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Psychology Postgraduate Affairs Group

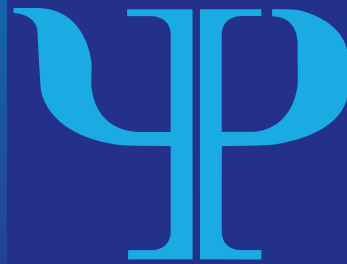
**Quarterly**

Issue 105 December 2017

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**Women on the front line: The role of metacognition  
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'The selection of papers suits my eclectic mind perfectly, and the quality and clarity  
of the synopses is uniformly excellent.'

Professor Guy Claxton, University of Bristol

# Editor's Column

Marta Isibor

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**I**T IS MY PLEASURE to welcome you to the 105th *PsyPAG Quarterly*! The end of the year is upon us and the little elves (aka *Quarterly* Editorial Team) have been working hard to ensure you are provided with a good dosage of reading! In this issue you will find a great range of discussion papers, research in brief, hints and tips, and conference and book reviews. I hope you enjoy it!

As many of us will soon immerse ourselves in various holiday activities, it is a good time to stop and reflect on circumstances surrounding those who might be less fortunate. The issue begins with a featured article by Becky Scott discussing the important issue heatedly debated in the present political climate: the impact of austerity on welfare reform and mental health services. The subject is timely as it follows increased involvement of the Society in political matters, highlighting the evident adverse effects of current policies on wellbeing, and advocating greater appreciation of the role of socio-economical factors. Becky's inspiring article touches on some of the pivotal issues in the debate and can be seen as part of the movement towards psychologists becoming more active in voicing their concerns pertaining to the political realm.

The next discussion paper, by Danielle Hett, again takes us away from celebration, this time towards meaningful reflections on women on the front line. Danielle looks at the potential of use of metacognition for prevention of post-traumatic stress disorder. The article will be highly relevant to anyone with interest in areas, such as – but not limited to – mental health, trauma, metacognition, psychotherapy, psychology of women, and the military. Another important issue is addressed by Alan Price, who tells us how psychologists can help investigate foetal alcohol spectrum disorder, an area argued to be in substantial need of psychological input and a major over-

looked public health concern. The 'Discussion Papers' section ends with a piece by Sarah Gardener considering social networks in psychology research, along with implications for data collection and analysis.

The 'Research in Brief' articles lighten the mood. What would you say is one of the key features of this special time of the year that we can see in other people? No, not Christmas jumpers – it's kindness! And kindness is indeed the subject of the first report by Jessica Cotney, who investigated adolescent perspectives on the links between kindness and wellbeing. Jessica explored youth perceptions through focus groups and seems to have come to an optimistic conclusion... but I will leave it with you to find out what it is! The second 'Research in Brief' article, by Adam McNeill, addresses an issue yet again relevant to many during this period, as the title will explain: 'Inhibitory control is predicted by age of alcohol use onset but not by cumulative alcohol and binge drinking exposure during adolescence...' I think we can assume there are no adolescents among our readership, but the subject of alcohol consumption and impulse control come strongly to the fore here! On a more serious note, Adam's research investigates a truly important topic, given the prevailing 'drinking culture' and the fact that adolescence is known to be a dynamic neurodevelopmental period. The study offers insights into links between specific cognitive features and problem-drinking in young people, and ends with a set of thoughtful conclusions which close the section.

To sustain the festive spirit, this issue of *Quarterly* will be particularly generous, offering you four 'Hints and Tips' articles. Firstly, Alice Rees shares her advice on designing conference poster presentations. The article presents concise, practical tips on creating an effective

and capturing poster for all your conference ventures. As postgraduates we are expected to engage in active dissemination of our research, with poster presentations being one of the most popular methods. While for some this might be their daily bread and butter by now, many newer students are only beginning to grapple with it. Nevertheless, readers in all phases of postgraduate study may find the article useful. When considering a poster presentation, please remember our annual PsyPAG conference, which offers a perfect and highly supportive arena for displaying your postgraduate work. The conference website is now live, so please visit [www.psyag2018.com](http://www.psyag2018.com) for details.

Another actively encouraged academic pursuit is public engagement, a practice which gradually becomes an essential element of research. Emma Nielsen reflects on her experiences and offers guidance for developing activities designed to promote public involvement – an incredibly useful piece! No less useful is the next article, which explores the use of a crowdsourcing platform to collect research data. We are all probably too familiar with challenges of participant recruitment. Gail McMillan introduces a potential solution while sharing her experience of conducting PhD research via an online recruitment platform, and offers tips on how to best go about it. Sounds promising, don't you think? Much of our content so far focuses on work-related matters. But what about self-care? This seems to be something people in academia struggle with; long nights with a dim light, surrounded by empty coffee cups, books, papers and stationery... Sounds familiar?

In the final article in the section Kirsten Russell considers whether prioritising sleep is the first step in academic self-care. As a result, she proposes a number of clever hacks for getting the all important good night's sleep during postgraduate study. Never underestimate the power of sleep – something that our discipline should understand very well. And yet... Are you all of a sudden feeling it is time to do some catching up on that missing snooze? Stay with us for the remaining conference and book reviews!

We start with a review from Anna McLaughlin who attended the IEPA 10th International Conference on Early Intervention in Mental Health. The event took place in Milan, Italy, and the theme was 'Looking Back, Moving Forward'. Anna shares her reflections as a delegate, paying particular attention to findings regarding role of stress in the pathophysiology of psychosis.

Secondly, Donna Littlewood reports from the American Association of Suicidology 50th Annual Conference, where she presented her research to like-minded people with an interest in suicide prevention from across the world. Finally, we close with a nod to health – an occupant of the top seat among New Year's resolutions. Liam Knox read *Quit Smoking: Sheldon Mindfulness* by Dr Cheryl Rezek, and shares his enlightening thoughts on the book, which can hopefully assist in deciding if it is for you. Thank you, Liam!

