

Ψ **PSYCHOUT**

ISSUE 15



FEATURE THEME

Sports Psychology

ΨSYCHOUT

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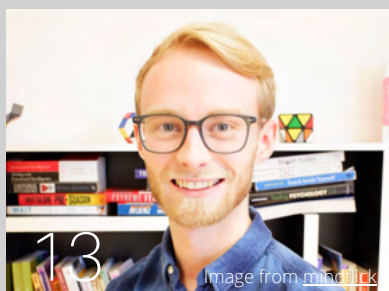


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Image from Vancouver Whitecaps FC

FEATURE

Jia Xuan Neo covers the "win-at-all-costs" mentality and unsportsmanship.



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INTERVIEW EXCLUSIVE

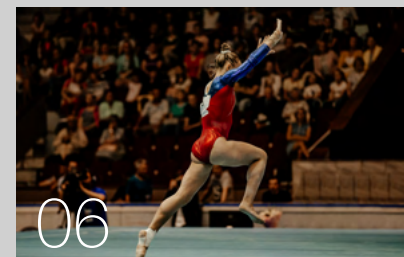
Lucy Stafford interviews Liam Burnell about his sports psychology journey.



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FEATURE

Hattie Jones covers the effect of exercise on cognition.



06

FEATURE

Branislav Kaleta discusses "the zone".

ΨSYCHOUT

Meet the team

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EDITOR'S NOTE

This issue explores the psychology behind sports and exercise, including what it means for athletes to be "in the zone", the win-at-all costs mentality that can accompany poor sportsmanship, and the effect of exercise on cognition.



As you've probably guessed from the cover, this issue of PsychOut is all about the psychology behind sports and exercise.

The scope of this issue is wide; from what it means for athletes to get into "the zone", to the role a "win-at-all costs" mentality can play in poor sportsmanship. PsychOut also features an article about how exercise effects our cognition and an interview with Liam Burnell, a previous University of York Psychology student now working to become a chartered sports psychologist.

We would like to thank all the writers for their outstanding contribution to this newest issue of PsychOut and can't wait to publish more of their work. We would also like to give a special thanks to Liam Burnell for agreeing to be interviewed for this issue.

We hope all our readers are well and staying positive!

LUCY STAFFORD & HATTIE JONES

Editors



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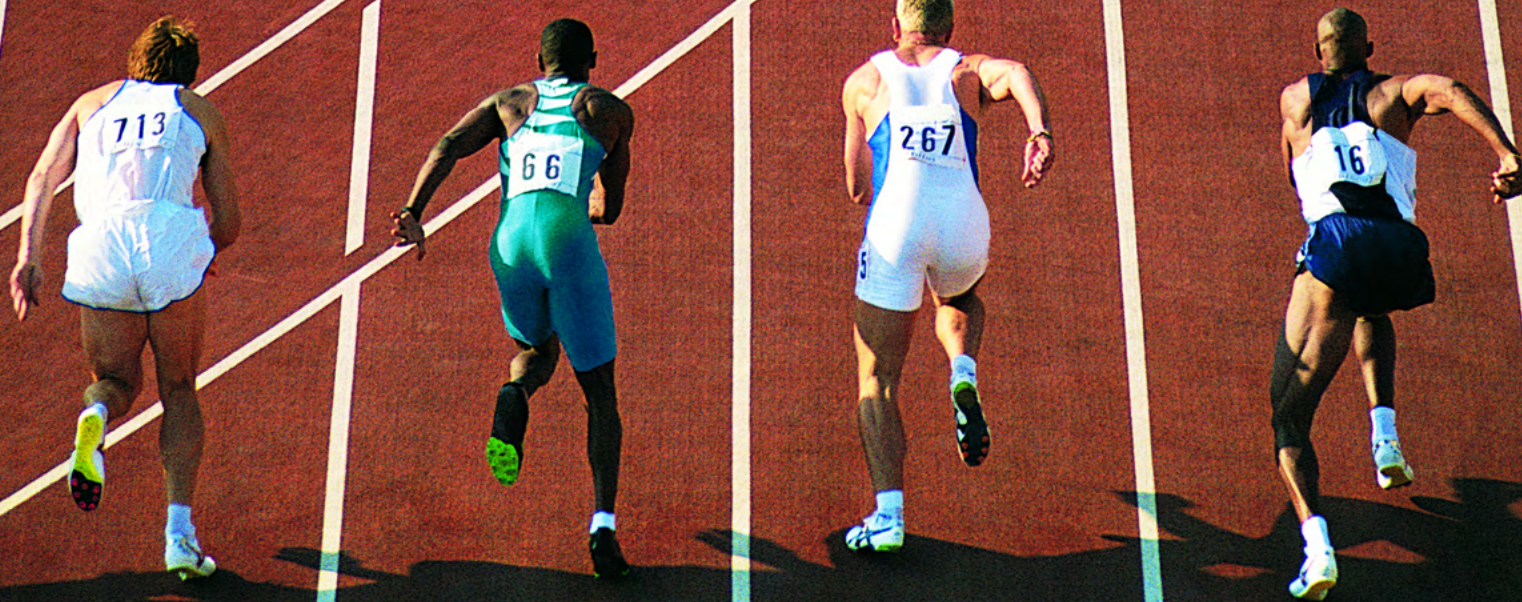
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All references from this
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Features

