

Your physical and emotional preparation

Chair: Malcolm Hackett OAM

Presenter: Dr Danielle Clode



Chair

Tonight's webinar will begin with Associate Professor Dr. Danielle Clode from Flinders University. Danielle will examine the issues and what is known about human responses to bushfire threat. As a past resident of Nillumbik Shire during Black Saturday, Danielle has a knowledge of life in Bushfire Prone Areas, and more recently she experienced the threat of fire while defending her home in the Adelaide Hills.

After Danielle's presentation, Dr. Rob Gordon OAM, and Adjunct Professor Jim McLennan from La Trobe University discuss in panel format their responses to the issues raised by Danielle. Both had extensive experience in the bushfire disaster field, researching and documenting events, psychological responses and behaviour.

Danielle Clode

Thank you Malcolm. It's lovely to be here, and I hope this introduction provides a bit of background for psychological and emotional preparation for bushfires, and a good starting point for the discussion afterwards with Rob and Jim.

I want to start a little bit before psychological and emotional preparation for bushfires and talk a little bit about what's required to get to that point of being ready to psychologically prepare for bushfires. Indeed, just what's required to prepare for bushfires, to be ready to think about that. Which is actually a really major step because I'm sure as most of you know there's an awful lot of people who haven't reached that stage yet. The people listening to the seminar are probably not amongst them. But I think it's useful to look at these factors.

This is a slightly complicated graph but I'll talk us through it. I guess the first stage of psychological preparation for being prepared being ready to be prepared is called Threat Appraisal. So it's about understanding what the likelihood, recognizing that there is a risk of bushfires, that you face at risk of bushfires. That involves a couple of things. That involves risk, how likely do you think the threat is likely to occur, how likely do you think a fire is going to occur in your area, and secondly, severity, how bad do you think the fire will be if it happens.

People chronically tend to underestimate both of these things. So they chronically underestimate the likelihood of a fire and they also think that if a fire happens it's not going to be that bad. There's another factor involved here as well which is fear. And fear can kind of increase and decrease our ability to appraise threat. Sometimes fear can make us be more likely to think that fires are going to occur and that they will be bad when they do happen. But they can also make us move away from that and we go into a bit of a state of denial.

So, that's the first step. First, you have to recognize that there's a risk, that there's a threat, and that it's a serious one that needs to be dealt with. Once you've gotten to that stage, we go through a process called Coping Appraisal, which is basically can we do anything about this? And this also has a couple of different factors. Firstly, there's the question of is my property or family protectable, can I do anything, am I capable of doing anything, and what can I personally do? And then "Can I protect it" is the other question. So it might be protectable by some bigger organization or more people or you know a sense that it's protectable by the CFA for example. But is it predictable by

myself? We need to be able to say yes to both those questions before we'll be willing to prepare for bushfires. And there's another factor there, can I afford the costs, and that's really a very practical issue because obviously we all know that bushfire preparation can be expensive. So that can have a downward pressure on coping appraisal.

Once people have come to the position that they do face a threat, that they are able to do something about it, that they can afford to do something about it, and know how to go about doing it, then they're actually ready to move into protective behaviours. So all of these things are psychological factors that build into our willingness to be prepared.

There's another factor there you'll see at the top there's the green arrow pointing down, which is actually public protection. So, that's the sense that someone else is going to look after this problem. And this is where we have this is the kind of issue that manifests when people expect a CFA or a truck to come and save them in a fire. So if you have an over-confidence in an official capacity to save you from a problem, people will tend not to prepare for the fires themselves. It's important to balance that out so there's a bit of an issue there with making sure people don't think that the CFA is important but you also can't rely on it to be there in every situation. There's not enough resources to protect everybody all the time. So there's a couple of different factors there. We've got a lot of different levels to get through before people are ready to be prepared.

The issue of threat appraisal is really interesting because it's obviously based on a number of different things, how risky we think fires are, it's based a lot on personal, family and cultural memory, the memories of other people who've been through fires, what's happened in your local area, your knowledge of past fires. Which can increase your knowledge ability about the risk, but it can also build in a lot of assumptions you'll have about the risk. So we then carry with us assumptions that future fires are going to be the same as past fires or the lack of past fires will mean there'll be a lack of future fires. And we see this a lot with people saying "This place has never burnt before, so it's not going to burn in the future."

