DANNY LENNON: Here we are. Jake, welcome to the podcast. Thanks for joining me.

JAKE LINARDON: Thanks very much for having me, Danny. I'm really looking forward to talking about some of these very important issues and topics of discussion. So yeah, I really appreciate you asking me on this.

DANNY LENNON: Yeah, for sure. And as I've mentioned to you, like you say, extremely important issues, I think very topical right now. But most importantly I think for practitioners in particular as well as just individuals trying to advance their own understanding it's important to get some of these concepts from the right areas. And given your work in some of the areas of research we're going to discuss today, I hope they'll get much more accurate view of some of the terms, some of the interventions and some of what the data actually says. And that might help frame this conversation better for them in some of these areas hopefully.

Before we get into any of the specifics, maybe just a good place to start so people kind of know where you're coming from with some of this information. Give people a bit of your background and then specifically leading into the researcher you're involved with right now.

JAKE LINARDON: So my name's Jake Linardon and I'm currently a research fellow and lecturer at Deakin University, which is located in Australia, Melbourne. So I completed my PhD in 2017 and then I essentially immediately started working as a full time lecturer in 2018. And then I really want him to amp up the research aspect of my career. So, I applied for funding to essentially fund me full time to do research which I was lucky enough to guess. And for the next couple of years really just, just focusing on the research, particularly on the areas of digital technology and, and eating disorders. The reason being that we know that there are so many people in the world that have an eating disorder or symptoms of eating disorders, but there is just not enough therapists out there to treat these people.

As a result, what we want to try to do is capitalize on digital technology and translate our interventions from face to face delivery via kind of mobile phones or the Internet so we can really reach a broader range of, of people, of a variety of different backgrounds. So, I've done quite a bit of work on, on looking at the effectiveness of various psychological interventions for eating disorders.

So, I guess the bulk of my research publications have been on meta-analysis, which essentially synthesizes the available literature we have at the moment and, and ultimately looks at how, I guess the quality of the evidence we have so far in combination. So, I really looked at many, many different psychological treatments for many different eating disorder subtypes and synthesized them through meta-analysis and looked at what's kind of effective and what's not effective and what are the components that are making it effective which I think is a really good starting point because at the moment the state of the evidence is relatively poor in terms of not only the quality of included randomized controlled trials not optimum, but the outcomes are pretty dismal to be honest.

So, it's really kind of prompted me to try to hopefully, I guess in the future to improve this space. And so that's kind of occupying my time at the moment is

trying to I guess broaden the dissemination of treatments in particular Australia where I'm from. And also, kind of try to improve the potency of the available treatments that we have. And to do that we need a really good understanding of the things that are keeping the eating disorder going, so which I'll touch on a little bit later in terms of the maintaining factors and also some of the risk factors as well, really trying to target them through our intervention.

So, I've published quite a number of papers over the past couple of years on this topic, but I still am definitely learning much more to come as well. So just a little bit of background around myself. I hope that kind of answers the question.

DANNY LENNON: Yeah. Awesome. We'll definitely piece through different parts of that as we go here. I think probably a good place to start for a lot of conversations like this is to probably go through a few definitions just so that everyone is on the same page and it's clear on some of the things we're talking about. The first one that comes to mind is when we're talking about eating disorders, that's obviously a very broad category of different disorders and can be an umbrella term for a few different things. And obviously without getting into the specifics of every single type of disorder which would take a considerable amount of time, are there kind of some general classes under that term of eating disorders that have some distinguishing characteristics from one another? Or how should we view different categories of eating disorders and where they might be slightly different?

JAKE LINARDON: Yeah, that's, that's a great question. So, I am of the opinion - so, all of my PhD work was on, I took a trans diagnostic perspective towards eating disorders. So, what that means is instead of viewing eating disorders as separate things, so whether anorexia nervosa is different from bulimia nervosa, bulimia nervosa is different from binge eating disorder, we take them as one eating disorder together. And the reason why I'm an advocate for the trans diagnostic approach is that we have a look at the clinical features of each eating disorder are highly similar to each other. So, there's this pretty good evidence that at the core of every

single eating disorder, irrespective of what it is, is what we call this overvaluation of white shape.

So, what that means is, so whereas most people, most people without an eating disorder evaluate themselves on a variety of different domains, so their self-worth is acquainted with many different things. So things like their relationships, how well they perform at work, how good they are at sport and various things like that. This does not happen with people with eating disorders. Their self-worth is essentially acquainted with their body weight and their body shapes, so how much they weigh and what they look like. So that over evaluation is considered by some models of eating disorders to be the core psychopathology; the thing that is essentially driving the clinical features that we see. And we know that this overvaluatio33n is present across each eating disorder type. So we can kind of really observe it if we see it with each eating disorder. And as a result, what we need to do is kind of target that over evaluation because if we target that and knock that out essentially, then what should happen is then we should have kind of a flow and effect towards the clinical features of each eating disorder.