ISSUE 15



ATHLETES AND "THE ZONE"

Branislav Kaleta discusses how to get in "the zone".

EXERCISE AND COGNITION

Hattie Jones details the cognitive benefits of physical exercise.

"WIN-AT-ALL-COSTS" MENTALITY

Jia Xuan Neo writes about the impact of a "win-at-all-costs" mentality on poor sportmanship behaviour.

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PRODUCTIVITY AND PERFORMANCE

GETTING IN "THE ZONE"

By Branislav Kaleta



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HOW TO ENTER "THE ZONE"

1. Have a clear goal in mind
2. Try and get immediate feedback on your progress/performance
3. Find the optimal amount of challenge

You might have experienced it before. That rare feeling of being completely absorbed in a task where nothing can distract you. The past and the future are irrelevant, and you don't even notice that minutes or maybe even hours have passed. If you haven't experienced this yourself, you might have heard an athlete mention feeling as if they were 'in the zone' after an exceptional performance. Psychologists call this 'flow', and researchers from various fields of sport and positive psychology are continuously looking into its effects and how it can be induced for optimal focus and productivity (Engeser & Schiepe-Tiska, 2012).

Flow has been described as the optimal state of complete focus and absorption into an activity (Wells, 2010). This is that rare feeling of doing everything right and being so involved in the task at hand that nothing else seems to matter. The characteristics of being in the zone include intense focus, complete control, and distortion of time. The task is enjoyable, and the execution of the task is automatic and effortless. Sounds perfect right? The best thing about

flow is that the task can be just about anything; so it's not just relevant to sports (Jackson, 1995, 1996; Sparkes & Partington, 2003), but also gaming (Nah & Hall, 2014), academia (Ljubin-Golub et al., 2018), and various other fields (Chen, 2007). So how can we consciously achieve this seemingly amazing state of mind?

The three main ingredients to enter the zone include having clear goals, immediate feedback on progress, and the optimal amount of challenge (Nakamura & Csikszentmihalyi, 2002). No one wants to work on a task which is too difficult or too easy, which is why the task needs to hit that sweet spot of being just challenging enough to stretch one's abilities a little past their current limit. This is where most of the growth and improvement in our skills happens and is how we enter 'the zone'. If you take these conditions into account, it's not at all surprising that the phenomenon of 'the zone' is quite rare, especially in a world where our attention is constantly disrupted by notifications. It's also not surprising that 'flow' is often experienced during sports or when gaming, which not only fulfil the major conditions, but also require a lot of focus as being distracted can be costly. Moreover, the skill ceiling in these activities is very high so there is always room for challenge and improvement.

Despite the rarity of this state of mind and the specific conditions which need to be met, psychological research continues to focus on the benefits of flow for productivity and wellbeing (Bassi et al., 2014) in sports and many other areas. Research is slowly but surely uncovering how every one of us can reach our potential by getting in 'the zone'.



