

Leeds University Business School – Research and Innovation Podcast

Episode 4: Research & Innovation Podcast: From laughter therapy to testing communication strategies for emergency evacuations

Speakers: Hannah Preston and Dr Natalie van der Wal

Hannah: Hello, I'm Hannah Preston and I'm a Research Support Officer here at Leeds University Business School, and today I'm joined by Natalie van der Wal, who is a Marie Skłodowska-Curie Research Fellow. And we're going to be talking about Natalie's research, so welcome Natalie, hello.

Natalie: Hi, thank you for inviting me.

Hannah: So, I recently went to one of Natalie's seminars on her research, which is all about laughter induced therapy, can you tell us a bit more about what that is?

Natalie: Yes. So, there are different types of laughter therapy that are out there. Some are based on humour, so you could use jokes or clowns or watching funny videos, and others are not based on humour. And then, it sounds weird, but you just imitate laughter, you fake it until you make it, in a way, and you do lots of laughter and breathing exercises.

Hannah: Yes, this wasn't something I was aware of when I went to the seminar, I mean I was interested anyway, and I always... I was told there was going to be free pizza, which is always a good way to get me to an event. What I didn't realise was that there was going to be audience participation, so Natalie had all of us up and doing some exercises, do you want to go through some of the awkward things you made us do in the name of research?

Natalie: Yes, in the name of research. So, I told the participants at a seminar that I think it's best to just experience what laughter therapy is, because hardly anybody knows what it is and just sounds weird to just start laughing. So, I thought if we do it together it's less weird, although there's definitely an awkward beginning. So, shall we start with a laughter exercise?

Hannah: Yes, let's go on then.

Natalie: Alright, so what I generally start... what I generally start with is a clapping exercise to bring energy a little bit up and then also to get in the mood. So, I would like to invite you to clap, so all the listeners, you can actually try and join us. So, just start clapping,

and then see if you can do a rhythm, like one, two, one, two, three. One, two... one, two, one, two, one, two, three. And now we're going to say, "Ho, ho, ha, ha, ha, ha." Ho, ho, ha, ha, ha, ha.

Both Speakers: Ho, ho, ha, ha, ha, ha. Ho, ho, ha, ha, ha, ha. Ho, ho, ha, ha, ha, ha. Ho, ho, ha, ha, ha, ha.

Natalie: Alright, that was a good beginning, so the energy should be a little bit up now in your body and it's good to just start with saying the words, "Ho, ho, ha, ha, ha, ha." And, yes, maybe it was fake, but after a while we can make it real. So, then I would like to do one more exercise with you here on the podcast, and I call it a flossing your brain, so instead of using dental floss for your teeth, we're going to use an imaginary little piece of floss, so if you can just pretend you picked the floss, so we're holding up our fingers now with an imaginary piece of floss in between, we're putting it over our head and then you can just imagine, like, all the awkwardness, or all your worries of the day, you can floss away. So, we're bringing our hands to the left, the right, as if we're flossing our brain, but it goes with a little laugh, so (Laughter). Try to make some sounds, Hannah.

Hannah: It's so awkward, but it does work (Laughter).

Natalie: Just floss the awkwardness out of your brain (Laughter).

Hannah: (Laughter)

Natalie: Well that's it, and then after some exercises, we always end with putting your thumbs up, so let me see your thumbs up, Hannah, and then we say, "Good."

Hannah: Good.

Natalie: Very Good.

Hannah: Very Good.

Natalie: Yay.

Hannah: Yay. Excellent.

Natalie: And that's your laughter exercise for the day.

Hannah: Yes, doing this with unexpected colleagues was quite a good way to spend a lunchtime. So, how did you get into this laughter induced therapy research?

Natalie: Yes, that's a good question. For many, many years I had already been a yoga teacher, then one day I saw, like, a movie on YouTube, on laughter yoga, I had no idea that that existed but it always was something I wanted to try and then I saw, actually, laughter yoga leader training, so...

Hannah: Can I just pause for a second to say, who knew that that existed? Laughter yoga leader training, amazing.

Natalie: Yes, it's amazing, right? But I'm always in for fun things. So, I did that, and I liked it so much because I found out it's quite serious. At that time I was in a low point in my life and I learned that even through laughter you can get over emotional things, so you can use singing, dancing and going to therapy, some people use medicine and I found out that laughter is also one of the things you can use to feel better.

And then I ran a pilot study at university, I taught students to do laughter and then another group of students, I taught them how to meditate, breathing meditation. And I found that both were beneficial for their health. And then I thought, well, let me just do a meta-analysis, looking at all the therapies out there and all the scientific literature about them. And then, what I found in my meta-analysis is that it can decrease your depression, your anxiety and your stress levels.