JAKE LINARDON: Okay. So I guess my point is taking this trans diagnostic perspective, it's just saying that although we tend to separate certain eating disorders, they all share some highly common characteristics. So, we should focus on what is similar with them rather than what is distinct with them. But we know that, we know that there are some eating disorders we can usefully distinguish between. So anorexia nervosa and bulimia nervosa, for example, anorexia nervosa typically characterized by very low body weight, whereas bulimia nervosa, these types of individuals have relatively normal body weight. So, they're generally not overweight, they're generally not underweight. They're relatively normal. And the trans diagnostic perspective says that that doesn't really matter. We need to get to the crux of the disorder, which is that over evaluation, which is kind of driving everything else.

So, whereas we can see some sort of differences in terms of physical features with some eating disorders, what this perspective is saying is that let's look a little

bit deeper and if we look a little bit deeper, well, they're actually the same thing and there's quite a bit of evidence supporting this trans diagnostic approach. And I think it's very useful for conceptualizing eating disorders and not complicating it too much because we have treatments now that are used for eating disorders that are applicable. They've taken this perspective and meaning that they're applicable to any eating disorder subtype and there's emerging success being shines with this particular treatments. And I think it's just a very useful way in which we can essentially not discriminate amongst different disorders and instead view them as one thing and then ultimately treat them as one.

DANNY LENNON: Just from again me trying to work through some of the stuff you've just said and you can correct me on any of this if I'm incorrect. If we're taking this approach that you've outlined of seeing that many, or maybe even all eating disorders have a potentially a similar or perhaps even the exact same root cause that is driving some of the behaviors that lead to the disorders, then that's important to identify and then the steps we take to improve things would be directed towards that. Whereas presumably the problem with looking at defining characteristics that are different between them, for example you've mentioned one of low body weight in anorexia. If we start looking at those characteristics, they're almost like symptoms rather than causes and then you can fall into the trap perhaps of starting to treat symptoms of oh we'll just try and get someone's body weight up without actually addressing why that is there. Is that kind of some of the thinking behind some of this model?

JAKE LINARDON: Yeah, that's exactly the thinking behind the model. So the idea is if we treat these more overt kind of symptoms like low body weight for example, that doesn't necessarily translate to improvements in the core pathology that's driving everything else. And there's a good body of evidence showing that in anorexia nervosa, if we are able to successfully get them, these people up to a 'normal body weight', that does not mean that they necessarily improve in those core body image symptoms that I talked about it, that overvaluation of weight and shape. And as a result, what tends to happen there is that if these residual

levels of overvaluation of shape and weight are still present after treatment, but as clinicians we're thinking we've done a great job because we've got these people back to a normal weight, then that is a strong indication that they may relapse later on in the future. So their restrictive behaviors will still be present because this thing is, this over evaluation is still present and is still driving the other things happening.

So ideally what we want to do is we want to get to the crux of the problem first. The crux of the problem being those extreme and intense body image concerns where people equate their self-worth with how they look and how they weigh, because that is the thing that is essentially promoting every other feature we see in these eating disorders, so exactly right. We don't want to take a superficial approach and just focus on the weight. We want to go a little bit deeper and that is the thing that will ideally and hopefully promote or prompt success in treatment.

DANNY LENNON: Yeah, I think probably intuitively when you make that connection between some of the disorders and how people have tied their self-worth either to their body size or body image or their kind of perception of these things. That probably doesn't surprise a lot of people because we often see, well that's of course that's driving some behaviors that objectively someone shouldn't be following, right? When someone is, have this maybe false perception of themselves and then is tying that to their self-worth in a certain way or identifies themselves based purely on body weight or how they look visually or so on.

So when it comes to the actual interventions that we have right now, you mentioned earlier that there's a ton of stuff going on, some stuff probably not so effective, some showing a bit more promise. And I know you've, for example, published some reviews, looking at some of the behavioral interventions, where's the best place to start into talking about some interventions that show good promise or have good data behind them that could potentially be useful in tackling some of these underlying pathologies?

JAKE LINARDON: Yes, good question. So, the overwhelming majority of the evidence is in favor of cognitive behavioral therapy. And that's for the disorders primarily binge eating types, so things like bulimia nervosa and binge eating disorder. For anorexia nervosa, it's a little bit more complex, meaning that we don't have a clear standout treatment at the moment. Cognitive behavior therapy is one of the front running treatments for anorexia, but it's one of many different front lining treatments as well because we've seen through the multiple randomized controlled trials that have been conducted that there's no clear treatment that is performing better than another one. And part of the reason is that the disorder is just so difficult to treat improvements are quite modest that they're not as good as what we typically observe in Bulimia Nervosa and binge eating disorder. But for the disorders of binge eating, cognitive behavior therapy is a clear standout and that's usually based on a model that conceptualizes the maintenance of the eating disorder. And it does take a trans diagnostic perspective meaning that all eating disorders regardless of what they are share common symptoms and common kind of causes. And the idea of treatment is in CVT is to tackle the maintaining mechanisms, so the things that are maintaining the eating disorder. So, the things that are keeping it going essentially, and those things that are keeping it going are what I mentioned earlier that over evaluation and also dietary restraint. So dietary restraint meaning the intention to restrict food intake in order to regulate body weight and shape. But there are multiple different kinds of facets of dietary restraint that might be useful to tease apart. But CVT kind of recognizes these different types of restraint and uses a bunch of different strategies in which these maintaining mechanisms are targeted. Because the assumption is if we knock out these maintaining mechanisms or if we eliminate or target the, then what will happen is we'll be able to break the eating disorder cycle and that's where recovery or improvement will happen.