“ It's not at all surprising that the phenomenon of 'the zone' is quite rare, especially in a world where our attention is constantly disrupted by notifications. ”



Image from the [TBR Boot Room](#)



Image by [Mark Pain](#)

EXERCISE AND COGNITION

By Hattie Jones

It has been well established that exercise is good for both our physical and mental health. Exercise can strengthen and tone muscles, but can also leave us feeling euphoric and capable. Some may even say exercise helps them to “clear their mind”. Indeed, a meta-analysis found that exercise significantly improved cognitive function in those aged 60 or above (Carvalho et al., 2014). But how exactly does exercise do this?

One way exercise may improve cognitive function is through neurogenesis. In research by van Praag, Christie, Sejnowski, and Gage (1999), experimental mice were given access to a running wheel whilst the control mice were not. All mice were trained on the Morris water maze task in which they were required to find a platform hidden from them under the water. The running mice were significantly better than the control mice at finding the hidden platform in the Morris water maze and had enhanced hippocampal dentate gyrus long-term potentiation. Van Praag and colleagues concluded that physical activity could regulate hippocampal neurogenesis, the process in which new neurons in the hippocampus are generated, which in turn may improve learning and memory.

Turning to research conducted on human participants, Erikson et al., (2011) had participants aged 55-80 years old complete 1 year of regular aerobic exercise. Compared to pre-intervention measures, the volume of participant's anterior hippocampus had increased by an average of 2%, reversing age-related volume loss of about 1-2 years. Likewise, spatial memory improved. In comparison, hippocampal volume declined in the control participants. Like van Praag, Erikson and colleagues concluded that aerobic exercise may facilitate neurogenesis and improve memory function.

Thus far, exercise has been evidenced to benefit memory function in both animal and human participants, but what is bridging the gap between exercise and neurogenesis? One candidate is brain-derived neurotrophic factor (BDNF). Indeed, a meta-analysis of 29 studies concerned with BDNF levels and exercise found that resting levels of BDNF increased after an exercise regime of 20-90 minute sessions for 5-52 weeks (Dinoff et al., 2016). Surprisingly, increases in BDNF seemed to be specific to aerobic exercise as levels did not increase with resistance weight training. But contradictory to these results, De la Rosa and colleagues (2019) found that more active participants had significantly better memory and lower BDNF resting levels than sedentary participants. Critically, these participants had or had been exercising for 20-50 years rather than just 5-52 weeks. De la Rosa and colleagues suggested that in the active participants, BDNF levels increase immediately after exercise just like in sedentary participants, and thus facilitate neurogenesis and memory performance. However, the BDNF is then utilized to repair the muscle damage that can accompany chronic exercise. Thus, chronically active individuals can have a better memory than sedentary individuals despite lower resting levels of BDNF. De la Rosa and



colleagues concluded that a life-long exercise regime may be a protective factor against age-related memory loss and neurodegeneration.

Exercise as a protective factor against age-related memory loss is not a recent discovery. In 1993, Hill, Storandt, and Malley allocated a proportion of their participants to partake in regular exercise for 12 months. Control participants were not given any such guidance. Pre-intervention memory tests were also conducted to establish a baseline measure of memory performance. Memory tests were again administered after 12 months. Sedentary participants experienced a decrease in their memory performance, but active participants experienced no such decrease. This research suggests regular exercise may maintain mental agility for longer, even if the neurological underpinnings had not yet been uncovered.



Image from [Phoenix Clubin](#)

It's clear that a long-term exercise regime seems to maintain and even bring about cognitive benefits. However, irregular working and studying hours may impede individuals from ever being able to adhere to a long-term and routine exercise regime. So can spontaneous and singular workouts also benefit our brain? Research suggests they can! For example, a meta-analysis by Chang, Labban, Gapin, & Etnier (2012) found a small but significant positive effect of a singular exercise session on cognitive performance. This was found with the inclusion of studies which measured cognitive performance during, immediately after the singular exercise session, and even after a brief delay between the singular exercise session and cognitive measures.