In fact, thank you to all our amazing contributors. It is you who make *PsyPAG Quarterly* what it is – a hospitable and informative platform for sharing ideas and knowledge for psychology postgraduates by psychology postgraduates. If you have not written for us yet, please give it a thought and get in touch – we would love to hear from you! Also, thank you to the *Quarterly* editors for welcoming me to the team, and for all their hard work and support. I hope everyone has a great holiday and remains reinvigorated until our March issue! Most of all, I hope you enjoy reading this issue!

**Marta Isibor**

*On behalf of the PsyPAG Quarterly Editorial Team*

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# Chair's Column

Holly Walton

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**H**ELLO and welcome to the December issue of *PsyPAG Quarterly*. I hope that everyone has had a brilliant start to the new academic year!

Preparation is well under way for the 33rd PsyPAG Annual Conference at the University of Huddersfield on Wednesday 24 July to Friday 26 July 2018. We hope to welcome over 150 delegates, including psychology postgraduates currently studying for MSc degrees and PhDs, and trainee psychologists. The conference provides a brilliant opportunity for you to showcase your work in a supportive environment, network with other postgraduates, and keep up-to-date with up and coming research in psychology. If this doesn't convince you to attend, there will be also be some fascinating key note speakers, a broad range of workshops for you to learn new skills and many social events. We hope to see many of you at the University of Huddersfield in July 2018!

Please consider applying for our range of funding opportunities. We offer funding for hosting workshops ([www.psypag.co.uk/workshops](http://www.psypag.co.uk/workshops)) and bursaries ([www.psypag.co.uk/bursaries-2](http://www.psypag.co.uk/bursaries-2)). We offer bursaries for attending conferences (international and domestic), workshops and training events, study visits and travel bursaries. So hopefully there is something for all! The next deadline for workshops and bursary applications is in February.

PsyPAG funded workshops vary in topic and are organised by psychology postgradu-

ates who have applied for workshop funding and are free to attend for all psychology postgraduates.

Applications for our annual PsyPAG awards will open soon! We currently offer four awards: The Master's Award, The Rising Researcher Award, the DARTP/PsyPAG Teaching Award and the PsyPAG Undergraduate Award. Please contact Athina Tripli (Awards Chair) at [awards@psypag.co.uk](mailto:awards@psypag.co.uk) or see our website for more information ([www.psypag.co.uk/awards](http://www.psypag.co.uk/awards)). It's never too early to begin thinking about your application.

If you are interested in joining the PsyPAG committee, please look on our website or at the back of this issue for vacancies. If you would like any more information or would like to apply, please contact Ryc Aquino (Vice Chair) at [vicechair@psypag.co.uk](mailto:vicechair@psypag.co.uk).

I would like to thank the Society's Research Board for their continued support and all of our PsyPAG committee members for their dedication and hard work in supporting UK psychology postgraduates.

Please get in contact if you have any questions, we would love to hear from you! We can be contacted on social media (Twitter/Facebook) or via e-mail.

Wishing you all a relaxing and enjoyable break and a Happy New Year!

**Holly Walton**

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# The impact of austerity on welfare reform and mental health services

Becky Louise Scott

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*The coalition government of 2010–2015 was formed amidst the worrying context of the ‘Great Recession’ of 2008. Consequently, many of the austerity measures which were introduced were very much focused and rationalised by a reduction of public spending. Welfare provision was particularly targeted and problematised. This article draws together previous research and some contemporary ideas in regard to how people with disabilities navigate and continue to be affected by welfare reform, with a specific focus on the impact of austerity on those experiencing mental health and distress.*

In his speech at a mental health conference in 2015, Deputy Prime Minister Nick Clegg unabashedly referred to the lacking equality in treatment between mental health and physical health, putting much of the onus on historical institutional biases against mental health. Clegg further stated a commitment from the coalition government to work towards this parity of esteem through the provision of additional funding:

*If any of these things happened to someone with a serious physical health condition in our country, there would quite rightly be outrage. It would be on the front page of every national newspaper and dominate Prime Minister’s Questions every week. People would be out on the streets calling for reform. But this is exactly the kind of second class treatment that people with mental health issues have had to endure for decades. (Liberal Democrats, 2015)*

The prospect of providing a space through which public discourse on the treatment of people experiencing mental health difficulties, coupled with additional funding for mental health services aspired to fulfil the commitments which were outlined by the UK government in the No Health Without Mental Health strategy (HM Government,

2011). The No Health Without Mental Health strategy sought to set standards for NHS waiting times regarding referrals, access to therapy and treatment for those experiencing mental distress, along with an additional £120 million of funding to be allocated to mental health services over two years.

Although additional funding and improved access to mental health services is undoubtedly always welcomed, the demand for crisis services is far outstripping supply; over 1700 acute beds were closed in the period 2011–2013 (McNicoll, 2013). Many mental health services across the UK are simply overstretched, under-resourced and understaffed to function effectively. Similar instances of underfunding, fundamentally unacceptable service provision and difficulty in accessing effective support have been widespread throughout adolescent and child mental health services; some services will only accept referrals when the young person has attempted suicide at least once (House of Commons Health Committee, 2014).

The idyllic image of the future of mental health services, however, has been masked and moulded by the period of austerity which followed the coalition government into power. Amidst the political doublespeak, and despite frequently repeated promises and disorien-

tating claims regarding the 'real terms' boost in mental health funding, the reality on the ground suggests a vastly different story.

Whilst NHS funding was ring-fenced during the beginning of the 'Age of Austerity', the increased demand for services, combined with reductions in 'real terms' funding, suggests a somewhat different reality to that which was promised. The historical underfunding in mental health services continues in austere times, with no sign of stalling any time soon.