But without targeting the things that are maintaining the binge eating and the purging behavior because they're just the symptoms, we want to go a little bit deeper and we want to talk the mechanisms without

targeting them, then we probably won't get much done in treatment if we just take a more superficial approach is what we said before. So, the best evidence we have at the moment is CBT. And that's reinforced by several different meta-analysis done by myself and by other teams across the world showing that one CVT, whether it's delivered in an individual format, so just the therapist and the client or whether it's delivered on a group basis, so you know a bunch of different patients go into a group and they do group therapy. So irrespective of the type of format, CBT tends to outperform other different psychological interventions for eating disorders, including interpersonal psychotherapy is one classical behavior therapy where there's no attention devoted to the underlying thoughts or cognitions that are contributing to the eating disorder and some other different therapies as well, so more like non directive counseling as well.

So yeah, the, the evidence is quite in favor of that and the reason is because it's the most studied as well. There's been about over 50 randomized control trials of CBT, which is huge compared to what we already have with the other treatment approaches. So, synthesizing them together, we've shown whether it works and under what conditions it works. So as I mentioned that's the clear standout at the moment. And there's also a lot of support garnered for particular self-help versions of CVT where we translate the CVT treatment into a kind of a book format or via the Internet and people work through the manualized approach by themselves or just with a little bit of guidance from a therapist. And guided self-help is very beneficial for binge eating disorder, but it's not very good for Bulimia Nervosa. For the people with Bulimia Nervosa generally don't respond very well to guided self-help. They need a therapist to direct the content and the nature of the treatment.

But people binge eating disorder, it's remarkably good. So, what we typically do, we prescribe that as the first approach treatment. So the first step in treatment. So, we say to, we essentially say to or what we're trying to promote to people with binge eating problems is we said to them, "Perhaps giving this a go so you can almost like save your finances and save

your money without spending 20 sessions with a therapist. Give this a go and see how it works first. And then if you don't improve, then maybe you know, use your resources for a therapist." And that's what we call the stepped care approach in treatment. So, we want to save the more intensive resources like the outpatient or inpatient treatment for those who fail to respond to less intensive forms like guided self-help. But yes, what we have there is that's kind of the gold standard treatment of what we have for the bulimia type disorders. And that's been recognized all over the world, so there's general consensus that, that should be administered to these disorders first up.

DANNY LENNON: There's a few things there that I want to dig into. One that'll definitely put a pin in and then come back to is the aspect of dietary restraint you mentioned. And, and also we'll maybe talk about some current behaviors that might tie into some of this stuff. But one thing I just wanted to clarify is when we're talking about binge eating disorders, one typical question people may have is number one, highlighting what exactly a binge eating disorder is or how we should define that. But probably a step on from that is knowing exactly what a binge eating episode is and how should someone go about distinguishing a true binge eating episode that would tie into someone indicative of having a binge eating disorder versus just that feeling of overdoing it now and again, or going and overeating on certain occasions. So what are some of the characteristics that would define a true binge eating episode?

JAKE LINARDON: Yeah, that's, that's a good question because there is kind of a lot of discussion around this topic of binge eating is excellent and some of it can be a little bit misinformed. So, in what we know and the way in which we assess and define binge eating is essentially or put very, very simply, binge eating can be thought of as uncontrollable eating, but we can take a more detailed approach to this definition. So, what we can do and what we and what we can distinguish between is two different types of binge eating episodes.

So, the first one is objective binge eating and the second one is subjective binge eating. So, let's just talk about objective binge eating. And this is the binge

eating episode that is typically observed in people with eating disorders. So objective binge eating is when someone consumes and an unusually large amount of food given the kind of circumstances that someone's in at a point in time, but it's also accompanied with a sense of loss of control. So, I'll just break that down a little bit because there's a little bit going on there in that definition. So, the first part is consuming an unusually large amount of food. So, an unusually large amount of food can be quite difficult to define. It can be a little bit of a controversial topic, I guess. But what the general consensus is, is that an unusually large amount of food can be somewhere between 1500 to 2000 calories, but it must be done in a short period of time, which is about, I think the cutoff we tend to use in the literature is about two hours or so. So, within this space of two hours, someone eats around 1500 to 2000 calories in that period of time. But then the whole mark of the binge eating episode is a sense of loss of control. So, the idea is that the person feels that they cannot stop eating at a period of time and there's no way in which they can control their behavior. So, it's almost like, people describe binge eating episodes as they're in a trance. They've got no ability to stop what they're doing and they just keep going and keep going despite the adverse consequences. So that's what we call an objective binge eating episode.

But a subjective binge eating episode is the same thing, but the only difference is that the people don't consume a large amount of food. So, they eat right, but they still feel like they've lost control for some reason, but the amount of food is not great, it's not unusual. You wouldn't look at the amount of food someone eats and thinks, well that's quite a lot of food in that period of time. It's a normal thing, but they just feel like they've lost control for some sort of reason. And although that's the difference, that's I guess the only difference between the two episodes, both are highly distressing to the person. So there's been some work done comparing the two episodes, in terms of their relationship to a bunch of different outcomes and things mainly like quality of life impairment, psychological distress and things like that.