Image from [Forbes](#)

“
Sedentary participants experienced a decrease in their memory performance, but active participants experienced no such decrease”

In an attempt to specify which cognitive functions a singular exercise session can benefit, Basso, Shang, Elman, Karmouta, and Suzuki (2015) had participants partake in just one aerobic exercise session. Participants were tested on a wide range of cognitive tasks, including a Stroop, digit span, and a verbal short-term memory test. Basso and colleagues found an improvement in only tasks thought to involve the pre-frontal cortex. These improvements were even sustained for 2 hours after the singular exercise session was terminated.

Overall, research findings seem to support the anecdotal evidence that exercise helps us to “think straight”. Even just an occasional workout seems to bring about small benefits in cognitive function. So as we approach exam season, perhaps we should incorporate some physical activity into our revision timetable, even if it's just a sophisticated way to procrastinate!

WIN-AT-ALL-COSTS MENTALITY AND UNSPORTSMANSHIP

By Jia Xuan Neo

Competition is a universal concept which everyone gets involved in during their lifetimes. Competition can range in various forms including academics, job hunting and sports. Sports in particular as a form of competition is given a tremendous spotlight in today's modern era. Most would have heard of the Olympics, Commonwealth games and the Asian games. These sporting competitions are overwhelmingly popular and they transcend cultures, race and religion. With popularity comes money and fame and, as a consequence, the over emphasis on winning. Given the pressure on athletes to perform under this spotlight, some stoop to unsportsmanlike behaviour.

What drives unsportsmanlike behaviour and a desire to win at all costs?

Firstly, athletes are under pressure from external forces. External forces like their coaches, financial benefits, and media coverage overemphasise the importance of winning. For example, in Nigeria, coaches are terminated after they fail to win or qualify their National sports teams for major events. Coach Sampson was dismissed as head coach of the male National football team "Super Eagles" after failing to qualify for the 2012 Nation's Cup. (Christian Elendu, Ibitamuno Dennis, & Ifeanyichukwu Christian Elendu, 2017). Winning or losing determines a player's or a coaches' subsequent financial value. Furthermore, media coverage tends to announce winners and losers rather than delving into an athletes' skill.



This mentality can affect a person's attitude towards sportsmanship. According to Duda, Olson, & Templin (1991), if an athlete's attitude towards sports is to win rather than develop one's skill, aggression and unsportsmanlike behaviour can arise. Duda and colleagues used a Task and Ego Orientation in Sports (TEOS) questionnaire to measure the athletes' attitude towards sports. They were asked questions regarding approval of unsportsmanlike behaviour and their subjective rating of the legitimacy of intentionally injurious behaviour. Results showed that people with a win-at-all-cost mentality approved unsportsmanlike behaviour and showed more aggressive tendencies like verbal insults, hitting, and fouls.

Not only does a win-at-all-cost mentality increase an athlete's aggression and unsportsmanlike behaviour, but this fear of losing also gives rise to anxiety. According to Papavessis (1996) there three main dimensions of competitive anxiety: cognitive anxiety, somatic anxiety, and self-confidence. Cognitive anxiety refers to a person's mentality. Athletes can have irrational fears, anticipate the worse outcomes, and have obsessive thoughts regarding their performance. Whereas somatic anxiety involves the heightened bodily symptoms of anxiety, such as increased heart rate, perspiration, and breathlessness. Self-confidence is the belief the athletes have in themselves and their abilities.

This win-at-all-costs mentality involving performance enhancers also has a physical cost. It can bring about detrimental health issues like eating disorders, dehydration, undernourishment, and death. (Nkiru & Ann, 2020)

From the current studies mentioned, it is clear that athletes in the modern age are under tremendous stress and pressure, driving them to extreme lengths in order to win. The current emphasis on winners and losers doesn't do them any favours. Perhaps media coverage of an athlete's career can put more emphasis on their skills and their contributions to sports rather than focusing on their track records. This may help the fans and spectators to appreciate the sport in a new light which over time will hopefully put less pressure on the athletes and help them overcome the win-at-all-costs mentality in sports.



Image from [Bloody Elbow](#)

“ Not only does a win at all cost mentality increase an athlete's aggression and unsportsmanlike behaviour, but this fear of losing also gives rise to anxiety. ”



Interview Exclusive

WITH ASPIRING SPORTS PSYCHOLOGIST,
LIAM BURNELL

ISSUE 15



Image from [AP News](#)

ACADEMIC AND CAREER BACKGROUND

How Liam found his place in sports psychology.