The link between financial inequality and mental illness is well established in the field of mental health. Some 45 per cent of people who are in debt have mental health problems, compared to 14 per cent of those who are not in debt (Fitch et al., 2011). However, this link is also bidirectional; people with mental health difficulties are at an elevated risk of unemployment, economic hardship, debt, social deprivation, isolation and substance misuse (Knapp, 2012).

Likely of greater importance is research which suggests that the introduction of a stricter welfare system has produced very little in the way of the financial surplus – which was used to rationalise many cuts. The UK government's own assessment of the 'Mandatory Work Programme', which required unemployed jobseekers to participate in compulsory work to continue receipt of their Jobseeker's Allowance, found that the programme had no impact on employment (Department for Work and Pensions, 2012). Similarly, whilst reform has been implemented to tackle the suggestion of a bloated welfare system, there is no empirical evidence to demonstrate that cash programmes, such as welfare provision, discourage the take-up of employment (Banerjee et al., 2015).

Whilst the UK government has made great efforts to deny the association between psychological distress and austerity, there is a suggested link between unemployment, people who seek aid from foodbanks and welfare sanctions, evidenced by the growing number of employment advisers and use of psychological therapy in locations such as foodbanks, jobcentres, schools and libraries (Disabled People Against

Cuts, 2016). There is a wealth of evidence which suggests that welfare sanctions do not act to incentivise claimants into employment, (Joseph Rowntree Foundation, 2010); however, work programme providers are sanctioning twice as many people as they are signposting into employment (Etherington & Daguerre, 2015).

Food deprivation via sanctioning can often result in catastrophic consequences, such as destitution and homelessness. In the worst case scenario, punitive sanctioning regimes have resulted in death and cases of suicide. In short, the normalisation of food insecurity through sanctioning or financial hardship plays no role in fostering a sense of citizenship or incentivising participation as a market consumer. If basic needs cannot be met, the preoccupation with food may diminish the individual's ability to fulfil their psychosocial obligations or wishes (Maslow, 1943), such as seeking employment:

*It is quite true that man lives by bread alone – when there is no bread' (Maslow, 1943, p.375)*

Again, this certainly may be a notion that is shared in cases where people are unable to access mental health services whilst also navigating a heavily stigmatised welfare system which has been continuously subject to systematic cuts. A recent example of this is the move for a £29-a-week cut to the work-related activity group element of Employment and Support Allowance, which has currently been blocked by parliament. A move to completely scrap the cut was almost unanimously rejected. Whilst pausing the implementation of a new welfare cut appears to suggest that parliament is at the very least attempting to apply reform carefully, there is a clear mandate for the continuation of welfare reform.

When exploring this area in my PhD research, people with mental health difficulties who are faced with navigating the systems associated with welfare provision often describe feelings of worthlessness and demoralisation; there is a very real sense that claimants feel they have been ascribed and defined by ideas of lax morality and being a burden on the taxpayer and society. It is

not difficult therefore to envisage how these systems can elicit further instances of mental distress as well as feelings of shame.

Employment and Support Allowance, the main out-of-work sickness benefit in the UK, has been subject to multiple cuts. To access the benefit, the individual is required to complete an extensive form. Many of the questions already present a significant barrier for many people with disabilities. The form is over fifty pages long, requiring the completion of details such as hospitalisation, medication taken, living arrangements and savings, amongst many other details. Once this has been completed, the claimant is required to attend a medical assessment. This assessment, known as the Work Capability Assessment, has been the subject of much controversy and outrage. Anecdotal accounts of attendance at a work capability assessment have described those who are attending based on ill mental health, being asked to squat or lift an arm, as if to put an object in their jacket pocket. Inevitably, the assessment has been frequently criticised on the basis that it is not fit for purpose, failing to account for the intangibility and visibility of mental health, which is continuously subject to flux.

Provided that the claimant is awarded with a score that satisfies the requirement for eligibility for Employment and Support Allowance but is expected to take up work in the future, they will be put in to the 'work-related activity group' and will be entitled to a weekly sum of up to £160.15. The recent benefit cap means that a single person, with no dependents, living outside of London is eligible for up to £257.69 a week in benefit provision. The Joseph Roundtree Foundation (2015) estimates £17,000 annually for a basic, but 'socially acceptable' standard of living for a single person living in the UK. When compared to the maximum amount received by a person who is unable to work due to illness or disability, this represents a shortfall of at least £4730 annually, or around £100 weekly.

Interestingly, the work-related activity component of Employment and Support Allowance is not exempt from the benefit cap.

Although those who access this support have been deemed unfit to take part in work, they are still required to take part in some form of 'work' to avoid being sanctioned. This bears repeating: A person who has been declared *unfit to work* due to illness or disability is required to *work* for their benefits. It is of little surprise then that when exploring the emotional impact of the benefits system within my PhD work, fear of destitution and worthlessness, suicide ideation and feelings of extreme distress are commonly noted by those accessing this system.

Many of the reforms implemented as austerity measures have increased poverty whilst seizing the 'safety net' (Mattheys, 2015) from beneath the feet of 'vulnerable' people whose interests the government proposes to be acting in, such as with the targeting of ill health and disability related benefits. Welfare such as child tax and housing benefits have been subject to prolonged and repeated attacks and claimants have been further forced to navigate assumptions of scepticism regarding the legitimacy of their claims whilst also navigating a far stricter sanctioning system which punishes a lack of compliance with the prospect of a complete removal of benefit provision, leaving little option other than destitution, homelessness and increased access to foodbanks.

Arguably, the path of austerity that the UK public was led down by the coalition government has only served to exacerbate the already damaging impact of stringent mental health service cuts. The future of mental health services and the experience of their users hangs in the balance during this contemporary period of austerity. Their experience of social deprivation, unemployment and debt is only exacerbated by a government which targets virtually all its welfare reforms at the 21 per cent of the UK population who live below the poverty line (Duffy, 2013). This makes it difficult to comprehend how a system that puts the most vulnerable in society at the heart of welfare provision, allows this group to simultaneously be disproportionately affected by reforms.