And we typically find that people who engage in either one or the other have the same level of impairment. So it's still highly distressing to the person, regardless of whether they actually ate a lot or not. So it's suggesting that it's the component of loss of control that is the factor that is driving the pathology as well. Yeah, we can distinguish between those two types of, of binge eating episodes, but both of them as I mentioned are associated with impairment. But in order to receive the diagnosis of binge eating disorder the person must be binge cheating on average once a week over the past three months. And they also must feel some other characteristics with the binge as well. So they must feel deeply ashamed of what they've done, embarrassed, they feel secretly, so they go to great lengths to hide their behavior as well. So a lot of the time we see these individuals eating in secret. So essentially, they do all they can to be alone to engage in their binge eating episodes and that's part of the embarrassment and the shame going on there. And normally we see that the types of foods eaten are very predictable, and it's typically the forbidden foods that people have. So the things that are highly processed, 'highly palatable junk foods' essentially. So they're the defining features of binge eating and binge eating disorder.

DANNY LENNON: One thing, and again, please correct me if this just makes absolutely no sense, but just as you were talking about some of the things that were particularly distressful or sorry stressful to the person in this particular case is that perception of loss of control, whether that's objectively or subjectively them actually overeating or not. Just the fact that they feel like they've lost control here, that's the thing that is causing this distress. So is there any kind of tie to that kind of feeling of needing to control things of one of those characteristics that may even feed into an eating disorder in the first place? Because again, just intuitively thinking about how some of those behaviors we would think about of being overly restrictive with the diet, being obsessive with the types of foods and amounts that are consumed and all those things that we can probably delve into later on. But some of that seems to be driven by this very strong need to control this certain element of their life. And if

that goes beyond any bounds outside of that tight restraint and having it, they kind of feel this loss of control and then that tends to be quite induced as distress. Is there anything to that?

JAKE LINARDON: Yeah, that's a good point that you raise because we know or we used to think and I think we still do think of eating disorders as the need for control. So people with eating disorders, one of the hallmarks or characteristics of it is the desire to getting a job, particularly for people with anorexia nervosa where control is then exerted through their ability to restrict their food intake because that's the thing that they can control because it's in them to eat or not to eat, so they can choose that. So although I'm not entirely aware of any research linking the binge eating loss of control element to the more general need for control element, I certainly think it's intuitive and I certainly think that it makes sense to an extent because we do know that loss of control, I mean the, sorry, the need or the desire for control is very prominent in these individuals. So I think it's just – I think to answer your question it's something worth exploring. And I'm not aware of any work that's been done linking the two or kind of studying the two. But I think you're onto something there because I actually haven't really thought about it in that fashion which is quite interesting as well. So I'm not sure how well I answered that question, but all I can say is that I think it's certainly something to look into for the future.

DANNY LENNON: If you have any potential PhD students, maybe there's, there's an idea for you. But to move into one of the aspects you've already mentioned, Jake, was around this aspect of dietary restraint. And I think as you alluded to, different forms of dietary restraint aren't all created equal and have maybe potentially different implications. Can you maybe outline those distinguishing features between different types of dietary restrain, what we mean by dietary restraint and then solve the implications of those different types of control someone may have via dietary restraint?

JAKE LINARDON: Absolutely. So I've done a bit of work on dietary restraint. I find it quite fascinating to be honest because I've talked to many, many people in this

world that say that they've been on a diet or they have dieted or are dieting. So it's really relevant to essentially the entire population to some degree. SO, it's quite interesting for me. So in the literature, we can also distinguish between a couple of different types of restraints. And I think it's important to distinguish between them because we always, people generally have this blanket rule that dieting is bad and as a result we should never diet. So a lot of the proponents of the non-dieting or the health at every size movement completely discount the role of any form of dieting which I think can be not very useful sometimes, because I don't think there's a differentiation between the multiple different types of restraints. And the multiple different types of restraints have been shown to be linked differently to certain outcomes. And I've done it through my work, other people have done it through their work and it's, relatively, it's a consistent finding. So to distinguish between them we can look at one component which is the rigid dietary control or rigid dietary restraint versus the other one, which is a more flexible approach.

So let's just talk about the region approach a second. So the rigid approach is the harmful approach. There's no question about that. That research has consistently shown the region approach to be linked to various ill outcomes. So things like eating disorder symptoms, poor quality of life, psychological distress, even weight gain because it's so hard to sustain these rigid approaches. So what characterizes the rigid approach? It's that it's essentially an all or none approach to eating food and dieting. This is where people have, extremely demanding and multiple a diet rules that essentially govern their eating behavior. These rules tell them when to eat, what to eat and how much to eat. And there's no leeway, there's no questions asked. These rules must be followed. And that's the rigid approach. And under this umbrella of rigid control, we can look at a couple of different forms of rigid restraint. So one can be food avoidance, which is where people have essentially in their own heads, they have a list of forbidden foods and a list of permissible foods; so foods that aren't forgotten, they're allowed to eat. So that's food avoidance where people just go,

"Chocolates are on my forbidden list and I will never touch chocolate for as long as I can try to."

