

We actually do operationalize a fairly large standing offer now on behalf of National Defence and Veterans Affairs for their research ideas that they want to put out to the research community. We are a network of 41 Canadian universities and over 1,000 researchers dedicated to researching the health needs of military personnel, veterans, and their families. Public Works has actually cited the way we do business with National Defence and Veterans Affairs as the way government and academia should be working together, so we're pretty proud of that.

The other thing that we did not do from the beginning is we did not limit the research areas. We really wanted to focus on the population, which I think is very similar to your mandate. Your mandate is public safety personnel, meaning first responders, corrections, 911 operators—public safety personnel in a broad sense. We focus on military, veterans, and families.

The vast majority of the research is being done in mental health, but we also do research in physical health, novel health and technologies, and occupational health. There are different areas of research, and what's been really remarkable is we're now seeing overlap among a lot of the areas of research. For example, some of the technology allows for children of military families who are moving around the country to still be treated by the same psychologist through social media and through technology. Those are really neat overlapping areas of research.

● (1120)

I think it's incumbent upon our government—and I say this not as a researcher but as a taxpayer—to ensure that policy or programming decisions are based on evidence, and it's out there. It exists. It's just not always harnessed and used to the best of our abilities. I believe the academic community is here to help with that.

I'll stop there. I'm happy to answer any questions, but my orientation is just to say we've done it. We're happy to help any other group that wants to set up similar organizations for public safety, but I'm going to agree 100% with Dr. Merali that it needs to start with the research. To focus on one area of treatment or to fund treatment programs blindly doesn't solve the problem. We need to go back to research, and some of it in very basic science and new diagnostic methods.

Thank you.

The Chair: Thank you.

We'll begin our questioning. We'll start with Mr. Erskine-Smith.

Mr. Nathaniel Erskine-Smith (Beaches—East York, Lib.): Thanks very much.

My first question is a simple one. I note that at the round table there was a conversation about terminology and the difference between PTSD and OSI. Do you think it makes more sense to move to the use of the term “OSI”?

Dr. Alice Aiken: PTSD is a formal diagnosis, and operational stress injury is not. What the research is telling us is that often a childhood history of trauma can predispose somebody to developing post-traumatic stress disorder. There may be underlying mental health issues that come out because of operational issues. I would say that operational stress injury is more encompassing. It allows for pre-existence of the condition or for a work-related cause. I think it's definitely more encompassing, and it's not a diagnosis.

It also allows for what a lot of the research is looking into right now—that some of this may not be a mental health injury. It may be a moral injury, and that's important to consider as well.

Dr. Zul Merali: I tend to agree with Dr. Aiken. Next week I'm off to the United States, where they have an organization called One Mind. It's led by a retired army general, Peter Chiarelli. He tells me that in the United States they wish they had the same approach we have here in Canada. OSI gets people away from the issues of stigma and diagnosis and points them towards looking for help and intervention. Also, it encompasses the overarching combination of things. The injuries don't need to be emotional; they could be physical, or a combination of physical and emotional. OSI captures that, so it's a good term to have.

● (1125)

Mr. Nathaniel Erskine-Smith: Dr. Merali, you spoke of the abject failure of current approaches and of the need for more research and innovation. I wonder if you could be more specific. You mentioned developing biomarkers. Can you explain how much more investment is needed if we want to get better practices?

Dr. Zul Merali: Let me ask you in exchange what you would say in the realm of cancer. There's a huge amount of investment and there are definite milestones that have been achieved, but there's a long way to go there as well. It's the same with mental illness. It's hard to come up with a figure of how much the solution will cost. The solution is there, but we need to get to it. What will it take? I can't honestly tell you, but I can tell you that if we don't do this, we'll never have the solutions we want.

Secondly, I'll tell you that it looks highly promising. The new technologies at our disposal are being exploited for other illnesses. We have to retool them.

Mr. Nathaniel Erskine-Smith: You mentioned biomarkers and you mentioned scanning. This is not an area I'm familiar with. Could you give us some examples of where we should be going?

Dr. Zul Merali: I think that we're banking very much on brain imaging. The reason is that the symptom expression in depression or post-traumatic stress disorder, among other mental illnesses, is very variable. We need to better understand the genesis. Where are those circuits in the brain that are responsible for the expression of these symptoms? When we find out, we can go to the source of where things are going awry, understanding the neurochemical processes that are making the circuits go rogue. Then we can fix them. Unless you can see and identify them, you cannot find ways to fix them.

Mr. Nathaniel Erskine-Smith: You mentioned that it's promising. For the layman, how close are we to accomplishing that?

Dr. Zul Merali: I think we're making a lot of progress on that front. The fact is that these steps or tools have not been easily accessible for people doing research in mental health. That's why the scanner we have at The Royal is going to be dedicated to mental health and neuroscience. It's probably one of the very few in the world that's going to be dedicated. We need to have open access to the machine to address our problems.

There are some inklings that we're getting through research for where the progress could be. We can, for example, see the brains of people with post-traumatic stress disorder. There's a researcher in the States by the name of Dr. Alex Neumeister who published evidence showing that if you looked at those brain scans, you wouldn't have to be a neuroscientist to discern a person with post-traumatic stress disorder versus a control, because the brain actually lit up like a Christmas tree. There are receptors in the brain that are really malfunctioning, and we can see that.

So diagnostics is one example.

Another example is that Dr. Helen Mayberg, in the States, has done a lot of work and been able to identify through brain scanning those who would respond better to drug treatment versus those who would respond better to psychotherapy. When you got your diagnosis, wouldn't it be nice if you were able to be guided by some evidence that says you are a better candidate for a specific kind of therapy?

These are just some examples that I'm citing.

Mr. Nathaniel Erskine-Smith: Thanks very much.

Dr. Aiken, you were more optimistic about the solutions, optimistic that we do have some available solutions that have been effective. With regard to public safety officers, I wonder if you could speak to some specific examples that perhaps the military has already canvassed.

Dr. Alice Aiken: I'll give you a very specific example that moves away from the technology aspect.

The military developed a very successful program called the road to mental readiness. You're all nodding, so you've heard about it. We were able to link the military developers of this program with researchers and spin it or adapt it for university students, for industry, and for the RCMP. That's more of a prevention program, so it starts right from the new recruit and continues pre-deployment, post-deployment, and all of those things. It takes people right through and helps to de-stigmatize mental health.

That's a really concrete example of taking something developed in the military for people living at the extreme end of the spectrum and bringing it back to the general population—the university and industry—but also to another group living at the extreme end of the spectrum, the RCMP.

● (1130)

The Chair: Thank you for that.

Could I just ask, Dr. Merali, if in addition to imaging, there is work done in genomic sequencing as well?

Dr. Zul Merali: Absolutely.

The Chair: Is that showing any...?