Whilst this statement may appear somewhat seditious, a groundbreaking report from the United Nations Convention on the Rights



of Persons with Disabilities (United Nations, 2016) stated that the UK government has implemented many reforms with little acknowledgment or regard for the devastating impact they would have, whilst contributing to many of the taken-for-granted assumptions, unevidenced political claims and justification narratives in regard to welfare provision, which continue to circulate public, political and media domains, consequently legitimising grave and systematic violations of human rights within the welfare system, to the detriment of over half a million disabled people (United Nations, 2016).

Whilst some may regard austerity as a phenomenal example of social history, the abandonment of a budget surplus goal for 2020 suggests that these austere times may not quite be over yet. Whilst shifts in

the benefit system continue to respond to neoliberal concerns, it is likely that people with mental health difficulties will continue to navigate the disorientating no man's land that is the welfare system. It is therefore our responsibility as psychologists to continue critically engaging with research, to work in an interdisciplinary manner, and to challenge structural inequality in contemporary society in an effort to strive towards social justice.

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# The role of metacognition in the primary prevention of post-traumatic stress disorder (PTSD)

Danielle Hett

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*Military servicemen and women face a multitude of psychological stressors when deployed (e.g. witnessing the death or serious injury of military personnel or civilians). Previous research suggests that women are more vulnerable to developing PTSD compared to their male counterparts; however, little is known about the effects of combat trauma among military servicewomen. This is an important issue, given that women are now allowed to occupy front line roles. This article firstly highlights the lack of research surrounding the mental health of servicewomen exposed to combat trauma. Secondly, it discusses the need to develop more preventative interventions for PTSD which can aid psychological resilience prior to trauma exposure (e.g. primary prevention). Lastly, the article addresses the role of metacognition as a novel approach to the primary prevention of PTSD and explores ways in which this intervention could be delivered to military personnel.*

**M**ILITARY SERVICES worldwide are faced with a broadening range of conflicts, and consequently they have had to learn to change, adapt and remain resilient in the face of adversity. One significant change within military services is the increased presence of serving women. More women than ever before were deployed to the recent conflicts in Iraq and Afghanistan, with deployment figures showing a 6.1 per cent and 7.5 per cent increase respectively (Ministry of Defence, 2014). Until recently, women have only been allowed to serve in combat support roles, never occupying close combat positions (e.g. serving on the front line). Despite the ban on combat roles, women have long been serving and dying on the front line. In the wars in Iraq and Afghanistan it is estimated that more than 1000 servicewomen were wounded, and at least 160 died from combat and non-combat related injuries (Kamarck, 2016). However, worries remain as to whether women are both physically

and psychologically equipped for the rigours of combat. Research shows that deployment to combat zones and exposure to combat trauma are associated with an increased risk for a range of psychological disorders including PTSD, depression and alcohol use disorders (e.g. Hoge et al., 2004). However, these studies are based on predominantly male samples, given that combat roles were only available to men. Interestingly, it appears that women in the general population are twice as likely to develop psychological disorders such as PTSD compared to their male counterparts (Olf et al., 2007). However, these figures may reflect the reluctance of men to disclose such mental health disorders due to the mental health stigma associated (e.g. Sharp et al., 2014) and cultural masculine norms such as appearing strong, unemotional and independent (Lindinger-Sternart, 2015). PTSD is a serious debilitating psychiatric disorder that can develop following exposure to a highly distressing event (e.g. combat, sexual

assault, road traffic accidents). Key symptoms include re-experiencing (e.g. intrusive memories), avoidance (e.g. avoiding any reminders of the event), high levels of arousal (e.g. constantly feeling on edge), and negative cognitions and mood (e.g. feeling emotionally numb). It is unclear how women serving in close combat roles will cope with the increased trauma exposure that is associated with combat (i.e. seeing dead bodies, killing in service, being fired at). One recent study showed that female service members deployed to Iraq and Afghanistan (in combat support roles) had experienced a range of combat trauma, including rocket or mortar fire, seeing dead bodies, caring for the wounded and receiving small arms fire (Afari et al., 2015). Additionally, this study reported that although males experienced higher levels of combat exposure, the rates of PTSD were similar among men and women, suggesting that women may be more susceptible to the effects of combat trauma. It is possible that women serving in close combat roles may be more vulnerable to developing PTSD compared to their male counterparts, or that women are more willing to talk about their trauma exposure and mental health than men. Nonetheless, armoured with this knowledge, the question is, can anything more be done to help mitigate against the effects of trauma exposure in serving personnel? One research avenue, primary prevention, would suggest so.

Preventative interventions can be classified into three key areas: primary, secondary and tertiary. Primary prevention refers to interventions which occur before the onset of disease (i.e. PTSD) and seeks to reduce disease incidence. Common examples include health promotion, reducing environmental risk factors and improving an individual's resilience. Secondary prevention occurs after the disease has originated, but before symptoms are evident; in other words, early intervention. Tertiary prevention refers to the prevention – or further decline – after the disease has already manifested and has commonalities with treatment. To

date, the majority of preventative interventions for PTSD within the military are either secondary or tertiary (e.g. psycho-education, exposure therapy, medication), with little known about the effectiveness of primary preventions. Arguably, primary preventative approaches could serve to help reduce mental health stigma among military personnel, as it is training that everyone would get – not just those experiencing symptoms. It may also help close the divide between mental and physical health, by placing equal importance on training both prior to deployment. Secondary preventative approaches within the military have focused primarily on psychological debriefing strategies such as psychological debriefing (PD; Dyregrov, 1997) and more recently, trauma risk management (TRiM; Jones et al., 2003). PD refers to a brief – typically one session – intervention that is delivered to groups of trauma exposed individuals in the immediate aftermath of trauma. PD aims to reduce the emotional distress associated with the trauma and to prevent the development of PTSD. Despite being widely used for several years, single session psychological debriefing is found to be ineffective against preventing PTSD, with some studies demonstrating a significant increase in PTSD rates among those who received the PD intervention compared to a no treatment group (e.g. Bisson et al., 1997). Consequently, organisations banned the use of debriefing with immediate effect, including UK military services. The ban on PD techniques sparked the development of TRiM, which is a peer delivered support system that aims to provide support to all military personnel who require it. It does not claim to prevent PTSD, nor treat it, but instead it aims to encourage active help-seeking and reduce stigma towards discussions on mental health within the military.