There's also an issue of fire exposure being a bit of an all or nothing experience. It's very hard to have a practise run with fires. You either experience one and it's a pretty daunting thing usually, even small fires are pretty daunting, or you don't have any exposure at all. So it's very hard to get that past experience to build on. There's also an issue with risk and severity. We're not generally very good at assessing risk and severity. We're quite bad at probability generally. We tend to think, "It won't happen to me, and if it does it won't be that bad." We underestimate the outcomes.

I guess just to illustrate this point we tend to be eternal optimists. If I can just let you think about this. How many of you have bought a lottery ticket? I'm sure a lot of us have at some point in the past, and I want you to think about what the chances are of winning if you happen to get a lottery ticket with these numbers that came up. Screen shows the numbers 1 2 3 4 5 6 7 8

Now I'm sure most of you would look at a lottery ticket and think, "Yes, I've got a chance of winning this." If you've got a lot of ticket with the numbers one, two, three, four, five, six, seven, and eight, you'd probably go, "No way, there's no chance of winning that." But of course those numbers are just as likely to come up as any other random set of numbers. So you are just as likely to win with that set of numbers as any other. And in actual fact the chances of you winning the lottery I'm told is actually the same as you dying before the lottery is drawn. So that gives you an idea of how rare it is, and yet we still buy lottery tickets.

Just as another example of our poor risk assessment or probabilities think about how good you are at driving. So I want you to tell me virtually whether you're an above average driver, an average driver, or a below average driver. And I've done this a lot in live sessions and I know what the answers are going to be. So I'm just going to tell you those. In the past I have found that about 75% of people will say they're above average drivers, 20% will say they're average, and about 5% will say they're below average. Which of course can't be true. It's just an illustration about how people are quite poor at assessing risk and assessing probabilities as we tend to be very

optimistic. Which is probably a good way to be for life generally but I guess we really need to be like my grandmother always said, "You need to hope for the best and prepare for the worst."

So moving on to our fire issues. You'll all know that we have a basic decision to make with bushfires which is whether to leave early or stay and defend, and that is a really big issue in bushfire safety. And of course the official line is that everybody should leave early. That's the safest option. But there's a lot of complications around that and it's not always the easiest decision to make. And of course if you do stay and defend you really have to prepare as if your life depends upon it because it does. So I want to explore some of those complexities around staying or leaving.

One model that I find really helpful in getting people to think about why they make the decisions they do and what makes them choose to think they're going to leave early or whether they think they might stay and defend is about whether we think there's a risk to life or a risk to property. Very often when people are predominantly thinking about a risk to property they will decide they want to stay and defend. This also tends to be when people will think about the wait-and-see option which is not a strategy that's very good at all. But the issue is that our sense of risk can change during a fire so in the early stages of a fire we might think there's a risk to property. But as the fire gets closer as we see the flames as we realize that the flames are higher than the trees on the adjoining property we suddenly realize that actually this is a risk to life and our strategy changes. We suddenly think "We have to get out of here, we have to leave." So that switching of strategies is really important to consider beforehand. Are you really prepared to stay and defend a property if you think there could be a risk to your life personally? And trying to understand that is a really important factor because that perceived risk really influences how we think about fires.

I want you to think about how you might react on receiving a warning that your home is threatened by an approaching bushfire. And I'm going to ask you to fill in a poll. I know some of you have probably already done this, but I want you to answer this question in the context of you've received a warning that your home is threatened by bushfires. And I'd like you to click on the options, whether you have done any preparation emotionally and psychologically for a fire at all, a very little, some preparation, a fair amount, or quite a lot. And we'll just let this fill in. You're all being super-fast at filling it in, I think you must have done it before. That's excellent thank you. We'll discuss this a little bit further at the end of the session and see what you said. Because, I guess, the issue of preparation is really tricky. I personally find there's a lot involved and it's always surprising how much more there is to do. And it's the same as physical preparation, there's always a lot to do there too. So you do have to just keep working at it all the time. But it's useful for us to see where you're all sitting at the moment and how much you feel you've done.

All right I can't put you in a situation of thinking that you've got a fire approaching, so I'm going to give you a different scenario to work with. Something that you're equally I think actually less prepared for and we'll talk about how you might respond to that situation. So I want you to imagine that you're going around the back of your house walking into your backyard place you're very familiar with, you know everything that's there, how it should work, what's around the corner, and all of a sudden you see something completely unexpected. It's this.

Now I want you to think about how you're going to respond to this, having a fully grown male aggressive lion in your backyard. Most of us are not going to know what to do unless you happen to have been brought up in the country in South Africa, or you happen to be a zookeeper or an animal tamer. Most of us do not have a plan for what to do if we have to encounter a large predator. I guess we have a number of different responses. Most of us would probably initially freeze. That's a fairly standard response, which is often about seeking information, where sort of our brain's just going, "What on earth is going on? what's happening here? I need more information," trying to assess what's going on.