Dr. Zul Merali: Yes, it is starting to show. It has taken a while. What is interesting to see is that the genetic aberrations that you see in mental illness seem go with a whole bunch of genes simultaneously. It has not been a simple situation of one gene, one illness. That's what we were hoping; that's not the reality. There are a lot of genes that seem to be changing simultaneously, and it looks as though the manifestation of different mental illnesses stems from that. Only now are we beginning to be able to identify, through GWA studies, through big data—so it takes thousands of subjects—some genetic signatures that we're starting to now follow down towards an individual level. Right now it's a group level, but it is starting to look promising.

For a while I was very pessimistic about success in the genetic realm, and that's why we were investing in the imaging side, but there is value in the genetic side, and I think in the next few years we'll see much more development, including predication of suicide ideation and expression.

The Chair: Mr. O'Toole.

Hon. Erin O'Toole (Durham, CPC): Thank you, Mr. Chair.

Thank you very much, Dr. Aiken and Dr. Merali, for your work. Your institutes both do very important work. I've had the good fortune of getting to know your work and both of you. I appreciate your passion.

Dr. Merali, I found it interesting. I've had the opportunity to see some of your imaging work, and I think I told you we had Dr. Ruth Lanius here from Western, who showed some images of a couple after a horrific car crash and trauma. Intuitively, for the members of the committee, I'm sure it's easy for us to understand how imaging can be used to show whether treatment has been effective or not by using the images.

You mentioned prevention. This used to come up. I met some injured veterans when I was the minister. Some of them said to me they shouldn't have been allowed to join the military, because of childhood trauma or a range of things. That always troubled me, because I like the fact that it's a volunteer force. Can the technology indicate who might be predisposed to OSI or mental trauma, and do you think it should be used?

Dr. Zul Merali: That's a very good question, and it's a loaded question. The answer is not very easy, but in the case of other illnesses, we do tests, for example, to look at your cholesterol level before you might have a heart attack so that you'll take corrective measures, both in exercise and statins, to prevent a cardiovascular event. If you have some markers that tell you that you are on the road, then you can take corrective measures.

Identifying those markers is not a sentence of any sort; it is just an indicator, like cholesterol. Because you have high cholesterol doesn't guarantee you're going to have a heart attack, but it's a warning sign. If we were able to develop those warning signs, they would be of immense value.

I think it's a continual spectrum. If you look at early indicators that may eventually lead to a condition that's an exacerbation of that biomarker, it will be very useful, because then we can begin to say you will benefit from this type of resiliency-building training, or whatever, and avert an adverse event. I think those biomarkers are very important not just for diagnostics and treatment but also for giving us some guidance as to how we can identify individuals who may need certain types of interventions early on to change the trajectory of how they're going to function later in life.

● (1135)

Hon. Erin O'Toole: Thank you.

You mentioned resiliency training. Certainly, Dr. Aiken, you mentioned the road to mental readiness program and how that important work done by the military and the veterans community with your participation helped the military and was then shared with first responders and then redesigned somewhat to be used for other populations. Certainly, in the new government, several ministers have mandates for a national strategy or an approach for post-traumatic stress for first responders. That's why we're doing this important study.

How do you think CIMVHR, your institute, having brought together 41 universities and experts, could be used in that capacity? You've helped build a network together of leading people for certain uniformed services. I would be worried if another university or somebody suddenly tried to create exactly the same structure for a different type of uniformed service. Do you see CIMVHR as being about to fulfill a function wider than for those who serve in uniform in the Canadian Armed Forces? Do you see corrections, fire, and police as a potential mandate?

Dr. Alice Aiken: We've always had first responders as part of what we talk about with CIMVHR and at our conference we always have presentations on first responder research as well. It's definitely something that's in our sights and always has been. In fact, a lot of the researchers doing research on military and veterans populations are also doing research on first responder populations. It's the same people that we see doing the work, because they are experts in their area of research and they can focus in on a particular population.

Where we ran into a bit of a hiccup, though, was on the more political side of things. First responders don't see themselves as military and veterans, and military and veterans don't see themselves as first responders. They understand there is an overlap, but they don't see it as exactly parallel.

Have we built a mechanism that works extremely well? Yes, we really have. We've networked the universities and we have the research being done. For example, three years after we started, research on post-traumatic stress in Canadian veterans had increased by 400% over any other period of time since World War II. We know we're having that kind of effect by focusing on a specific population, and we've built a very effective mechanism.

However, what I realized at the meeting in January is that there are a lot of stakeholder groups for public safety who probably need a say in how a research institute moves forward for them. We're happy to share. If an institute were to start, we'd be happy to share whatever we have. If the public safety department decided they wanted their own, they could use our governance structure, our conference, our journal. Anything like that we're happy to share.

I did get the impression—Monsieur Picard will correct me if I'm wrong—that the groups there felt they needed their own institute focused on this, as we were focused on military and veterans health.

Hon. Erin O'Toole: With the overlap, as you've said, do you think the current structure could have an extra pillar or two built within it? Could CIMVHR have special chairs or something?

My concern is that when there is such overlap, although there are differences too, do you redesign something from scratch? There's a great organization doing a lot of parallel work, and maybe with some specific new expertise or an embedded joint venture or something, the trail-blazing work you have done could help with a head start.

● (1140)

The Chair: Very quickly. We're quite over time.

I think you have already answered that question. He gave a second answer too, but if you'd like to affirm him in his need, it's okay.

Dr. Alice Aiken: Certainly we're happy to help however we can.

I'm not 100% convinced it's how the public safety personnel would see it being most effective. However, if an institute were to start, we would do everything we could so they would not have to go through what I went through seven years ago and they could start where we are now. We'd do that.

The Chair: That was a noble try.

Monsieur Dubé.

[*Translation*]

Mr. Matthew Dubé (Beloeil—Chambly, NDP): Thank you, Mr. Chair.

I would like to thank the two witnesses for being with us today.

I will continue a little along the same lines, regarding the distinction between military veterans and first responders. Obviously, our study also includes correctional officers in the first responders group.

You mentioned that they want something that would be specific to them. Based on what I've heard so far during our study, it seems that they're right because their reality is very different. I don't know what you think about it. I'll give you an example. During a previous meeting, a witness said that military personnel were in a danger zone when they went abroad, but that it was temporary because they came home afterwards. That creates very difficult challenges, of course. However, correctional officers are in a danger zone during their shift every day, and they are in their own country, their own province, their own city.

How can understanding this nuance or distinction to better respond to their needs help these people in their job?

[*English*]

Dr. Alice Aiken: You know, I don't think we....

[*Translation*]

May I answer in English?

Mr. Matthew Dubé: Of course.

Dr. Alice Aiken: It's easier for me.

[*English*]

I don't think that the diagnostics or the understanding of disease has progressed enough in mental health to understand the subtlety of differences between deploying somewhere into danger versus potentially facing it on a daily basis. Dr. Merali might be able to speak to this a bit better.

There are reports that military-related post-traumatic stress disorder is different from that of somebody who, say, suffers an accident or something like that. If it is one instance of trauma versus repetitive trauma, I don't know if we know how big the differences are in terms of how the treatment would be affected or, for that matter, a research institute.