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TOP TIPS

Liam's top tips for any aspiring sports psychologists.

INTERVIEW EXCLUSIVE

“A CAREER IN PSYCHOLOGY CAN FEEL LIKE A LONG AND LONELY PATHWAY AT TIMES.”

Lucy Stafford interviews aspiring sports psychologist Liam Burnell.

Firstly, it would be great if our readers could get to know you a little bit more.

I started out at the University of York, graduating with an undergraduate degree in psychology in 2017. I was quite involved with the department throughout my undergraduate degree- I said yes to almost anything the department was offering. I also got really involved in the sports clubs at York and ended up doing my dissertation on a topic in sports psychology. I'd always had an interest in sports psychology, but I think it was a career's talk from Joanne Butt that made me realise it was the career I wanted. She really emphasised the importance of getting involved in research projects, sports clubs, and coaching if we were thinking of pursuing a career in sports psychology. These were all things that I was already doing (and enjoying!), so this advice really emphasised to me that I was well suited to a career in sports psychology.

After my undergraduate, I completed a Master's in Sports Psychology at John Moores University in Liverpool. The reason for choosing John Moores came from having been to a talk by Mark Nesti whilst at the University of York. He talked about sports psychology in relation to philosophy and spirituality. Hearing someone talk about sports psychology from that kind of angle really highlighted how dynamic sports psychology was and having the opportunity to work with Mark was one of the main reasons I chose to complete my Master's degree at John Moores. Like I had in my undergraduate degree, I got really involved with the department and the sports clubs. During my Master's I also took on a programme leader role for a



Image from [Forbes](#)



Image from the [Irish Times](#)

youth programme for 16-18 year olds, and completed a placement with a rowing club. I also built up my research experience, conducting research with a professional cricket club for my Master's project.

After completing my Master's degree, I took on a role in the mental health sector. I really enjoyed the role and worked in the mental health sector for about 8 or 9 months. A position with mindflick, the company I currently work at, then came up. They offered the opportunity of a PhD alongside a working role, and so I applied. I'm currently exploring the concept of adaptability in relation to personality, and how adaptability contributes to performance and mental wellbeing in sports and business. Alongside my research, I work with a number of sports teams and athletes to help them perform in competitions. I really enjoy the variation this gives me, as it makes every day very different!

You touched on your interest in sports psychology during your undergraduate degree in the previous answer. Was the sports side of a psychology career always something you knew that you wanted to pursue?

I think I always knew I wanted to have a career related to sports. But alongside this realisation, my interest in psychology really grew during my A Levels. I was particularly interested in the people-focused nature of

psychology. So, like most, I started off with my eye on Clinical Psychology. Whilst I saw the real value in working with clinical populations, I also realised that a career in sports psychology would align with my interest in sports and helping people reach their true potential. I grew up playing a lot of sport, and so when I realised I wasn't going to quite make it at the top level, the option to combine working in the sports industry with psychology became the next best thing for me.

Can you pinpoint something or someone who inspired you to pursue a career in sports psychology?

“ The option to combine working in the sports industry with psychology became the next best thing for me. ”

I think for me, I was inspired to pursue a career in sports psychology because it combined two of my interests; my love for sport and psychology. I think this came from a number of teachers/mentors that really ignited my interest in these subjects. I had a P.E teacher at school who made me believe in myself and to follow my dreams, even if some people didn't necessarily believe it was the right thing to be doing!



Having this initial push, I then think working with Mark during my Master's degree really gave me the confidence to pursue a career as a psychologist, even though it may not be as much of a straight line as coming out of university and getting on to a graduate scheme like my friends had done. He really gave me that confidence, even though a career in psychology can feel like a long and lonely pathway at times.