One emerging area of research that may contribute towards the prevention of PTSD and harness psychological resilience among military servicemen and women focuses on the role of metacognition. Metacognition refers to one's awareness and ability to recog-

nise one's own thoughts – in other words, it is reflecting on one's own thinking processes. Everyday examples include the awareness that you have forgotten the name of the person you have just met, or losing concentration when watching a film. This metacognitive awareness allows you to take action; for example, rehearsing the name of the person you just met or refocusing your attention when your mind wanders when watching the film. One form of metacognition is metamemory; this refers to the processes whereby people are able to examine the content of their memories and make judgements about their own memory; for example, what it means to have gaps in their memory. The metacognitive model of PTSD (Wells & Sembi, 2004) proposes that psychological disorders develop when an individual's style of thinking or coping strengthens and persists the emotional response. More specifically, it proposes that psychological disorders such as PTSD develop because of the cognitive processes, including worry, rumination and threat-focused processing, and not the cognitive content itself. This is particularly crucial for women, as growing evidence shows that women have a greater tendency to ruminate compared to men (Johnson & Whisman, 2013).

In brief, the metacognitive model of PTSD views symptoms such as intrusive memories of the traumatic event, increased arousal and startle responses as normal responses following a traumatic event. According to this model these symptoms are part of an individual's in-built reflexive adaptation process (RAP). For most people, these symptoms tend to subside within a few days as the RAP runs its course. However, for some the RAP process is interrupted by the activation of cognitive attentional syndrome (CAS), which inhibits flexible control over the RAP and inadvertently fuels threat-focused processing, maintaining a sense of danger and anxiety. The CAS is driven by maladaptive metacognitive beliefs such as positive beliefs about worry, rumination and threat monitoring (e.g. 'If

I worry about being shot in the future I'll be more prepared'; 'If I constantly look out for potential sources of danger I will remain safe') and negative metacognitive beliefs about the uncontrollability and danger of thoughts (e.g. 'Worrying will make me go crazy'). Both types of metacognitive beliefs drive a current sense of threat, maintain anxiety and reduce the natural process of the RAP. Consequently, the CAS gives rise to routines of processing that are geared towards detecting potential sources of threat such as worry, rumination, threat monitoring and avoidance. The threat-related processing is not brought under appropriate flexible control; cognition fails to return to a pre-trauma state of processing, and individuals develop PTSD.

The metacognitive model of PTSD differs markedly from other cognitive theories of PTSD (e.g. Ehlers & Clark, 2000) as these models propose that it is disturbances in the trauma memory (e.g. disorganised memory) that are responsible for the emergence of PTSD symptoms. The metacognitive model suggests that most people have incomplete memories, and the crux of the problem is the way in which individuals relate to their thoughts post trauma (i.e. engaging in worry and rumination) that is crucial for recovery. Therefore, targeting the maladaptive metacognitive beliefs which drive the CAS could play an important role in reducing the onset of PTSD. This gives rise to the question of whether women, prior to deployment, can be trained to adopt more adaptive, healthy metacognitive beliefs in an attempt to reduce the psychological effects of trauma exposure.

Research has highlighted the relationship between maladaptive metacognitive beliefs and PTSD symptoms. Bennett and Wells (2010) found that positive (e.g. 'I need to have a complete memory for what happened so that I can learn from the event) and negative (e.g. 'Gaps in my memory are preventing me from getting over it') metamemory beliefs; negative beliefs about the uncontrollability of thoughts (e.g. 'my worrying

could make me go mad'), beliefs about the need to control thought (e.g. 'If I could not control my thoughts, I would not be able to function'), and rumination were all significantly associated with PTSD symptoms. Although this demonstrates that maladaptive metacognitions may increase vulnerability to developing PTSD symptoms once the event has occurred, it does not address whether maladaptive metacognitions maintain PTSD symptoms, nor does it reveal whether pre-existing maladaptive metacognitions predict PTSD symptoms. Takarangi et al. (2016) conducted a study to examine these unanswered questions. This 12-week longitudinal study investigated which, if any, maladaptive metacognitions predicted or maintained PTSD symptoms. The results found that pre-existing metacognitive beliefs concerning the uncontrollability/danger of thoughts (e.g. 'My worrying thoughts persist, no matter how I try to stop them') and negative inferences about intrusions (e.g. 'My life is ruined') at baseline independently predicted PTSD symptoms following a novel traumatic event 12 weeks later. They also revealed that negative metamemory beliefs (e.g. 'Gaps in my memory are preventing me from getting over it') and negative inferences about the meaning of intrusions (e.g. 'My life is ruined') significantly predicted the maintenance of PTSD symptoms. This study demonstrated the significant role maladaptive metacognitions play in predicting and maintaining PTSD symptoms.

Although the research on metacognition and PTSD looks promising, key questions remain. For instance, can training geared to change people's metacognitive beliefs for the better (i.e. adaptive beliefs) help guard against the development of PTSD following a traumatic event? Training could take various forms to suit the needs and demands of the organisation. For example, computerised training, psychoeducational delivered workshops or even psychoeducational resources (i.e. leaflets) to help educate individuals on the metacognitive model and guide them to employ adaptive metacognitive beliefs. This

training may be of added benefit to women, given their greater tendency to engage in repetitive thinking styles such as worry and rumination compared to men (e.g. Johnson & Whisman, 2013). It may also appeal to men who particularly struggle to open up and discuss traumatic experiences and emotions, as it does not require individuals to focus on the content of their thoughts, but more on how they relate to their thoughts. If training can successfully change servicemen and women's metacognitive beliefs, this could help dampen the effects of trauma exposure and reduce the onset of PTSD symptoms.