[*Translation*]

Mr. Matthew Dubé: It's true that we need to consider the distinction between the work done by public safety officers and the work done by military personnel.

[*English*]

Dr. Alice Aiken: Yes.

Dr. Zul Merali: I agree. I think you already had a presentation on a single event with two people in a car accident responding very differently to the accident and then eventually developing very different types of post-traumatic stress disorder. That talks about the individual differences.

I think the call for action is to understand that we need to be much more integrative and bring out all the evidence and information and not silo them, because we don't have enough resources to do that. I think the sooner we can come together on all different facets, with the expertise we need to solve those problems, the better it's going to be. That single exposure to the accident, with two individuals responding differently, tells you a lot about the complexity of the illness. It's not just the event; the response of the two individuals to the event was very different. Then you have to ask if this is related to the individual differences in the two people, or if it is really a gender thing? It opens up much broader questions. I think it's important to integrate.

The point you're trying to bring is that instead of addressing issues that are specific to individual groups, if we address the fundamental issue, which is individual differences, I think we'll make much more progress.

[*Translation*]

Mr. Matthew Dubé: I have another question about the existing issues.

Dr. Merali, you mentioned the physical aspect. I find that interesting. A few years ago, a representative from the Union of Canadian Correctional Officers told us that sometimes workplace accidents occur that were designated as such, but that were actually acts of violence.

What link do you make between a physical incident that happens and the post-traumatic stress disorder that may follow?

● (1145)

[*English*]

Dr. Zul Merali: Excuse me, but I'll answer you again in English, if you don't mind.

Mr. Matthew Dubé: That's fine.

Dr. Zul Merali: I think that's an interesting point you raise. I think if you look at the body's response to trauma.... Trauma does not just have to be a physical trauma or an emotional trauma. There could be traumas of many types, and often it could be a combination of the two.

The conference I said I'm going to, which is hosted by One Mind, will be addressing two of those things. It will look at physical brain injury as well as post-traumatic stress disorder. The reason they're bringing these together is that in the realm of sports, for example, there's a lot of concern about people who are exposed to physical trauma to the head that gives rise to something else.

It all boils down to how the organ of the brain responds to different kinds of trauma and what makes one person respond differently from another. The more we understand about that, the more fundamental solutions we'll be able to find.

[*Translation*]

Mr. Matthew Dubé: Thank you very much. I appreciate your answer. I also appreciate that you're willing to discuss this.

In fact, when we do a study like this, we also want recommendations to give to the government.

I have a question related to that. I know that there is still a lot of work to be done before really being able to establish treatments. At the moment, I find that the government is mainly treating the symptoms and not the causes. That's basically what you said.

With that in mind, what do you think we should recommend to the government to ensure that programs are put in place that will really deal with the problem in the long term, rather than just treating the symptoms? I would like to hear what both of you have to say about this.

[*English*]

Dr. Zul Merali: That's a very important question, and there's not an easy answer to it. I think that there are many factors that result in somebody developing mental illness. In society as a whole there are many different segments that have different kinds of stressors and different kinds of challenges.

The fundamental thing in terms of developing recommendations for the future is that there is not going to be a one-size-fits-all solution but that there will have to be different solutions tailored to the individuals; that's why I was saying in the presentation about research that my focus was to get to individualized treatments.

For example, if you have a chest pain and you are taken to a hospital, they won't give you a pill for chest pain. They'll say, “Okay, let's find out what's going on.” It may just be heartburn, or it may be a blocked artery. It may be a faulty valve. It may be an atrophied muscle. There are many different causes, and the treatment will be very specific for that cause, even though the symptom was chest pain.

This is what we're getting to. In the general domain, many people will express certain kinds of symptoms, but we need to get to the root so that we can correctly treat it.

The Chair: Thank you.

Go ahead, Mr. Mendicino.

Mr. Marco Mendicino (Eglinton—Lawrence, Lib.): I yield my time to Mr. Spengemann.

The Chair: We'll see how it goes. We've been about a minute over for each person so far. It has been valuable, so I let it go on. We'll do the same with the next round.

Mr. Sven Spengemann (Mississauga—Lakeshore, Lib.): Thank you, Mr. Chair.

Thank you both for being here and giving us your expert opinions. Thank you also for the work that you're doing.

I want to thank my colleagues on this committee for taking on this issue and giving it serious attention and public prominence as well.

For me this is all too real. I served for seven years in a war zone. During that time, over a very short horizon, I had two colleagues who committed suicide. One of them was a serving U.S. service person who went on home leave and killed himself with his service weapon. The other was a civilian PSD, personal security detail, who killed himself in theatre, again with his service weapon. Neither of the two men was directly involved in front-line combat, but neither of them, obviously, had received adequate treatment, and they had the most severe response to the condition that we know of.

I want to begin by asking a question that might be blatantly obvious, but may drill down a bit into the clinical ramifications. The fact that we're talking here, and that this is now out in the open as something to be talked about, has given us the opportunity to give it the attention, the planning, and the resources that it deserves. Again, it's stating the obvious, but is there not also a clinical component to getting past the stigma?

Dr. Merali, in your writing you compared this to the stigma that existed with respect to cancer. We're now breaking down the walls of stigma.

What can we do as parliamentarians? What can we all do as human beings to make sure that this continues to be something that is not stigmatized and is increasingly talked about? Very concretely, what might be the therapeutic benefits of bringing this phenomenon out into the open and tackling it nationally, and increasingly, internationally?

● (1150)

Dr. Zul Merali: You point to a very critical issue in the sense that at least in the military, where they keep very close tabs on the number of suicides that occur and the causes of suicide, half of the people who end up committing suicide have already been in some kind of care. The other half have not yet sought solutions.

Getting into care is not a guarantee that you've been rescued. The first step for those who have not even sought help is to get through that door, and maybe they will be helped. That's one aspect of it.

It boils down to what I was saying before: just because you alleviate stigma and get people to say that they need help, it doesn't mean that they will get the kind of help that we want, mainly because we do not always have the solutions that they're looking for. In some cases, yes, but in many cases, no. I think that's what's burdensome.

Regardless, I think it's very important from many different perspectives to remove the stigma so that it gives them the ability to at least speak about their problems and not to be hiding behind some kind of a wall.

Mr. Sven Spengemann: I am sorry to cut you off. Would there be a prevention-level benefit as well? Let's say you have a young firefighter. She is embarking on her career and she knows that if she runs into trouble on the mental health side, there are supporting mechanisms.

Do you see potentially even just awareness and the breaking down of the stigma being helpful at the prevention level?

Dr. Zul Merali: Yes, I think so.

For example, I will give you a situation in Ottawa, where the Senators coach's daughter, Daron, committed suicide. When this became public—it was very good that the parents were brave enough to make it public—what happened was amazing. We were trying to figure out what to do with this problem, but the kids in the schools mobilized en masse. They were tweeting each other, having Facebook pages, doing fundraising, talking to each other, and becoming very aware and starting to discuss the issue of suicide, which had been very silent.