The other one is delayed eating. So delayed eating is kind of synonymous with fasting, where people go for very, very long periods of time without eating anything. And the idea is to fast so that they can modify or regulate their body weight to a better extent. And the final one is restriction. So restriction is where people essentially under eat so that physiologically they under eating, they're eating much less than that than what their body should be having. So they're the three different kind of components of rigid control. And we did a study last year that looked at, in people with Anorexia Nervosa who were in treatment. And we looked at those three components of a rigid control; so food avoidance, delayed eating and restriction. So we just looked at their links or their connections to various health outcomes, so the health outcomes being eating disorder symptoms, so the attitudinal components that I talked about earlier, body weights and also measures of psychological distress; so depression, stress, anxiety, quality of life, disability and things like that.

And we found pretty consistent evidence that all of those components were linked to each outcome, so they're all kinds of harmful or detrimental to some extent. But what was interesting, we found one clear component that outperformed the rest in terms of the strength of the relationship between this one component and each outcome was so much bigger than the other components, and that was fasting. So people who fast or who go for periods of about five hours or so without eating during the day, that is the component that seems to be connected most strongly to these ill health outcomes, but we can't clearly generalize those findings to the general population because we did look at people with Anorexia Nervosa. But I guess the interesting thing about this study was that one, all of those rigid kind of components were correlated or associated with poor outcomes. And two, the component most strongly related to poor outcomes.

So the implications were we need to kind of assess and

screen for fasting behaviors in treatment because that might potentially be beneficial and just essentially be on the lookout for fasting behaviors because it looks like it could be very damaging to the person. Although there were various limitations to the study as well, but I think it was just the first nice stepping stone for future work to be done in this kind of space.

So then we move on to the other form that's called forms of dietary restraint, which is the most flexible component. So the flexible component is it's more of a graded approach to eating where people who don't have these black and white food rules, they eat all different foods in moderation. But the key factor that makes them comparable is that people do them both for weight related purposes. So there's a degree of weight regulation in each component. Although the behaviors seen in the flexible component is much more different and much more adaptive than the behavior seen in the rigid component. So because we always hear about these flexible dieting and things like that, and do the evidence for flexible dieting is a bit strange actually. It's not I guess conclusive at the moment. What is conclusive is that rigid facet. So the rigid form is harmful. We don't want to ever promote a rigid form of dieting particularly for the general population. But the flexible component is a little bit different I'll hopefully I'll explain why.

So there's been about three or four studies that have compared flexible control and rigid control with other kind of eating styles as well, so things like intuitive eating. And what we found is that at like a bivariate level, so when we're just looking at the relationship between flexible and rigid control, we see that both are highly related to each other in a positive direction meaning that people who endorse a degree of rigid control also endorse a degree of flexible control, which is a little bit strange. It means that people are doing the same thing. But what's interesting is when we put them in like more of a multivariate model and we look at trying to predicts which ones uniquely relates to these ill health outcomes. What we see is that flexible control turns into nothing. It kind of becomes unrelated to any outcome, whereas the rigid component still relates negatively or poorly to those ill health outcomes. It's a measurement issue, and what

we don't know is how to measure flexible control or flexible restraints by excluding other facets of rigid control. So in the literature, we have a bit of a measurement issue in terms of we don't know how to define flexible control is what I'm trying to get at. And as a result, the literature or the research at the moment on the positive impacts of flexible control is not known just yet. And the primary reason is because we don't know how to define it and we need to create a bit of tool in which we can define flexible control.

DANNY LENNON: Right, so essentially the overlap between those is what's causing a problem and actually quantifying what proportion of the positive or negative effect could be attributed to flexible restraint in this particular case because it has these overlapping concepts that are also present in rigid control?

JAKE LINARDON: Yeah, that's exactly right. And it makes sense that this happens because there's only one scale or one questionnaire available that assesses flexible and rigid control, the way we think about it at the moment. And that questionnaire was developed, it came out of a previous questionnaire as well, so it actually hasn't really been validated too much and the kind of the underlying structure is a little bit unknown, but people continuously use this scale because it's just what people have done in the past before. So no one has yet to kind of bother to create a new scale that tries to tap into their unique components of flexible control and the unique components of rigid control. And until we're able to measure them and separate them clearly and thoughtfully, then we'll be able to make more stronger conclusions about what impacts flexible control has, because at the moment the available evidence doesn't suggest conclusively that flexible control is harmful.

It's actually saying that if we remove any kind of shared variance with rigid control and we just look at flexible control in total isolation, then actually flexible control is not associated with bad things. It's not associated with eating disorder symptoms, with weight gain, with psychological distress or impairment. So it's kind of suggesting that it could be beneficial if we devote more time to studying the unique components of it. And that's where I think

people jump on the back of other people and say, “Well no, all forms of dieting or problematic, we should never do that.” The answer actually is we don't know just yet, particularly from that component of restraints. So it's almost like hold your horses before making these old claims.