Women are now allowed to serve in ground close combat roles. Consequently, they are more likely to be exposed to higher levels of combat trauma than ever before. No one can predict how this increased trauma exposure will impact on the mental health of serving women. This issue, combined with men's reluctance to discuss and seek help for psychological disorders, calls out for the development of novel preventative interventions for mental health disorders. One promising avenue of research focuses role of metacognition in the prevention of PTSD. Ultimately, service men and women should be provided with appropriate psychological training, just as they are physical training, prior to deployment. This psychological training should work towards strengthening their psychological resilience to enable them to carry out their duties and maintain their health. Therefore, metacognition offers a novel approach to psychological preventative measures that has the capability to not only impact military organisations, but all first responder populations too.

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# Psychologists can help investigate a major overlooked public health concern

Alan Price

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*Foetal alcohol spectrum disorders (FASD) are a leading preventable cause of learning difficulties (Roozen et al., 2016). Caused by prenatal exposure to alcohol, the range of conditions within FASD are characterised by brain damage, cognitive deficits and a wide range of behavioural and social difficulties. Psychology graduates have a role to play in raising visibility of FASD, delivering evidence-based interventions and contributing to the research literature to generate knowledge about the developmental trajectories of FASD. In one project currently underway, we are investigating the impact of postnatal traumatic experiences on children with FASD – a combination which unfortunately may be widespread.*

**P**RENATAL alcohol exposure is one of the world's leading causes of developmental disorders (Roozen et al., 2016), and one of the few that is entirely preventable. Alcohol is a teratogen, which when consumed during pregnancy can cause a wide range of congenital defects in the skeleton, organs, nervous system and brain of the developing foetus. The type and scale of damage depend on a combination of factors including the blood alcohol content of the expectant mother, the period of pregnancy during which an exposure takes place, the number of exposures, levels of iron and other minerals in the mother's blood, and the genetic makeup of the mother, biological father and foetus (Guerra et al., 2009). Many of the more severe cases, which include miscarriage and stillbirth, are seen where mothers have serious alcohol misuse issues. However, a lack of public awareness, including amongst healthcare professionals, may be contributing to harmful levels of alcohol exposure – harm that may be preventable if clear and consistent advice and support was available.

The range of conditions that result from prenatal alcohol exposure are known by the umbrella term foetal alcohol spectrum

disorder (FASD). FASD is estimated to affect around 2 per cent of the world's population, with higher rates of up to 5 per cent in some western countries where alcohol consumption is commonplace. Some of the highest rates are seen in parts of South Africa, where in some townships binge drinking is a major public health problem, and drinking during pregnancy is socially acceptable. Prevalence rates here can exceed 10 per cent (May et al., 2009; Roozen et al., 2016). Within the spectrum of FASD, a number of different diagnoses are currently in use, including the first to be described and probably best-known, foetal alcohol syndrome (FAS). 'Full' FAS is characterised by a distinctive set of craniofacial abnormalities including a smooth philtrum (the groove between top lip and nose), thin upper vermilion (the top edge of the upper lip), and short palpebral fissures (openings of the eyes) along with restricted growth and central nervous system (CNS) dysfunction. Babies born with visible dysmorphic features tend to be diagnosed earlier, and therefore qualify for invaluable behavioural and educational interventions earlier and more easily than other children on the foetal alcohol spectrum (Streissguth et al., 2004). Other diagnoses are

sometimes considered to be less severe, but central nervous system (CNS) function can be equally impaired across the spectrum. A diagnosis of partial foetal alcohol syndrome (pFAS) may be given where some but not all of the dysmorphic features of FAS are present, along with CNS dysfunction, restricted growth and confirmed alcohol exposure (alcohol exposure is necessary for all diagnoses except FAS). Alcohol related neurodevelopmental disorder (ARND) may be diagnosed where CNS dysfunction is present in the absence of dysmorphic features, and alcohol related birth defects (ARBD) is used to describe a range of physical defects in the organs or skeleton.

FASD is a major public health concern which lacks attention in the UK and around the world, but of particular interest to psychologists are the brain damage and wide range of cognitive and behavioural deficits caused by prenatal alcohol exposure. During early investigations in the 1970s and 1980s, autopsies revealed a fairly consistent neuroanatomical pathology of microcephaly, complete or partial absence of the corpus callosum, and abnormalities in the brainstem, cerebellum, optic nerve, pituitary gland and limbic system (Guerra et al., 2009). The development of brain imaging technologies such as MRI has since led to the identification of more subtle defects in living patients. Reduced overall brain and cerebellum volume are typical, and in terms of the cortex specifically, it is the frontal and parietal lobes that appear to be impacted most by prenatal exposure to alcohol. Abnormal development of the corpus callosum and frontal lobes are implicated in neuropsychological deficits such as speech and language, executive functioning and attention (Guerra et al., 2009), all of which are often observed in FASD.

One of the more common deficits in individuals with FASD is diminished intellectual capacity. Those who meet the diagnostic criteria for FAS or who have more visible dysmorphic features tend to have an IQ in the low borderline range, although learning disability (IQ < 70) is not widespread. Those

without visible features tend to have a slightly higher IQ, but still below average (Mattson et al., 2011). Executive dysfunction is similarly prevalent, and this often includes poor planning abilities and a lack of behavioural inhibition. These deficits may be largely to blame for poor adaptive functioning and many behavioural difficulties, including stealing and aggression in children, and delinquency or risky sexual behaviours in adolescents and adults (Mattson et al., 2011).