It raised awareness, and through that awareness I think we will save quite a few people—not everybody, but I think increasing awareness and reducing stigma have a very positive impact.

Mr. Sven Spengemann: I have a final quick question for Dr. Aiken on the idea of repeated exposure to probably the worst stimuli that we can experience in the military field.

If someone has been treated for PTSD—again, on the far side of the spectrum—does it make any sense at all to expect that a reinsertion into a combat environment after a successful treatment is not going to result in a relapse? What is the incidence of relapse in the military?

Dr. Alice Aiken: The stats that Dr. Merali gave you are consistent for the military: about a third of the people who go into treatment for post-traumatic stress disorder are successfully treated, a third don't respond and will never respond, and a third stay in treatment.

Of the ones who are successfully treated, many do return to combat, if that is what is decided for them. The incidence of relapse is no greater than with any other mental health issue, if they have been successfully treated.

● (1155)

Mr. Sven Spengemann: Would you speculate that the same is true on other sides of the spectrum of first responders, such as firefighters, EMS, and police? Do you know a reason to assume differently?

Dr. Alice Aiken: As Mr. Dubé mentioned, it is a different exposure, and from my knowledge I don't think we have enough data to tell us at all.

The Chair: I might ask, just on the concept of "successfully treated", if a disease is diagnosed by a symptom as opposed to by objective testing, how do we know whether the treatment was the effective cause of the success or whether the success was a result of something else?

I come at this from asthma, where I just spent the last four years and where we have some objective lung function testing, not well used by respirologists or doctors. We have a symptom-based disease, and we are never exactly sure whether the treatment was really efficacious or if it was something else.

How do you prove "successfully treated" as opposed to functional or something? How do you measure that?

Dr. Zul Merali: It is very hard. I think that to pin the success of a treatment to a specific intervention is hard, mainly because the people we treat will tell you that in life they might be doing yoga, doing exercise, or engaging in spirituality. Many of these interventions have an impact. It is very hard to dissociate them from the outcome.

What we typically do is double-randomized studies, where we divide the population into two. One gets a particular intervention, whereas the other one doesn't get that activity; otherwise, everything remains the same. Based on that, we derive our conclusions as to whether the treatment is effective or not. On an individual level, it is hard to tell, because something else altogether might have helped them.

The Chair: More work on double-blind randomized studies could be useful, as you keep telling us.

We are going to have to have money for this. We are always told not to ask for things, not to lead you guys to ask for money, but our report is going to have to ask for more research, although I am not predicting it yet.

Mr. Di Iorio: We are going to have to start cutting down the meal budget.

The Chair: It can come out of the meal budget, yes, which is quite low....

Monsieur Rayes, go ahead.

[*Translation*]

Mr. Alain Rayes (Richmond—Arthabaska, CPC): Good morning. Thank you for your presentation.

My comments will follow on the question my colleague Mr. O'Toole asked. This is something that is of great personal interest.

Dr. Merali, you spoke about treatment after a PTSD diagnosis. You said that a third of people who go into treatment are successfully treated, that a third has limited success and that the remaining third has no success at all.

You also said that technology and research made it possible to better predict who would respond the best to a treatment, and it's important to note that this varies from person to person.

Are there pre-existing conditions, such as trauma, that exacerbate this disorder in certain individuals? It would be good if the research or the discoveries that have been made could be used to determine basically which individuals have such conditions. If that was the case, perhaps we could raise awareness about this.

Could you speak more about that?

My question is also for Dr. Aiken.

[*English*]

Dr. Alice Aiken: You know, it's very interesting, because they did a very large-scale study in the U.K. on military people. They screened them for likelihood to develop post-traumatic stress disorder specifically. The people who they determined—based on childhood experiences of trauma and a bunch of different screening tools—were most likely to develop post-traumatic stress disorder were not allowed to deploy with their unit when their unit was going overseas, but the people who were not allowed to be deployed were more likely to develop post-traumatic stress disorder after the deployment, because of being separated from their unit, than they were had they gone into theatre.

As Zul said, it's a very loaded question to talk about screening. I think the more mediated response, as he suggested, is probably to identify if people are predisposed to developing a mental health issue and then help build resilience or help work on treatment programs, but don't take them out of their workplace and single them out. From speaking with people in corrections, I know that this is especially important for them. They know they're targeted, because they're taken off the floor if they're suffering from a mental health issue.

● (1200)

[*Translation*]

Mr. Alain Rayes: Dr. Merali, I fully understand the distinction that could be made, especially with regard to these occupations. As a former mayor, I've worked with firefighters and police officers. It's an environment where they are all strong and where "weaknesses" aren't accepted.

You spoke about scanners and brain imaging. Do you think that investing in research would ultimately make it possible to detect this? We would see later what we would do, but at least we would have the indicators.

[*English*]

Dr. Zul Merali: You raise a very important question. There are no answers to it. I think the only way to answer that kind of a question is to have longitudinal studies that study people right from the get-go, from day one all the way through, for quite a few years, and have those biological, psychological, brain-imaging biomarkers collected over time to then see who develops PTSD versus who does not.

For example, if you look at people who develop PTSD, through brain-scanning we can tell that the area of the brain called the hippocampus is shrunk. It's smaller than normal. If we had longitudinal studies, we'd know whether the hippocampus was shrunk before the trauma and predisposed them, or whether it happened after the trauma. I think you need these longitudinal studies. There aren't many to be had in this area, and I think it's very important that they be done.

Dr. Alice Aiken: They're mostly done on rats right now.

[*Translation*]

Mr. Alain Rayes: This is very interesting. We need to make sure these people are treated.

You just gave the example of cholesterol, cancer and diabetes. With those diseases, we know that if we eat better and less, if we take care of our health and so on, our chances are better. There is prevention and public awareness.

My concern has to do with that. I know we shouldn't categorize people, but we could do sort of what they do in sports, where they work on an athlete's resilience. If human resources know the stress risks or the situations that may lead to professional burn-out, training can be given that includes scenarios and role playing, among other things. Ultimately, it would make it possible to determine who around us would be likely to be in a stressful situation.

Efforts shouldn't focus solely on treatment, especially when the results aren't always there. We need to work at the source, too.

I don't have any other questions.

Thank you.

The Chair: Thank you.

[*English*]

We'll suspend for a minute or two as we bring Professor Frewen in on video conference.

● (1200)

(Pause)

● (1205)

The Chair: We're going to resume the meeting.

Before we begin, I want to mention that Professor Frewen sent to the committee clerk a website that has been referred to by a previous witness, but since the website is in English only I would need to have unanimous consent to distribute it to members of the committee. If I don't have unanimous consent, we can't distribute it, but I want to check whether or not we have unanimous consent.

I see that we do not have unanimous consent. It may be referred to, and you can try to search for it on your own if you like.

Dr. Frewen, you have 10 minutes to present. Thank you very much.

● (1210)

Mr. Paul Frewen (Professor, Psychologist, Department of Psychiatry, University of Western Ontario, As an Individual): Thank you for having me. Indeed, I did share the website, and my presentation will pertain directly to it.