DANNY LENNON: Right. I think that's a really, really valuable point because essentially what we're talking about there is we see that there are clear problems with a rigid dietary restraint. And then so as a kind of counter to that we can come up with, well, what is the model that completely eliminates that? We can look at some of these approaches that have completely no forms of dietary restraint to try and get rid of the problems we're seeing as rigid control. But now if we think of someone taking the viewpoint of, okay, well is there a potential for me to take potentially some elements of dietary restraint that can be also mixed in with some of the good aspects of these approaches to don't have any restraint to have some sort of model where we're creating some degree of control, but without any of the damaging aspects of rigid dietary restraint? I think that's what people are trying to do. But as you've perfectly outlined, that's a very difficult thing to try and tease apart of where those positive and negatives are. And I think yeah, people maybe need just to say, “Okay, let's think about this before saying we need to completely go in one direction of that spectrum”. Right?

JAKE LINARDON: Okay. Yeah, absolutely. And we say it, there's a huge divide essentially in the community, there’s a huge divide between people who are proponents of a kind of dieting and weight loss versus people who are the complete opposite of that, people who promote more of the intuitive approach to and the body acceptance. And there's no middle ground between us, so people just do not want to consider the alternative side without really delving in and looking at what the research is showing before doing that. So, I think ultimately what needs to happen is yes, we need to be able to try to separate the two components together, to try to separate them sorry and look at them in isolation, because at the moment, the way that they're currently measured, they are both overlapping with each other. We can't get a clear picture of what flexible

control is without – if it has components or facets of rigid control in there. So I think personally it's just an issue with measurement and until we develop a measure that taps into these more adaptive properties of flexible restraint, then we'll be able to make more solid conclusions about what the state of the evidence is in terms of dieting.

DANNY LENNON: One other thing that you mentioned I wanted to pull it back onto, I mean this is kind of just a side note, so we don't need to spend too much time here, but you mentioned around how fasting can be potentially a predictive of some sort of issue or at least it can pop up a red flag in these certain cases. And just to kind of clarify for people here, you were talking about in Anorexia I believe in that specific example and I think maybe this number one actually mirror some things I've heard from practitioners and nutritionists and dieticians of whilst they may have used some degree of fasting protocols with various different clients, they have found that it hasn't been actually advisable and they completely avoid doing so with those who may be, have a history of disordered eating. And again, there are other areas we can get into why, but that is something I've seen practitioners talk about, so it's interesting you mentioned that. And I think maybe the reason why it becomes this distinction between fasting being potentially problematic in a model of someone with an eating disorder versus maybe let's say a healthy control is that if maybe it comes down to the reason for the fasting.

So if fasting is done purely as a means to enforce restriction on yourself or you feel bad for eating that is potentially very problematic versus someone without an eating disorder fasting for convenience of their schedule or for preference of the time when they eat, that could potentially be something very different. So I just want to get your thoughts on that of where there may be some distinction between a history of disordered eating or an actual diagnosed true eating disorder versus maybe those who don't have any of those.

JAKE LINARDON: Yeah, I do think the motivation towards why the person is fasting certainly would have a big influence. So the way in which we measured fasting and the way

that it's measured in the questionnaires that we have available to us, it's defined as a period of not eating anything, that being food and that being drink for I think they specify six waking hours. So if we think about six hours, it's quite a long time. If we wake up and just say nine at 9 O'clock and then yeah, six hours, what would that be? Somewhere around 2 O'clock or something. That's quite a long period of time without eating. So someone who has a really busy schedule, I can imagine them - I would find it hard to see someone go for six hours just because they've got a busy schedule.

I do, I believe that people would at least have some sort of snack in between some of there. But I do think the motivation towards why the person is doing it is certainly a contributing factor. Again, I'm not aware of any work that has looked at the motivations for fasting and whether the motivations are in themselves associated with these negative, I guess consequences. But what we do know with fasting is that one, it's incredibly difficult to sustain. So people with an eating disorder, who every day they go through the battle of, okay, I need a fast again, it could just become exhausting for the person. And what eventually tends to happen with these people is that it's just too hard to keep up. So when it's too hard to keep up, people then resorts to the complete opposite, which is the binge eating type behaviors as well. So the loss of control because they've restricted themselves for so long. So then they say, “Well, you know, I just can't handle this anymore. I might as well go all out.”

There are some people with Anorexia Nervosa who can successfully keep that fasting up for very long periods of time. But those people are quite rare and they don't happen too much. And then what tends to happen is that we have to intervene with treatment there. So it's an interesting point you raise about the motivations or the reasons to why someone fasts and it would be interesting to see whether or not that's, that's probably the determinant of these ill health outcomes that we see there.

DANNY LENNON: Yeah. Like I said, I would hypothesize that it has a role, but for sure it would be interesting to see that investigated. So a couple of terms that came up within

work that you have published on that I think are quite interesting areas and would be good to get you to kind of clarify some of these concepts for people who may be interested in looking more at them. One is this general field of eating competence. Can you maybe just explain a bit about that for folks who've never heard that before?