Memory and learning can also be impacted. While studies into nonverbal memory have yielded mixed results, verbal memory is often deficient, and this may be linked to an overall language and communication issue in FASD (Mattson et al., 2011). Studies have revealed issues with receptive and expressive language, comprehension and grammar, as well as more physiological issues such as lisping and other speech production difficulties (Mattson et al., 2011). Cognitive deficits such as those in language and executive functioning may contribute to difficulties in social communication, which can ultimately prevent children with FASD from developing positive peer relationships (Coggins et al., 2007; Mattson et al., 2011). Social isolation can lead to frustration and an increased risk of behavioural problems in children, trouble with the law in adolescents (Fast & Conry, 2009) and suicide attempts in adults (Huggins et al., 2008), all of which are seen in FASD. Meanwhile, difficulties with attention, memory and language, along with behavioural issues can disrupt an educational career which may already be handicapped by low intellectual functioning.

The life changing and potentially life endangering cognitive and behavioural difficulties associated with FASD may be somewhat alleviated by early diagnosis (e.g. Streissguth et al., 2004), or by pharmacological, cognitive or behavioural interventions. Many individuals with FASD meet the diagnostic criteria for attention deficit hyperactivity disorder, and there is emerging evidence that stimulant medication can reduce hyperactivity and impulsivity in this population



(Peadon et al., 2009). Cognitive and educational interventions have produced improvements in behaviour, literacy, mathematics, attention and nonverbal reasoning, whilst virtual reality technology has been used effectively to train children with FASD in street safety and fire safety (for a review, see Peadon et al., 2009).

Graduates and postgraduates in psychology may wish to pursue a career in which they help to design, develop or deliver such interventions. Given the prevalence of FASD, its wide range of debilitating symptoms, and the fact that this condition is so overlooked compared to less prevalent disorders, further work is urgently required. Research is equally important, and psychologists working alongside colleagues in the field of public health can contribute much needed expertise to this field. A series of studies currently being conducted at the University of Salford is investigating the impact that traumatic childhood experiences such as neglect and abuse can have on children with FASD. As many as a third of fostered or adopted children in the UK are thought to have been exposed to alcohol prenatally, although many are undiagnosed (e.g. Gregory et al., 2015). In England in 2015, 61 per cent of all children living with adoptive families were removed from the care of their biological parents due to some form of maltreatment (Adoption UK, 2015). It is therefore likely that a significant number of looked after children in the UK are currently living with the effects of prenatal exposure to alcohol and traumatic experiences during infancy or early childhood. There is emerging evidence of this from North America (e.g. Coggins et al., 2007), but prevalence studies in the UK are urgently required.

Individuals whose early months or years were psychologically traumatic can suffer from abnormal cognitive and behavioural development similar to those seen following prenatal exposure to alcohol. Some of the more severe cases are seen following physical or emotional neglect, abandonment,

or physical, sexual or psychological abuse perpetrated by a caregiver. Since early attachment is so crucial to child development (see Bowlby, 1998), maltreatment at the hands of an attachment figure can be extremely damaging and can lead to dysfunctional brain development cognitive deficits and a wide range of emotional and behavioural issues which can persist into adulthood (Glaser, 2000). Issues with addiction are almost always seen in neglectful or abusive parents, who often suffered from traumatic experiences as children themselves and have neither the cognitive capacity, nor the healthy attachment experience to successfully raise a child (Maté, 2012).

A recent systematic review of the literature on FASD and traumatic experiences (Price et al., 2016) found only five published articles which had investigated the interaction of these two exposures. The methods, quality and results of the studies were mixed; some compared children with both exposures to children with just FASD, whereas others compared both exposures to trauma alone. Most of the studies looked at speech and language, which tended to be more problematic in children with both exposures, as were intelligence, attention and memory, although one large study failed to find differences in terms of language. Results relating to behavioural and emotional difficulties were more consistent – all studies which assessed such issues found more problems following both exposures. High comorbidity rates were reported for FASD and childhood trauma, although these clinical samples may not be representative of the wider population. Some of these studies used recognised psychometric measures of neurodevelopment; however, there was some reliance on caregiver report measures which may limit the validity of these findings.

Thanks to a generous research grant from PsyPAG, the authors of the review are now conducting a series of studies at the University of Salford, to test the hypothesis that executive functioning, intellectual level, social cognition and social development are

further deficient following both exposures, compared to FASD alone. We did anticipate that recruitment from this population would be challenging, but many families appear to be highly motivated and are willing to take part in multiple studies. An online survey to investigate social cognition and social development advertised through social media has produced an encouraging response, mostly from families based in the US and Canada. UK charities such as the FASD Trust and the UK National Organisation for Foetal Alcohol Syndrome have been helpful in recruitment for a lab study in which children's executive functioning and intellectual level are assessed using a series of psychometric inventories and computer tasks on the E-Prime software platform. This also presents the opportunity to pilot the use of functional near infra-red spectroscopy (fNIRS) for the first time in children with FASD. fNIRS is a non-invasive brain imaging technology that provides data on cortical activity by measuring the absorption of infra-red light, which is used as an indication of blood oxygenation. fNIRS is especially useful for clinical paediatric populations, as participants are not required to remain still as in fMRI studies.

Together with the literature review described above, these studies represent the first steps in a career researching the impact

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of prenatal exposure to alcohol. As the review and others like it show, there is a discrepancy between the prevalence of FASD and the research attention it receives, but this issue is slowly becoming more prominent in the UK. An all party parliamentary group was set up in 2015 to put pressure on government to reduce prenatal exposure to alcohol and support those living with FASD, and the first dedicated conference was held in 2016 at Royal Holloway University in London. This is therefore a growth area, where psychology graduates and postgraduates can work alongside our colleagues in public health to further the understanding of FASD and ultimately increase attention, reduce exposure and improve services for affected children and their families.