Thanks very much. I'm going to share my screen now. You can see it in a moment.

What I'm going to be describing to you is a therapy that we've developed that combines an Internet-based approach with making use of mindfulness meditation and other types of meditation that I feel would be a good intervention for post-traumatic stress in first responders as well as other populations.

I was able to hear some of the earlier presentations which had to do not only with treatment but also preparation for an individual who can be expected to witness and respond to traumatic life events. I heard the terms “preparation” and “self-training”. I feel this type of approach, which is Internet-based and very much an intervention in which people are training themselves, would fit very well with that interest. As such, it should be a feasible intervention to provide in a large capacity.

We should think about the treatment of trauma and stressor-related disorders as involving two primary objectives.

The first is to work through the trauma. This typically involves some dialogue with a therapist in which a person is reviewing what has happened to him or her in different formats, essentially trying to understand what happened to them. It could be verbally or through writing or art, etc. That reflection leads to an increased capacity to not become distressed, for example, by being reminded of what has happened to them.

The other component, which may be talked about less, is the component of self-regulation, which essentially is helping a person cope better with the difficult emotions that come with diagnoses such as PTSD. I think you've certainly heard of the current evidence-based treatments. We have some effective treatments, typically cognitive behavioural approaches to psychotherapy, but there are certainly limitations to the current approaches. Indeed, not so many participants get fully well. For example, only about half show a response rate that leads to a loss of the diagnosis of PTSD in randomized controlled trials, and there's also a lot of dropout.

The literature is starting to turn to both Internet-based treatments and alternative approaches to cognitive behavioural therapy, such as mindfulness-based therapy. Indeed, at the University of Western Ontario, we've been the first to essentially put these two together with an Internet-based approach to mindfulness-based therapy.

Very briefly, assessment of the web-based interventions have been published, especially in the areas of treatments for depression and anxiety disorders, and more recently PTSD as well, and the findings are quite striking. Relative to the same types of treatments administered in the typical way—in face-to-face psychotherapy, for example—the effect sizes, the outcomes for the Internet-based approach are often just as strong and just as good as those obtained in the face-to-face approach. That surprised many, but it has actually been documented extensively now.

This is also the case in PTSD trials, for example, in college student samples, community samples, and combat veteran samples. To my knowledge, we don't have a study yet on an Internet-based approach for first responder groups, but based on the literature, similar kinds of outcomes can be expected.

Mindfulness-based interventions so far have not been delivered in an Internet-based approach, but there are several reasons that we would think mindfulness-based practices should be helpful in the treatment of post-traumatic stress disorder and dissociative disorders.

For one, they tend to improve attention and concentration, can improve the ability to focus on the present and away from ruminations around past trauma as well as future-based anxiety, and can alter cognitive style and help a person become less judgmental and more compassionate towards themselves. They can directly reduce physiological arousal and associated emotions of anxiety, irritability, and anger. They can lower anhedonia—the emotional numbing, the inability to experience positive emotions such as joy—and so increase positive emotions, increase a person's experience of social connectedness, and restore existential concerns towards improved well-being.

● (1215)

There are good ideas. There have been several research projects that have also shown persons with post-traumatic stress disorder are lower on what are called mindfulness traits. For example, they are less likely to notice changes in the body, such as whether their breathing slows down or speeds up. They are less able to put feelings to words and less able to find words to describe their feelings. They are less able to stay in the present. Their minds wander. They are easily distracted. Further, they are less able to accept their feelings without judgment.

These are areas that a PTSD treatment should target, and a mindfulness-based treatment targets such things.

We have recently shown that the relationship between trauma exposure and PTSD symptoms is significantly mediated with these types of mindfulness-based personality traits. If we can affect these traits, then we can affect the PTSD symptoms.

Improvements in attention and improvements in emotion are expected outcomes for mindfulness-based therapy, and there have been several studies that have shown positive results for mindfulness-based therapy, including our own study.

If I have a moment, I'll be able to describe a bit more about the specific treatment using mindfulness and metta-based trauma therapy, which is an Internet-based approach. It involves teaching meditation as well as various mindfulness-based principles and ethics.

The Chair: You have about three more minutes.

Mr. Paul Frewen: We teach six therapeutic principles. The first is about how a person can stay present. The second increases awareness of both mind and body. The third helps a person understand how to let go of difficult forms of distress. The fourth refers to metta, which has to do with loving kindness and self-compassion. The fifth has to do with recentring and decentring, and the sixth with acceptance and change.

I have a couple of slides to show you how we do this. In general, we try to teach a person greater control. PTSD and trauma lead to a sense of inability to control the controls beyond oneself. We're trying to put the control back into a person's hands. We use the acronym PALM to refer to the first four principles of presence, awareness, letting go, and metta.

Presence is the first. This has to do with helping people understand they are in the present and not the past. This has to do with the flashbacks and the re-experiencing and recognizing the influence of the past traumas on their responses in the present.

To assist with the awareness, we're trying to teach people to become more aware of their senses, their body, and their emotions, and to try to label and understand their experiences.

With the letting go, we're trying to help them to be able to let go of the distress as well as teach non-attachment to harmful impulses and desires that can develop from a significant trauma history, such as substance abuse or alcoholism.

We also help with the capacity for metta, for being kind and compassionate to oneself and others.

With the the recentring, people can desire a feeling, but they are feeling too far from it. We're trying to reverse that and bring people back to their sense of self and bring them back to their emotions. At other times we're teaching that if a person is feeling something too much, then the person needs to get outside of that. We're trying to teach a person to be able to develop that experiential distance so as to have the capacity to reflect, decentre, and then wait it out, as the distress will eventually subside.

I'm not sure about my timing, but what I would like to suggest in comparison with—

The Chair: You have about one minute left.

● (1220)

Mr. Paul Frewen: Thanks very much.

In comparison with the decentring, we want to contrast that with avoidance. We'll be rejecting the present. With dissociation, we leave the present.

Finally, that last principle is acceptance and change. It really is a sort of balance that typically the trauma survivor is trying to avoid. We talk about this as if it's like a blanket. We try to sweep it under the rug, for example, but it's really a see-through blanket, so we can't do so. Really, the only way to move forward following a trauma is this right balance between acceptance and change.

How are we doing these? Essentially, the website involves a journaling activity as well as various guided meditations.

What I'd also like to suggest, beyond just the website, are various technologies that are being researched, including here at the University of Western Ontario. Persons may have heard of the terms “neurofeedback” and other forms of biofeedback, such as heart-rate variability. The practice of meditation is going to have an effect on the brain and the body, and that's essentially indirect; the practice of biofeedback and neurofeedback is to learn what's actually happening in the body through physiological signals such as heart-rate variability and through the EEG. We can teach a person to directly modulate brain rhythms, cardiac rhythms, respiration, etc., as they're going to be doing naturally in meditation, but the biofeedback can be an additional aid to the person.

The Chair: I'm afraid I need to have you wind up.

Mr. Paul Frewen: Thank you.

For example, we can combine the biofeedback approaches with the mindfulness practices to achieve an even better benefit.