JAKE LINARDON: Yes, so eating competence, it's a relatively small area. There hasn't been much done on it at all to be honest. But it's highly similar to intuitive eating, highly similar, but it's also distinct. So I'll explain what I mean that, but first I'll just talk about how eating competence is conceptualized. So it's conceptualized in four components, the first one being positive attitudes towards food. So the first component of a competent eater is that these people tend to have very positive attitude, a relaxed approach to eating, so comes back to a little bit of that flexible component, that more graded approach to eating. The second component is the food acceptance components. So competent eaters we say that they're motivated to eat and try a variety of different foods that aren't for really weight related purposes. The third component is the regulation of food intake. So people who are competent eaters, their eating is based on their internal hunger and society cues. So they're very good at knowing when they're hungry and when they're full so they can stop eating when they're feeling pretty full and they can start eating when they start to feel hungry again. And then the final component of eating competence is something to do with like eating context. So this where people prioritize and structure and plan their meals. So they really take a lot of time and effort towards their eating behavior. It's not something too rushed and taking on the go on the way to work, no eating fast food in the car. They really make sure that they set themselves a good deal of time to really sit down properly, be mindful of their meal that they're eating and they're taking into account all the tastes, textures and smells and things like that.

So then the question becomes, well, how does eating competence differ from kind of intuitive eating? Well in my perspective, it only differs slightly. So I've actually got a study that's unpublished at the moment. It's fully written up, but it hasn't been submitted for

publication yet that compared eating competence with intuitive eating and the other components of dietary restraint that I talked about. And we found that when we compare the two, eating competence predicted a significant amount of a unique variation or variance in key outcomes. So the key outcomes are things like, again, like lower eating disorder symptoms, lower levels of depression, anxiety, stress and things like that. So the fact that it contributed a unique amount of variation in these outcomes suggests that eating competence is distinct or is a different construct to intuitive eating and the other components of restraint.

: So it doesn't fall on the same continuum. It's kind of operating in isolation is what it's suggesting. So then we had a look at well what are the facets of eating competence that are making it different from the other things. And we found the one component that that was clearly distinguishing between the constructs was the eating in context. So the idea that eating competent people prioritize and structure their meals and planning time. So they really go into effort to make sure that "Hey eating is an important part of my day. I want to make sure I sit down, enjoy it and plan for it." So that is the facet of eating competence that we've shown. That is the thing that is contributing to the unique variance or the unique variation in the positive outcome there, but again, very highly similar to intuitive eating. But I think it just goes a step beyond intuitive eating that it takes into account the full context not only around the eating behavior itself, but also around the way in which we think and view foods and perceive them.

DANNY LENNON: Do we have anything that looks at either eating competence and or intuitive eating on not only how that frames food and I suppose our perception of foods we're consuming and our eating behaviors, but also then that kind of related field a of body image itself directly.

JAKE LINNARDON: Yeah, so we have a couple of outcomes related to body image, particularly body image concerns and things like weight concern and shape concerns, so that's with someone who is essentially dissatisfied with their body weight and shape. And we did find that both intuitive eating and eating competence were uniquely

associated with lower levels of what body image concerns. But the mechanism or the reason as to why this tends to happen is a little bit unclear. We don't know why, we generally speaking don't know for sure why people that adapt these eating approaches or these are healthy eating styles are more likely to value and appreciate their body. So, the mechanistic side of it is a little bit unclear. There's been a couple of hypotheses put forth. One being that people who are quite satisfied with their body trust their signals of their body, their hunger and satiety cues and therefore their eating is governed by that. But in terms of hard empirical evidence, I don't think we understand yet why the relationship exists. So we clearly need a, unfortunately a lot of the stuff on intuitive eating and eating competence s based on cross sectional data, which means that we collect the data at one time point. So it's impossible to tell which variable is kind of influencing the other variable. So we can't say one variable causes the other because we can't rule out any other competing factors that are getting in the way. So when I'm talking about these kinds of things, I'm talking about statistical relationships that are going on. So this type of design is the important foundational work, but then what we need to do now is then go one step further and track these kinds of things over time longitudinally and that will give us a little bit more concrete evidence towards the potential adaptive role of these things.

And some impressive work has been done in terms of intuitive eating. Some people have developed interventions that are based on intuitive eating principles and they've found very good evidence in randomized controlled trials that people who learn intuitive eating do much better than people who aren't given anything. So typically on that way it's control. So I think we've got the groundwork set up. The groundwork is relatively clear cut so far with the exception of that flexible control I was talking about. So what we need to do now is use more intensive design, so things like longitudinal and experimental designs to really nut out these different mechanisms of action that you kind of asked just then.

DANNY LENNON: The final thing that I want to run down on before we finish that are kind of maybe related to this and some

of the aspects you talked about earlier, body checking and body avoidance. Can you maybe let people know what should we know about those? What were those terms describing and how are they relevant to this discussion?

JAKE LINARDON: Body checking and body avoidance is one of the clinical features of again each eating disorder and it's funny that you bring that up because we view body checking and avoidance as a direct behavioral expression of the overall evaluation of weight and shape. So that idea again that people are quite self-worth with shape and weight and the way in which people can act out that self-worth is via checking their body shape or weight or avoiding. But we kind of might think about these two as mutually exclusive, meaning that you can't have one without the other. That's actually not the case. What we typically see is the two variables are highly related. So it's very common for someone to go multiple times a day checking their body while simultaneously avoiding it. So what I mean by that is it's very common for people with an eating disorder to weigh themselves. So that's a form of body checking. They weigh themselves multiple times a day. I've heard of cases that weigh themselves about eight times a day and they'd just look at very, very minor fluctuations.