It's such a competitive track that it can feel like you're up against just about everyone, so sometimes you just need someone to tell you that you're good enough and you're where you are meant to be. Mark was that person. A psychology career can feel especially far away when you're hearing about friends moving up the career ladder when you're still getting the qualifications that would enable you to do just that. But I'm on track to have a career in something I'm genuinely interested and passionate about, so I've made peace with the fact that it might just take me a little longer to get there. I also think that working at mindflick whilst doing my PhD has made this path a little less lonely. I work with some of the best sport psychologists in the country now, as well as Andrew Strauss, who was the captain of the England Cricket team about 5 years ago. So getting the opportunity to work with such great people is always pretty inspiring and makes me think I did the right thing...

You're listed on mindflick's website as a researcher, and you've mentioned a little bit about it in a previous answer. It would be great if you could tell the readers a little bit more about your research interests.

My PhD is focused on psychological adaptability in performance settings. I'm particularly interested in

how an individual's adaptability could be developed to improve their performance and maintain their psychological well-being in high pressure environments. Although there's a lot of research investigating the benefits of being psychologically adaptable, there's not a lot out there about how it can be developed. Psychological adaptability has also been described in many different ways. For example, it's been described in relation to communication, leadership, and culture. So what I'm trying to do is figure out the core components of adaptability so I can create an intervention

“Whenever I'm doing a piece of research I always try and keep in mind what the applied consequences of it could be.”

aimed at developing it across different contexts. I'm hoping that this will allow interventions to be employed in universities, schools, and workplaces- not just in a sports setting.

Is there a favourite piece of research that you've been part of?

My favourite piece of research is probably the one that has had the most impact. In my case, that would be the research I did for my Master's dissertation with a professional cricket team. This piece of research was looking at understanding why people played for the club

and developing a set of values based on this. This involved interviewing a number of players and then presenting my findings back to the coaches and staff at the club. This had a real-world impact on what was being done at the club, and was the first time that my research had applied consequences- something that you don't really get during an undergraduate degree. I found this really rewarding, and so whenever I'm doing a piece of research I always try and keep in mind what the applied consequences of it could be. I think this is in the back of almost every psychologist's mind when carrying out a piece of research.

Some of the students reading this might be thinking of pursuing a career in sports psychology themselves. It would be great if you could give them some of your top tips.

There's so many routes you can take if you want a career in sports psychology, but it depends on your interests. If you enjoy the research aspect of sports psychology, then you might be suited to the PhD route. If you're more interested in the applied side, which is something I've gravitated to, then it's worth looking at some of the other routes out there like Professional Doctorates and the BPS Qualification in Sport and Exercise Psychology.

Whatever you're looking to do, contacts are super important! They can offer you their own perspective and journey and help you find the right route for you. This is important when seriously considering any career in psychology, so definitely try getting in touch with people whose work/research interests you.

I'd also say that it's important to enjoy and appreciate the journey. A career in psychology can be a long and bumpy pathway. It's important to have a goal in mind, but you can't get lost in how long



it's going to take to get there. Staying curious and enjoying the things that you learn along the way helps the journey feel a little more smooth. Pursuing a role that aligns with your values and passions can help you enjoy the journey; it makes the hard work feel like it's worth something.

If you're considering any type of career in psychology, then you need to pick a role that honestly works for you. A role might look great on paper, but if it's not leaving you fulfilled and excited then it's not going to work for you. That's why it's important to get as much experience as possible in as many different roles as possible. Say yes to any opportunity that you're offered, even if it means you're learning on the job.

It's also important that you're proactive when searching for a role. Don't be afraid to ask your contacts about any placements

or internships they could offer. Sift through the jargon on a job advert and you'll actually find you're suited to more roles than you initially thought.

Understanding that there are many stages involved in becoming a sports psychologist is essential. You can't just do an undergraduate degree. You need experience, you need a Master's, and then, in most cases, a PhD. This is a long process. Even when you're working as a fully qualified psychologist, you're always learning and developing. The reality is that it's hard work when you're working towards those qualifications and it's hard work when you're eventually qualified.

Lastly, I'd say it's important to build a support network. It's helpful to have a network of people who are going through the same thing as you, even if they're in a different discipline. I have a network of people who

“ Pursuing a role that aligns with your values and passions can help you enjoy the journey; it makes the hard work feel like it's worth something.

”

are going through a clinical psychology doctorate at the moment, and a network of people at the same stage in their sports psychology career as me. It helps make the journey feel a lot less lonely.

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