Thanks very much.

The Chair: Thank you.

We're on to questions. Ms. Damoff is first.

Ms. Pam Damoff (Oakville North—Burlington, Lib.): Thank you so much for your presentation. We heard of your work when Dr. Lanius was here, so it's wonderful you're able to be with us.

One of the other witnesses, Dr. Andersen, talked about the use of much of what you're doing as a preventative strategy as opposed to only for treatment. I'd like your comment on that. There was also a comment she made about terminology, which was that in the macho environment, you find within first responders and corrections officers that sometimes the terminology—and much of it you've used today—about meditation and mindfulness doesn't necessarily play well. Doing the same techniques but using different terminology to describe it is sometimes more effective. Could you comment on that?

Mr. Paul Frewen: Thanks.

In response to both, I think these interventions indeed could be a mental preparation for the difficult types of workspaces we're finding trauma and PTSD to come from. This could be done up front and throughout and encouraged as a well-being practice.

I'm sensitive also to the point around language. Indeed, it might be the same sorts of things, but we can call it mental training or cognitive preparation. A focus on mind and cognition and mental training more than the emotional fluffy stuff can sit well and be more acceptable. That would be the up-front preparation.

We have seen an openness to these types of practices as well. Both men and women in different types of jobs have experienced the trauma, they've struggled, and these types of interventions do more and more make sense to people.

Also, speaking to that as well, the technology focus that I was leaning toward at the end there can also aid the person who might be a little more sceptical of meditation and mindfulness. If you show them their EEG, if you show them their heart rate, if you show them how to regulate their condition, it really puts the power and the control back into their own hands, as opposed to being reliant on a medical model only.

Ms. Pam Damoff: Do you see a role for the federal government to play in sharing things like yours—which would have to translated into French, being mindful of that—as a best practice, if we were to put together something on PTSD and OSI?

● (1225)

Mr. Paul Frewen: Absolutely. Right here, these practices themselves don't require so much the therapist or the clinician. We do want to provide the instruction and ensure that everything we suggest is evidence based. These practices, of course, are ancient history and are increasingly being validated in the current conventions of randomized controlled trials that we heard about earlier, and indeed have actually been shown to have direct effects on the brain and body through the neuroimaging approaches that were also referenced earlier.

There is a good evidence base for these approaches and there have actually been no contraindications for them. There's really no research to suggest that meditation practice is going to lead to worse outcomes.

It has to be done right. Sometimes while sitting quietly with your emotions, difficult things are going to come up, for sure. We need the right education around how to address symptom occurrences that come during meditation. The same would occur, for example, while sitting quietly and reading a book or watching TV. It's really not that any of these practices are going to lead to harm, and quite likely they are going to lead to some benefit.

I would think that, yes, it would be quite reasonable to recommend it.

Ms. Pam Damoff: I want to turn to Dr. Aiken for a moment, because you've done a lot of work on the treatment side of it.

Do you use this type of work in treatment and also, I think more importantly, in prevention?

Dr. Alice Aiken: I'll speak about the research that's been done. There are many good Internet-based treatment protocols out there. In fact, Dr. Merali and I were just talking. We're on a research team together that has developed a website for men's mental health specifically. It was funded by Movember.

There are a lot of good Internet-based treatments out there. What I would always ask is—and I know Dr. Frewen would as well—what research has been done specifically on outcomes for that specific website? What kinds of responses are they getting? In particular, what kinds of responses are they getting from a population—I think somebody else said it—that is typically more male and macho? I would ask specifically what kind of work is being done on that.

Ms. Pam Damoff: Can you answer that in my remaining one minute?

Mr. Paul Frewen: Yes, thanks. Indeed, we're currently using this particular website with a number of populations, men and women of various trauma types. We've so far only published on it, actually, an open sort of web use, but in that case persons varied. We grouped them based on their PTSD symptomatology. We found that persons with PTSD indeed were responding very favourably to the intervention. With regard to their feedback, essentially, they would use it because they felt this made sense to them as an intervention for PTSD. We're taking those initial findings essentially as a proof of concept to the now more rigorous approaches that were spoken to before in terms of randomized controlled trials.

The Chair: Thank you.

Mr. Miller.

Mr. Larry Miller (Bruce—Grey—Owen Sound, CPC): Thank you very much, Mr. Chairman.

I'd like to thank Mr. Frewen, Mr. Merali, and Ms. Aiken for being here. You gave great presentations.

Ms. Aiken, I'd like to also thank you and your husband for your service to Canada. Thank you for that.

Mr. Merali, I found one interesting comment in your presentation that I just want to make sure I understand correctly. You mentioned medical marijuana, and in the context it sounded like you had a worry about the higher use of medical marijuana, in that it's already happening and is probably going to increase. It sounded to me as though you had a concern with that. Could you clarify? I just want to be clear that I heard you.

● (1230)

Dr. Zul Merali: I was not necessarily expressing a concern. I was reflecting that the projections indicate that the costs are going to keep on escalating to a level of $30 million or something. The question, again, was why we're not investing instead of—not instead of, but we should also be supporting parallel efforts to try to find more definitive solutions to this.

As we have seen, there are many, many modalities of treatments. How effective, really, are they? We want to stem the flow and make people feel better and more fully engaged. Why don't we figure this thing out, just as we do for other illnesses, and find more permanent solutions, other than through trial and error? Let's try this, this will make you feel better, that will make you feel a bit better, but you're still not cured. I think we need to get to the bottom of that. That is what I was trying to get to.

Mr. Larry Miller: To carry that a little further, then, do you believe that medical marijuana is a consistent treatment or a valuable treatment for PTSD or mental illness? To carry it even further, are there studies out there that without a shadow of a doubt show that it works?

I see you shaking your head, Ms. Aiken. I'm going to ask you to comment on it as well when Dr. Merali's done.

Dr. Zul Merali: From what I know, if you do the PET studies looking at cannabinoid receptors, the receptors in the brain that actually bind to components from the marijuana plant, to the tetrahydrocannabinol, you see that those receptors are much more highly expressed in situations such as PTSD than in controls. That tells you that something is going awry in the internal system.

I don't know whether with the use of drugs, which is quite common—it could be alcohol in the U.K. and it could be marijuana here—people are trying to self-medicate because they're not feeling well. I think that is a fact. People do seem to derive some benefit from it, and they're doing it because they're not feeling well.

Again, my old story is, well, let's find out: what is it exactly so that we can treat you properly?

Mr. Larry Miller: Dr. Aiken.

Dr. Alice Aiken: There aren't any large-scale studies. There really aren't. There is some great preliminary work on cannabinoid in Israel —for over 10 years—and they still haven't done a large-scale study. The reason is that nobody can patent it.

Mr. Larry Miller: Okay.

I've talked to five or six doctors that I know in my community, including my own doctor, just in having a discussion about this, because the more people you talk to, it's valuable. I've talked to two of the doctors in the same context.