Hannah: That all sounds excellent. But this is actually very different to your current main research isn't it? So, you're doing research on evacuation or, more specifically, testing communication strategies to save lives in emergency evacuation. So, how did you get into that, then?

Natalie: Yes, another good question. I won a Marie Curie grant, so I'm living my dream life here in Leeds, it's my dream job. I wrote the grant with Professor Wändi Bruine de Bruin, she's really amazing in writing grants and in doing her research, so I'm so happy we can work together. So, that's how I came here, I got money from the European Commission for two years to conduct this research and I aim to improve evacuations, and I do that with multi-disciplinary research. So, I make a combination of psychology and decision science with computer science.

Hannah: Excellent. So, what kind of scenarios have you been looking at with evacuation, then? Is it things like hotels or shopping centres?

Natalie: Well actually all kinds of scenarios. So, in the first step of my research, I did an analysis of videos I could find online of people

evacuating. And then I found all kinds of videos out there, so on YouTube, on news sites, for example, alarms going off in shopping malls, there could be, like, a fire at a concert, even movies from terrorist attacks or airplanes that need to make an emergency landing, or where the engine is on fire. So, I've looked at many different types of evacuation scenarios.

Hannah: And what have you found so far?

Natalie: Yes, so in the videos I looked at the relationship between the evacuation communication and the human behaviours. So, for example, I looked in every video, are the people running, are they responding immediately when the alarm goes off, or are they waiting and looking around? Are they, like, filming the evacuation, because that's the latest thing, to film everything, what happens instead of doing something. And then I found that when I look, if there's an evacuation communication going on in the videos, so for example the alarm is sounding or there are staff that are guiding the people out to do the exits, then people run less, so it's good. And there's less slow response, so people are responding faster the alarm.

Hannah: So, they're responding in a quicker matter, but they're also moving more orderly then, so it's not more of a panic mass running?

Natalie: Yes, yes. Panic is a very interesting word, anyway Hannah, because lots of people in this field of research are trying to get rid of the word, "panic," because that's what the media always tell us, "Oh, people were panicking," and then when you look at the pictures people were not panicking because panicking means, like, an extraordinary, super scary response to a situation that's maybe not that scary, so we should talk more about fear, fearful reactions.

Hannah: And have any of the findings surprised you? I guess the filming is kind of a bit of a worrying, if people are stopping on a mobile phone, is that, kind of, generic across the board or is it in some situations, people do realise they need to get up and move, or...?

Natalie: Well, I knew from the literature that most important or the behaviour that's mostly present is the slow response, but then to actually see it every time in a video, for example, there's a video where there's a show, like an opening of King Kong, the movie, and then the stage is on fire and people just stay watching because they think it's part of the show and then some start to film

it and it's... Yes, it's quite hard for me, it was really distressing, the first time, watching all these videos, but then I just tried to look at it as, like, a researcher, more objective.

So, even you know it exists, to actually see it the first couple of times is just, yes, it's shocking, so people please, when the alarm goes off or when there's a fire, act immediately. Like, the reason why people don't immediately move is sometimes because there's uncertainty, you don't know what's going on, like, okay, in the case of the King Kong that's on fire you can see there's actually a fire but then you might think it's part of the show, but if you're, like, in a shopping mall and the alarm goes off and you don't see anything, you don't know, is it real? Is it a fake alarm?

So, then we look around and then what happens is called, "informational social influence," which we know from social psychology, is that we always think other people know better. So, when you look around and other people are doing nothing, you're doing nothing, and then maybe especially when you're British, because you don't want to be awkward, or you don't want other people to notice you or, you know, look different from the rest of the group.

Hannah: That fear of embarrassment, yes.

Natalie: So, you might know if that's true since you're British (Laughter).

Hannah: And what's the next stage for this research, then?

Natalie: Yes, the next stage is conducting field experiments. I had a couple of interviews with experts, like safety managers and I concluded from those interviews that the best thing to do is to use dynamic signs and dynamic emergency lighting.

Hannah: What do you mean by that?

Natalie: Well, for example you have these LED strips that look like they're dynamic lights, so there's a little light that slowly goes from one end to the other end and you can actually, kind of, unconsciously guide the crowd to a certain exit because movements and lights, they attract us, so that's better than if you have, like, a static sign with an arrow on it. Because people don't really notice that, so if there's, like, a movement or a light people will see it and they will take that exit. So, that's what I'm going to look into, I'm going to conduct an experiment here at the university to find out if those lights are better than current static signs.

Hannah: Sounds interesting, and really important, really important. So, thanks for your time today, Natalie. What's your one message, then, if you want our listeners to take home with them, what would you say?

Natalie: Yes, the take home message, listeners, is whenever you are somewhere and the alarm is sounding, please act, take the nearest exit and also tell others to leave the building.

Hannah: That's great, thank you.

Natalie: You're welcome. Thank you.