

## The man who frightens small children

Lance Workman talks to **Andy Field** about his work on childhood anxiety

**Y**ou seem to have two areas of interest – understanding childhood phobias, and making statistics more accessible to students. I'd like to focus mainly on childhood phobias, but I can't ignore the statistics side of things, so let's start with that. Many students have a bit of a phobia about stats – what got you interested in the area?

It was fairly accidental really. Like many postgrads I had to teach research methods to fund my PhD. I always quite liked statistics as an undergraduate – I was bit odd in that way. Basically the first ever statistics session I taught went badly wrong – it was just horrendous. I thought 'well I have to do something to make these sessions better and engage the students'. So I started getting into the idea of creating weird examples. It kind of went on from there.

Then my book came about because I was taking some courses and I had developed handouts. I got talking to a publisher that was looking to publish a new book on research methods and statistics. Like most people who write books, I thought 'well it will be really easy to turn these handouts into a book'. Of course, it wasn't. It took two and a half years of writing out of my life.

**You use a lot of humour in your writing and teaching. Is this to put students at ease and make stats fun, or is it just part and parcel of the way you are?**

A bit of both really. There is an element of trying to engage students – the way I do that reflects personally what makes me laugh and I don't think you can do anything other than that. You just hope that other people laugh too.

**I use a lot of humour in my own teaching. Do you ever have times when it falls flat or backfires?**

It's really difficult to think of specific examples where it hasn't worked, but obviously there have been times where I've said things that I thought were rip-

roaringly funny and the proverbial tumbleweed rolls across the lecture theatre. I used to try to deliberately insert jokes – but that really doesn't work as well as when I'm just me and I spontaneously come out with things that I think might be funny at the time. That just works so much better than scripting something. It's really better not to plan it too much.

**Moving on to childhood anxiety and phobias – how can you tell when a child has a serious problem with anxiety rather than the normal childhood fears?**

It's difficult for me to do as I'm not clinically trained. But I think determining what is a real problem and what is relatively normal for children is quite difficult for several reasons.

First of all, children are not always very good at expressing their internal feelings. And parents are not always very good at realising that their child has a level of anxiety that is a problem. The best measure of this is the fact that whenever we do research and we get children to fill out measures of their anxiety and then we get the parents to fill one out for their children, the correlation between the two is very poor.

That's consistently found by lots and lots of different researchers. Parents are very bad at reporting their children's anxiety. Whether that is because at some level they know but they don't want some bloody psychologist knowing, or they just don't know... that's hard to determine. But I think a lot of it is to do with the fact that you just don't want to think that your child is anxious. So I think parents may unwittingly overlook signs of anxiety.

Second, and related to that, I think there are children who have significant problems but don't display them enough

for their parents to pick up on them. They really have to be very anxious indeed before the parents think this might be a problem.

The third thing that makes it difficult is that what tends to be called 'natural levels' of anxiety do wax and wane throughout childhood. It's fairly normal for children to become quite anxious about some things, and then it just goes away. That makes it very hard to identify whether the anxiety is a serious problem or whether it is something that will disappear of its own accord.

**What about fear beliefs in children – do these tend to disappear as they grow up?**

Because of the type of research that I do – which is basically inducing fear over a short period and then intervening so that they don't have them too long – it's difficult to give an empirical answer to that. The longest we have ever done is six months of induced fear. But I think it's not problematic if children have fear beliefs that endure for a long time. It's only problematic if those fear beliefs begin to drive behavioural cycles where children avoid situations where they would discover that the things they think are scary are not actually much of a threat. So it's not having the belief itself that is problem so much as if it escalates into affecting your behaviour.

**You are interested in observational learning and intergenerational transmission of phobias. How does intergenerational transmission work?**

Intergenerational transmission put crudely can mean 'blame the parents'!