One of them said to me, “Look, Larry, you could have a mental or physical ailment, and I could prescribe to you to go home every night and drink six or eight shots of Scotch, or I could prescribe medical marijuana.” He said that what both of those will do in most cases—that's how he worded it—is that basically you're going to forget about it for a few hours, but he said that in the whole context of the thing, there's nothing out there that tells him that it actually helps your condition.

Based on that comment from two doctors, do you in general agree with that? Is that a fair statement?

Dr. Alice Aiken: What I always like to say is that the plural of anecdote is not data.

Mr. Larry Miller: Okay.

Dr. Alice Aiken: I think it's really important that we get the data. All I'm saying is that we don't know.

Mr. Larry Miller: We don't know yet.

Dr. Merali, is there anything else?

Dr. Zul Merali: I think that doctor put his finger on it by saying that this is symptom relief. It's a temporary symptom relief that people are looking for in the absence of a proper cure.

Mr. Larry Miller: Okay.

Mr. Frewen, do you have any comment?

Mr. Paul Frewen: Yes. Thanks very much.

These drugs, both marijuana and other forms of recreational drugs, are being used, and I think they're being used for their effects on the nervous system. They have direct effects, of course, whether they be relaxants or stimulants. They have various dissociative qualities, which you mentioned, such as the suppression of memory and distress in the immediate short term.

My thought here is actually the idea of “meditate versus medicate”. Some similar effects can be achieved through mental practices. It's not so immediate as far as the effects of the drug go, but with time these forms of mental training that I was referring to—the meditations, the biofeedback, and particularly the neurofeedback—can achieve some of those benefits of relaxing the nervous system, improving concentration, and improving mental control.

● (1235)

Mr. Larry Miller: I have one last question in the time I have left.

Ms. Aiken, your organization does some great work. You talked briefly earlier about the work done in the military field with veterans with PTSD and with first responders. Is there enough interaction between the two to help...? I know they're separate, but they both come back to something that was a trauma. Is there enough being done between the two that we can help each other progress?

The Chair: Go ahead, very briefly.

Dr. Alice Aiken: Yes, certainly, and I would say that in Canada it's a lot of the same researchers, many of whom you've heard from, such as Dr. Lanius and people like that, who are doing research on both groups anyway. They have expertise in biofeedback or brain biomarkers or PET scanning, and they work with both populations. I think there is a tremendous amount of overlap in terms of the people doing the work, and we're lucky to live in a country where we can capture that so that we're able to harness it for a national perspective.

So yes, there is a lot of overlap in the work being done.

The Chair: Thank you, Dr. Aiken.

Monsieur Dubé.

[*Translation*]

Mr. Matthew Dubé: Dr. Aiken, I'd like to come back to the issue of data that was raised at the end of the first hour. It was said that, compared with the existing data for veterans, we are missing data for first responders, which includes public safety officers and correctional officers.

Is that really the case? If it is, how can we rectify the problem?

[*English*]

Dr. Alice Aiken: It's interesting, because there have been treatment centres with a research arm focused on first responders for longer than there have been those specifically for the military or, outside of the military, for veterans in particular.

There is research out there on first responders, a lot of it being done through CAMH, the Centre for Addiction and Mental Health in Toronto, and organizations like that. I don't have a good appreciation of how much research there is on first responders and whether there is more or less.

I can tell you, though, that once we had a concentrated effort on military veterans and families, we really saw the amount of research being done increase tremendously. Where we work is really at the clinical end of the spectrum, so it's research that can be translated into practices, policies, and programs fairly rapidly. To have a focus on the research actually really impacts the treatment and the lives of the people.

Mr. Matthew Dubé: We had a witness, a psychiatrist, who mentioned—I forget the exact number of years, and it was perhaps a number just to give us an idea—that for public safety officers, we were something like 15 years behind in terms of data compared to what was available for veterans and RCMP officers because we've been focused on military service more than on other first responders.

Is that something you would consider accurate?

Dr. Alice Aiken: No. We know a lot about people who serve in the military. In Canada we know almost nothing about our veterans, because when you're released from the military, unless you were injured in service, you're not tracked by anybody. We have socialized medicine, which is great, and none of us wants to give that up, but if you go out into a provincial system that knows nothing about you....

I was released when I was 32. I went to a family doctor and nobody asked me if I was a veteran. We don't know about our veterans—we really don't—and I don't know enough to tell you if we're tracking public safety officers any better, but we've only just started tracking veterans.

● (1240)

Mr. Matthew Dubé: Dr. Merali.

Dr. Zul Merali: I would like to respond to that in the sense that I think it is an important issue that needs to be addressed, because there is not enough being done. I would like to suggest that there be one or many centres of excellence that focus on all kinds of responders—first responders and military veterans. Let's just take away those barriers and have groups that come from very different walks of life who are going to be exposed to trauma as first responders.

Mr. Matthew Dubé: In other words, you mean sort of looking at everyone together, as opposed to

Dr. Zul Merali: No, but we should be able to slice and dice in order to address these issues. Otherwise we always end up addressing where we flow the money to. We always chase the money, so if the money is there, people do the work. I think instead that if there were resources to study this phenomenon, then we could specifically look at different groups to see what the commonalities are and what the differences are. If we don't do that, then we are working based on information that comes from select groups.

Mr. Matthew Dubé: Dr. Aiken, your point about tracking folks in the military but then not afterward, when they become veterans, is interesting. I think it's been touched upon a little bit, but what's the difference? Even with first responders, what kind of recommendations would there be with regard to how we have to look at what's happening during their work as opposed to after it, for lack of a better way of putting it?

Dr. Alice Aiken: Every province keeps health utilization data. At the research team I lead, we just found the veterans' identifier in the Ontario health utilization data. That's part of a big data set that Stats Canada links with a bunch of different sources. We were able to show that veterans in their first five years post-release are higher users of the health system for all reasons, and separately for mental health reasons, than the general population.

We were also able to show that young male veterans—we have 26-year-old veterans—are more likely to use an emergency department for a mental health crisis than age-matched controls. We are just starting to learn about some of the data, so we don't know why. Epidemiology tells you what, not why, but it's important to know that. We've never known that in Canada before, but they have different needs. We know that veterans who are released when they're older tend to have higher rates of diabetes over time, and we don't know why.

All those things are important to track. They've had different lives, different exposures, and when we say veterans, the veterans' identifier also included RCMP veterans until they went under the provincial system a few years ago, because when you release, you don't have the three-month interprovincial wait to get a health card.

Mr. Matthew Dubé: For first responders and correctional officers and so on, would it be the same thing?

Dr. Alice Aiken: We don't know.

Mr. Matthew Dubé: You don't know, so is it safe to say that one of the recommendations we should probably make is to have more data on the specific groups we are looking at here?

Dr. Alice Aiken: Absolutely, yes.

Mr. Matthew Dubé: Okay, thank you.

[*Translation*]

Dr. Frewen, could you tell us a little more about the issue of the vocabulary used and the existing culture? Ms. Damoff spoke about it, but could you expand on it? Is taking the steps to get treatment sometimes a challenge for people because of this culture?