Another very common response is to think it's a joke immediately look around and go, "Well who's playing a game here? Is this a mock-up? Is this a dog dressed up? What's going on? This can't possibly be real." And that's actually a surprisingly normal response. It's normalizing and trying to come up with something that you're familiar with, some simple explanation for what's going on. And

then there are a whole lot of other responses like running away, which is a fairly sensible thing. But I want to think about exactly what's happening in your brain when you're doing this. When you're exposed to this completely unprepared situation for which you have no preparation whatsoever.

To do that I want to talk about our brains a little bit. Most of you will be familiar with the notion of having two brains. A lot of people know about the left and the right brain. I'm not talking about that today what I want to talk about is the new brain and the old brain. So we have an old brain that we share with fish and reptiles and cats and dogs which is kind of what we might think of as the primitive part of our brain. And it basically regulates emotion it acts on instinct. So it's a very automated system. It's not the thinking part of our brain.

Over the top of that old brain we have the neocortex, which is a new brain. It's kind of an advanced version and it does a lot of the same things as the old brain but it does them in a very different way. It does them in a very thinking cognitive way It's the executive control centre. And these two parts of the brain operate together. So we have the emotional brain that's influencing what we think about, and then we've got the thinking part of the brain that's overlaying rationality over the top of these underlying emotions. And that's really important in a bushfire situation.

In a bushfire situation, where we have done no planning for a fire. You first of all receive an abstract threat that might be a bushfire warning over the radio, a public announcement, might even be smoke in the distance, a plume of smoke coming up on the horizon, somebody telling you there's a fire. Typically for example in a structure fire it would be a fire alarm going off. Now, the conscious response to that is often to normalize the situation. To say, "Oh, that's just the fire alarm. It always goes off, that's not important." Or in the Black Saturday fires people would commonly say, "Oh, that's just a burn-off that's going on. You know, it's the smoke from the burn-off that was happening a few days ago." So, those are sort of normalizing situations, or, "It's the neighbour doing something. It's not anything to worry about."

And then somebody sees a direct threat. So the flames arrive, and this elicits a different response. A direct threat to life elicits a subconscious response from the old brain. So the new brain is trying to come up with a rational explanation for what's going on, something that makes sense to it within the scheme of what it knows about. The old brain doesn't react like that. The old brain just elicits instinctive responses and that's where we tend to get fear, where we get flight instinct to run away, in some instances fight or freeze, and another one, that is an idea Jim mentioned to me earlier, which is fuss - to run around in a state of some disorganization trying to do something that's not quite working.

None of these responses are particularly useful in a fire. We need to find a way of keeping that emotional old-brain under control and making sure that our conscious brain can stay organized and think things through, because it's not going to be able to think things through very well. It's really being flooded by adrenaline, when that direct threat happens it gets flooded with adrenaline and your capacity to think rationally is severely curtailed. It's very hard thing rationally, so things that you think you would normally be able to do without any trouble at all, you really struggle to do. And so this is one of the big problems we have in a fire that we literally can't think straight. So we need to work out how to do that.

Here's another common scenario I want you to think about. Actually, normally this is a common scenario but at the moment it's not as common anymore. I want you to imagine that you're on a plane. That's a nice thought isn't it? All right you're off on holidays going somewhere exotic. No Covid. And suddenly some alarms start sounding. The alerts start, there's warning signs, the air hostesses and stewards are running around, there's clearly something going on and there's an emergency situation, the plane's starting to head down. I want you to do what you would do in that situation if you were on a plane. What's your immediate response? And I'm sure that most of you will go into the brace position all right? Because we've been in this situation before not where there's an actual where there's been a plane crash, I hope that none of you have actually been in a plane crash. But every time you get on a plane you are told about the brace position and you are asked to do it. You are you're instructed on it, they give you this training every single time you get

on a plane, and the reason for that is to make sure in the unlikely event of a plane crash you are prepared and you know what you have to do. You have to go into the brace position. If you land, you have to take your shoes off, leave your personal belongings behind and get down the steps. So that kind of repetition which they do every single time you get on a plane is really really important. And that's why they do it. So that you are prepared.