The thing that we are looking at is whether anxious parents give visual cues to their children that are anxiety-provoking. So it's to do with things like modelling. Lynne Murray and Peter Cooper's group at

Reading have done some really

good work looking at socially anxious parents and social referencing with their toddlers. They find that socially anxious parents behave in ways that give quite clear signals to their toddlers that meeting a stranger is something to be apprehensive about. What we look at is actually not as sophisticated as what they are doing at Reading. They are looking at parents who are clinically diagnosed as anxious, whereas we are looking more at anxiety on a continuum in parents and then giving them specific experiments or tasks to do. One of the things we do, for

"parents are not always very good at realising that their child has a level of anxiety that is a problem"

example, is ask them to stick their hand in a box that they think has an animal in that they don't know anything about and seeing whether the cues that they pass on to their children such as facial expression are related to the levels of anxiety that children demonstrate. We can measure things like how long they take to put their hand in the box and whether that changes as a function of how trait anxious they are. We are also looking at verbal information and what parents pass on to their children. For example, we give parents some ambiguous information about a novel animal and a collection of positive and negative statements about them. We then look at what sort of information anxious parents decide to pass on. We find that as anxiety increases in parents, they become more likely to pass on the negative information selectively and ignore the positives. You would expect quite anxious people to preferentially process threatening information. It's not that they are deliberately passing on negative information – it's that they are more likely to remember it and it's what they remember that is the information that they pass on to their child.

I guess this makes sense – that anxious parents pass on negative information that then affects their children and causes them to become anxious. But of course parents also pass on their genes which might also cause this anxiety. Can we disentangle these nature and nurture causes of anxiety?

Well, people like Thalia Eley at the Institute of Psychiatry have done some great work that shows there's a very clear genetic link in the case of transmission of fear. But only about a third of the variance is explained by genetic factors. So there's two-thirds of the variance going begging to be explained, and certainly before the age of eight the most important things are parents, peers and teachers. Of these, parents are probably the primary source. So whilst we don't rule out the genetic component, the behaviour of the parents appears to be very important in passing this trait anxiety on.

You have looked at 'hot periods' – times during childhood when children are particularly likely to develop certain anxieties. What sort of anxieties come out at specific ages and why do you

think they are tied to these periods?

There is a very nice evolutionary explanation which suggests it's to do with the ability to defend yourself in your environment during our evolutionary past. So very young children, toddlers, are not very mobile and are totally dependent on their parents to protect them from predators. At this age they tend to fear changes in the environment and their parents being away. That sort of anxiety makes perfect sense in a way since there is very little they can do about it. Then around three- to six-years-old animal fears become more prominent. Again that



Andy plays drums in a band called Fracture Pattern

makes perfect sense – they are becoming more mobile, more autonomous. So evolutionarily speaking they would have been away from their parents more than at a younger age, but they are still very small and helpless – not massively capable of fending off all sorts of predators. Once again it makes sense. When they are a bit older and physically bigger, the argument goes, they will become less worried about things like animals as they are better able to fend for themselves. At that point things like social cues, like being outcast from your group, begin to take over since these become more important as they find their

role in society and need to get on.

So that's the general argument as to why we find these different hot spots where different things cause anxiety. It's all driven by evolutionary pressures. Of course, you can't test it directly, but it makes a lot of sense.

So is there anything we can do to reduce the possibility of our children developing anxiety and phobias?

I hope so. Essentially that's why I do this research – it's not because I like going into school and frightening small children! It's because if you can unpick what causes children to be scared then maybe we can mend it. I'm not clinically trained so I can't intervene when children are anxious. But I can look at what we might do in school and what can parents do and not do, to hopefully prevent it. For example, there's lots of research evidence that certain parenting styles are associated with future anxiety in their children. This sort of research on basic behaviour might allow us to advise them on what to do and sometimes on what not to do. As a simple example, if you're a parent and you are scared of spiders, the best thing you can do when you see a spider is not react. But unfortunately children pick up on quite subtle cues. If you really are scared of spiders there's only so much you can hide.

And finally, do you have any phobias yourself that you are prepared to share with me and 46,000 others?

Well of course, as we know, all psychologists study their own problems – I'm completely neurotic! But seriously, I'm scared of spiders, but not as much as I used to be. And I get quite anxious about meeting people I don't know. But these aren't at a clinical level. So I'm just mildly neurotic!

Well, I certainly haven't found talking to you anxiety-provoking, and I hope you can say the same!

#### reading

Andy Field's personal page: [www.statisticshell.com](http://www.statisticshell.com)  
 Child Anxiety Theory and Treatment Lab:  
[www.cattlab.net](http://www.cattlab.net)  
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