[*English*]

The Chair: Be very brief.

Mr. Paul Frewen: I think it was touched on earlier that part of the job is to present it in a way that is palatable for the particular target group. Much of that can be rectified through, for example, conductive focus groups with the target population. It may have much to do with how it's packaged and what it is in the end. These practices with respect to meditation are millennia old, and we're also now building in the technological approach to augment these practices.

I'm also seeing—

● (1245)

The Chair: I'm afraid I need to cut you off there. We're at eight minutes, so thank you very much.

Mr. Di Iorio.

Mr. Nicola Di Iorio (Saint-Léonard—Saint-Michel, Lib.): Dr. Merali and Dr. Aiken, thank you very much. I very much appreciate your presentation.

With very little time allowed to me, I will address my questions to Dr. Frewen.

[*Translation*]

Dr. Frewen, I very much appreciated your presentation. You gave us an innovative perspective on solutions. I learned that methods exist to provide support, help and assistance to individuals affected and afflicted by this terrible disorder.

I would like to give you the opportunity to explain how you came to develop these methods, these tools, this infrastructure. It would help us see how we can learn from your approach and apply it in other areas or fields where people suffer from similar conditions, while adapting it to the circumstances of their workplace.

[*English*]

Mr. Paul Frewen: Thanks very much.

In this particular Internet-based intervention—MMTT, I'll call it for short—all of them are inspired and validated interventions. The journaling activity is part of a cognitive behaviour therapy standard approach, the automatic thought record. It is to take those six principles that I described and apply them to everyday stressors that the individual is experiencing, using those concepts and applying them to regulate themselves to be able to manage their distress, reflect, and respond in a more adaptive way. That is part of typical approaches, but we're using the mindfulness language and specifically making use of it and applying it to that journaling activity. However, the journaling activity, broadly speaking, is a well-validated and researched intervention.

We also include a specific practice that we developed here at Western whereby we can determine the level of concentration experienced during the meditation. It's a self-report methodology, but we're validating it against various experimental methodologies, including collecting EEG, and we're able to predict, for example, the brain state from the self-report, and whether the person was concentrating or distracted during the meditation. As they sit quietly and attend, for example, to their breath, their mind will wander, and it may wander towards the trauma and intrusive memory, but in terms of the degree to which it does so, we can provide some prompts, some cues, to bring them back to the breath, back to the target of their attention.

Finally, the different guided meditations that we include have all been used in various formats, most especially the well-researched mindfulness-based stress reduction and mindfulness-based cognitive therapy. Each of the interventions available through the website has been well researched in different domains with various populations, including PTSD, but also, as you say, various anxiety disorders, depressive disorders, dissociative disorders, substance abuse disorders, which PTSD is typically comorbid with.

[*Translation*]

Mr. Nicola Di Iorio: Could you give us an overview of the resources that were needed to develop the methods, the tools and the intervention systems you have and that you make available? By resources, I would like to know how much time you needed to get there and how many people worked on it. I'd also like to know the related costs.

[*English*]

Mr. Paul Frewen: Thank you.

These practices are self-directed. They could be part of an additional therapy, and that's ideally how I would recommend them. I would recommend that they augment additional approaches, such as the face-to-face psychotherapy that a person might have, but as we know, they may not have access to the other evidence-based psychotherapies, so doing this on one's own—

● (1250)

Mr. Nicola Di Iorio: Dr. Frewen, no, that wasn't my question.

My question is how much did it cost to develop these tools that you developed, and what kind of resources are required to develop these tools? I don't mean from a user's point of view, but from the developer, meaning you and your team.

Mr. Paul Frewen: Thank you.

Actually, we developed these tools on a very low budget. It was very much, in fact, my time. I've done a lot of the programming myself. Some of it I've outsourced, but at quite a low budget. The software is relatively simple to acquire. It's really more the creativity that goes into developing the stimuli, for example. The current website exists. Essentially, it could be available at very little cost. I would be very interested to continue to research outcomes at this particular website, but as for the resources, really, I put a lot of my own energy into this. There are a lot of hours that went into it in that respect, but the technology is now available in the form of a website that can be used on any device. It's not an app that's specific to a particular platform or operating language. It's a website, it will play, and it's fully available.

The Chair: We have about one minute left.

Mr. Mendicino, I'm wondering if you have anything you want to add on this.

Mr. Marco Mendicino: Well, with one minute—

The Chair: I'll give you two.

Mr. Marco Mendicino: —I'm not sure I can accomplish a deep explanation or dive into what is a complex issue.

First, let me just say thanks to Dr. Aiken and her husband for their service and thank the other witnesses as well.

I had planned to ask about how we could export some of the road to mental readiness program into the first responders context. I was just conferring with my colleague Ms. Damoff, and I know you touched on it, but maybe in 30 seconds or so you could just hit some of the highlights on what we could export from R2MR to first responders.

Dr. Alice Aiken: I couldn't tell you the detailed differences in the program, but it has been already adapted for the RCMP. I would think it wouldn't be too far a stretch to then adapt it as well for other first responder groups.

I don't know if she's been a witness here, but Lieutenant-Colonel Suzanne Bailey was one of the developers of that, and worked with Dr. Heather Stuart from Queen's University, the Bell mental health and anti-stigma research chair, to develop it for the RCMP. They would be good people to speak with about that.

Mr. Marco Mendicino: Thanks very much.

The Chair: Thank you very much to our witnesses for joining us. This has been very helpful.

I always love it when researchers say, “No, we don't know that”, as Dr. Aiken did. They don't just posit ideas, and I found that very helpful today.

I believe Ms. Damoff has a motion she'd like to bring to the committee today. I thought it would be a good idea.

Ms. Pam Damoff: I do have a motion.

Given what's happened in Fort McMurray, the motion would be that we say a thank you to the Minister of Public Safety, the government operations centre, and all the staff for their response in Fort McMurray.

The Chair: Do we need a seconder for that?

Hon. Erin O'Toole: Mr. Chair, certainly we want to express the same sentiment. I think if the motion were more, you know, toward the first responders, public safety workers, and those sorts of things....

I think the minister is doing a good job, but I'm not sure he needs to be part of this motion. It's really the people on the ground and the families affected, but we certainly agree in spirit.

The Chair: Okay.

All in favour of the motion?

Mr. Larry Miller: If I could, I was going to say exactly the same thing as Mr. O'Toole. This is the minister doing his job. Yes, he's responding in the correct manner, and that's good, but I think the motion is too political.

I'll leave it at that.

Mr. Matthew Dubé: I'm in favour of the motion. I believe, as Ms. Ambrose said this morning, we can thank the Minister of Public Safety.

The Chair: Are there any other comments?

(Motion agreed to [See *Minutes of Proceedings*])

The Chair: We'll extend our thanks to everyone on the ground—and Ralph, if he gets his boots on.

Thank you to the witnesses.

If the subcommittee could stay back for a few minutes, we could take a look at the witness list for a couple of minutes.

Thank you very much.

The meeting is adjourned.