And this is also why fire fighters do regular training every week. It's to prepare themselves and physically embed their knowledge, so that you're doing these things automatically. You don't have to rely on your clever brain to think out what you have to do. You're just ready to go you know automatically what comes next. So training your brain and your body is really important. You need to embed that knowledge into your physical practises.

So without preparation, we talked about these abstract threats. The tendency where our smart brain normalizes and ignores things, or denies that they're a risk, and your subconscious brain your old brain sends you into freezing or fleeing or fussing, running around in circles. With preparation, with a practised response, we have a very different response to the situation. So, what happens here is when we perceive an abstract threat, we recognize what that is and we recognize it as a trigger, and we know that we have to enact a plan. And we have that practise plan as a response. So, if you've done the practise for your fire response, you've run through the different scenarios, you have lots of different processes and understandings of the complexities that could happen what happens if you can't get the fire hoses out? What happens if you can't do this? What happens if you can't leave early when you thought you could? What happens if, you know, there's a problem with the car? All of the complexities that can occur in a fire situation. You'll have a much better chance of getting on top of them because you're keeping that panicky old brain, the instinctive old brain, under control. You're keeping your conscious brain a little bit more in control, but more importantly, you're not putting too much pressure on that conscious brain. You've got the plan in place. When you see the lion in your backyard, you know what you have to do. Rather than having no clue. And that allows you to then implement your plans much more successfully. So, the better trained you are, and the more training you've done, and the more scenarios you've run through, then the better you will be able to implement those plans safely and successfully.

And this training does work. We know from a lot of the community fireguard groups after Black Saturday that training and practise and preparation was super important for people's ability to stay safe during fires. Whether they left early, whether they stayed and defended, whether they prepared their properties. And you know this I think is a really good quote. "What we learned from our CFG meeting saved our lives because we were prepared, knew what to expect in terms of fire behaviour, and did not panic." And we also know that those community fire groups are much more likely to save their homes, whether their home safety is statistically much higher, whether or not they're defended or not, they are simply more likely not to burn. So they manage to stay in control.

And this also has benefits in recovery, which I'm not going to talk about today. But we do know that people who have plans, who stay in control, who feel that they knew what they were doing and how to respond to it, no matter what happens they still tend to recover better from that scenario than people who didn't feel in control. Who didn't have plans. It keeps the sense of control internalized, rather than being some external force operating. So it does seem to reduce the trauma and perhaps Rob could talk more about that in a little while.

Rohan was going to show us the results for the poll that you did at the beginning. You can now see the results of the poll, and we can see that most of you, 39%, have done some preparation, probably a little bit more towards the more preparation than not, which is a good thing. But the thing that strikes me with emotional and psychological preparation, it is like physical preparation in that there's always more to do. It's a constant process, and I'm always surprised having been actively preparing for fires for the last 20 years, how every year there's something more I can do and something more I can learn, and that includes psychologically and emotionally as well. And how surprised I am, you know, I went through my first significant fire that actually impacted on my property and burned my property this year, and that was still a huge revelation to me despite the fact that I had spent 12 months preparing, you know, done a whole 20,000 word review on

psychological preparation of fire and done all this research and run lots of programs on it. There's nothing like the real experience to really open your eyes to what actually happens.

So, we have one more poll, which I think we're going to open now. Just waiting to see if we're moving on to that one. Here we are. So, I want to know, there's always reasons why we don't prepare, and that applies to emotional and psychological preparation as well. So I'm really interested to know, what is it that you feel most limits your capacity to prepare? I don't believe anybody can be fully prepared. There's always more to do. And even if you do feel that you're fully prepared, what do you feel limited you in getting to that point. So if you could take some time to answer that question that would be really helpful. And while we're doing that, we will look at moving on to the next part of our panel discussion, where you will hear from Rob and Jim, who both have an extraordinary amount of experience in this field. And hopefully they'll be able to provide you with some more details and anecdotes and real-life stories about how that theoretical framework that I've given you actually pans out in reality, and for different people's personal experiences.

I knew theoretically about the notion that the conscious part of your brain doesn't function very well. But it wasn't until this fire I had recently at my property that I realized how impactful that was. And one of the things that really struck me is that I had to move my husband's car and he's got a manual car and I've been driving an automatic. Even though I've driven a manual for many years I forgot how to use the gears, because I just don't do it very much anymore. And that wasn't something I'd ever expected to happen. It seemed like a perfectly basic thing to do but it was a new car. I hadn't driven it very much before it had a few unusual things. And that clearly just disrupted my ability to think through something that I would have been able to do perfectly rationally normally. And I wasn't able to do it. So it's interesting how that actually pans out.