The same person can then go throughout the day and exhibit a variety of different body image avoidant behaviors. So one of one behavior of body images avoidance is the type of clothes people wear. So people who were generally really baggy clothes to hide as much of their body or their skin as possible, that's a form of body image avoidance. So yeah, both of them are usually highly related and they're both an issue. They both contribute to the maintenance of the eating disorder cycle for a couple of reasons. So think about self-weighing, so someone who weighs themselves multiple times a day. So the idea to self-weigh is to check that the number on the scales.

JAKE LINARDON: So someone who loses weight gets a good kick out of that. They really feel like they've done well. This is what they're aiming to do. They've done well, they've lost weight. So that's essentially reinforcing the eating disorder cycle. It's reinforcing that yet place more

emphasis on my weight and shape because then this will lead to weight loss and it's also reinforcing the dieting behavior; the rigid dietary restraint behavior that we talked about. So someone who loses weight goes, “Great, this diet's working, I'm just going to keep it up.” The same thing goes to someone who maintained their weight, sorry, puts on their white and maintains it. Those people are generally not too happy with themselves because they didn't see the number on the scales go down. So their ultimate conclusion is, well, I need to fix this. I need to lose more weight. So what I need to do is try harder. I need to diet even harder next time before my next weigh. So both of those regardless of the outcome of the person who's checking their behavior, the conclusion still stays exactly the same. And that is one that they still need to diet and two, and need a place even more emphasis on their white and shape in order to achieve their arbitrary goals.

And body image avoidance operates relatively similar. So someone who completely avoids checking their weight at any circumstance at all goes through the danger of being unable to disconfirm any maladaptive beliefs that they have. So essentially the erroneous beliefs people have about their weight and shape go left on challenged. And what we need to do as part of training is we need to challenge those negative thoughts that people have in order for them to get better.

So in treatment, it's kind of tricky because people might be listening and thinking, “Well, what do I do? If, if checking is bad and avoiding is bad, then then what happens then?” So the idea is we need to find a happy medium. And the general kind of treatment strategy we use in psychological therapies, particularly CBT is a principle of weekly weighing. So that's where we supervise the client and weigh them once a week with the therapist. But the idea is to help the clients reinterpret what the number on the scale means so they don't resort back to these particularly harmful things that I just spoke about there. So it takes a lot of work, but provided that the person is being supervised and is being educated about the proper biology of bodyweight, then what we can do is then we can tackle the eating disorder cycle.

The weekly weighing is introduced in the first week of treatment with CBT, for any eating disorder it's introduced first up. And the reason is because what we need to do is target that obsessive checking or that total avoidance behavior. And that's kind of the happy medium we think about with that strategy there. So ultimately to put your question into one answer sentence, both are problematic because they contribute to the eating disorder cycle and we need to get rid of those harmful behaviors in order to break the cycle.

DANNY LENNON: Awesome. This has been great Jakes, so much here for us to get through. So I really appreciate you taking the time to get into these concepts. Before we finish off, for people who are maybe looking to find out more about the work you're doing, have a look at what you've already published or to get into contact with you, where's the best places on the Internet for them to find any of that stuff?

JAKE LINARDON: Yep. So we've got a, we've got a website called www.breakbingeeating.com. So essentially in this website what we've done is I'm offered a variety of different self-help strategies set up based on the coded behavioral principles that I was talking out. So for anyone who has difficulty with their eating behaviors or their body image hopefully you might find some of the content there useful. And there's a list of my publications on their website so you can download them if you're interested in reviewing them. So essentially what we've done is just provided a bunch of different psychoeducation about eating disorders, almost all of the things that we talked about in this, podcast today in addition to various kinds of resources and self-help strategies for people who essentially can't really afford or can't access or don't want to seek out a standardized treatments there. So hopefully people will find that useful, @breakbingeeating.com

DANNY LENNON: Awesome, and for everyone listening, of course, link up to that in the show notes of this episode as well as more information about Jake and the link to any of the studies that we've mentioned throughout today's episode too. So Jake, that brings us to the final

question that I always end the podcast on. And this can be completely detached from today's topic if you wish. And it's a broad question, so forgive me for putting you on the spot, but it's, if you could advise people to do one thing each day that would have a positive impact on any area of their life, what would that one thing be?

JAKE LINARDON: Wow, that's a tough question. If I could advise people to do one thing, say I would say, try to catch up with a friend each day. I think that is highly beneficial to our mental wellbeing. So trying to just catch up, whether it be a 15 minute coffee, going go over watching an episode of a TV show. I think that is the thing that I would promote for mental health and wellbeing and also applicable to what we're talking about today in terms of body image and disorders, it takes that focus away. So that would be my suggestion.

DANNY LENNON: Awesome. With that man, I want to say thank you so much for everything that you've talked about today, for the great conversation and then obviously for the wonderful work that you're doing as well, particularly important work that you're doing. So thank you for all of that. It was an absolute pleasure talking to you too.

JAKE LINARDON: Thank you very much for having me, Danny. I really appreciate you getting me on and being able to kind of spread the word. It's really great work that you're doing.