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# Social networks in psychology research: Considerations for data collection and analysis

Sarah Gardner

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*As social beings we are all members of social and local communities, connected with friends, families, colleagues and loved ones. These social connections form social networks which psychologists can capture and explore within research. This article will provide a brief introduction to social networks including methodological considerations associated with collecting social network data and an overview of techniques for analysing social networks.*

**T**HE COLLECTION of sociometric data (a quantitative approach to measuring social relationships) is becoming increasingly popular in psychological research, allowing researchers to examine and make inferences about psychological phenomena within social networks. Research in this area draws on the foundations of graph theory (Biggs et al., 1986), a branch of mathematics concerned with the dyadic relationships between objects. For psychology in particular, the underpinnings of graph theory have been used to investigate a vast array of social structures, including friendship, leadership, working relationships, digital communications and much more (Prell, 2012). These networks can then be integrated with other areas of psychology. For example, work by de la Haye, Robins, Mohr and Wilson (2010) examined whether children select friends based on similar obesity-related behaviours. Social networks have also been applied to personality traits, with Kardos and colleagues (2017) finding that highly empathetic children have more friends than their non-empathetic peers. Beyond friendship, psychologists have found that negative workplace gossip in an organisa-

tion network is often targeted at those low in informal status (Ellwardt et al., 2012).

The application of social networks in research can be an extremely powerful tool for capturing the complex and dependent nature of social relations. Through collecting data on whole networks, researchers can understand social phenomena, not just from a single source but also from the social interplay between many individuals, including those not directly connected. Subsequently, applying quantitative social network methodology to social research questions can be advantageous above and beyond other commonly used methods, including self-report measures and qualitative interviewing.

This article will provide a brief overview of the following:

- (i) What are social networks?
- (ii) The methodological considerations associated with social network data collection.
- (iii) A brief overview of social network data analysis.

## **What are social networks?**

A social network can be described as a social structure made up of a set of social actors

and the dyadic ties between these actors. These social actors, sometimes referred to as nodes, could be, for example, children in a classroom, work colleagues in an organisation or family members. However, the actors in a social network do not necessarily need to be individuals. For example, we could collect data on organisations that trade with each other, or inter-team rivalry in football. The social interactions between actors are referred to as ties. These ties can represent both positive and negative interactions, such as ‘Who do you play with in the playground?’ or ‘Who bullies you?’. When developing your research question it is important to consider what social network you aim to capture and how you will ensure the ecological validity of that network. For example, if you are interested in capturing adolescents’ friendships you may need to decide whether to examine friendship at just the classroom level or whether you need to take the whole school into account. At secondary school adolescents often have friendships outside their immediate tutor group. It is therefore important to ensure the social network you are measuring is representative of the social world they live in.

### ***Sociometric data collection***

There are several different methods for collecting sociometric data, including interviews, observation and questionnaires. Each of these approaches has its own strengths and limitations (see Prell, 2015), but it is important to select the approach most suitable for your research question and participants. This section will provide a brief overview of some methodological considerations that are unique to social network research.

### ***Directed versus undirected ties***

Social networks can be either directed or undirected in nature. Directed networks contain data about the senders and receivers of ties (i.e. who sent the tie to whom and who received the tie from whom), whereas undirected networks purely indicate

whether a tie is present or absent between two actors. Directed networks are far richer in data because they allow us to examine whether ties have been reciprocated or are just one-way. For example, in a friendship network, we may be interested in identifying reciprocated friendships (i.e. if Child A sends a friendship tie to Child B, is this tie reciprocated?). However, in some cases directed ties are not appropriate. For example, if our research question was to investigate ‘Who is married to whom in a community?’, it would be very unusual for a tie not to be reciprocated!

### ***Binary versus valued ties***

Another consideration is whether you wish to measure purely the absence or presence of a tie or whether your research questions calls for a deeper understanding of this relationship using a valued approach. Valued data can refer to the strength, frequency or duration of a tie. For example, one could measure how often friends send text messages to each other each day. As researchers we are often interested in trying to obtain the richest data possible; however, in social network research the analysis of valued ties can sometimes be difficult in the more complex statistical approaches. It is therefore important that you are aware of the potential statistical limitations associated with using valued ties. For example, some network descriptive statistics cannot be calculated with valued ties and more advanced statistical models require valued ties to only have a small number of discrete values (see Prell, 2012; Ripley et al., 2017).

### ***Free versus fixed recall***

Historically, sociometric researchers regularly limited participants to a fixed number of nominations per sociometric question (often 3). However, more recent research has found that unlimited nominations (i.e. allowing participants to nominate as few or as many people as they like) has the tendency to provide more superior distribution properties (i.e. less skew and kurtosis,

more variability; Gommans & Cillessen, 2015). In addition, potential absenteeism and missing data is less affected when unlimited nominations are used. It is therefore often recommended to allow participants to nominate as few or as many actors as they would like.

### ***Paper versus digital***

As the cost of technology reduces it is now becoming more common for research to be conducted via digital means rather than using paper. This also has positive implications for social network research. Aside from time saving benefits, conducting social network research on a digital device can help overcome some of the ethical implications associated with using paper questionnaires. For example, specialised software can allow for the almost automatic conversion of participant names to unique identifiers for data storage, ensuring the anonymity of the participants.

### ***Ethics***

Regarding ethics, one potential issue concerns anonymity. For instance, it will be difficult for participants to remain anonymous as names must be recorded in order to identify ties between actors. It is therefore important that you ensure confidentiality of these names post data collection. One way of achieving this is to convert all identifiable information to a unique identifier as soon as possible. Another issue unique to social network research is the inclusion or exclusion of participants without consent. If another participant nominates an individual without consent, you must decide whether or not to remove this data from your study. The answer here is not clear cut, as it raises questions regarding who 'owns' a relationship. Typically, it is advised not to include information about a participant without consent. However, in some instances you may have a case for the inclusion of this data if excluding nominations severely impacts the quality of your research. For example, if you are inter-

ested in school truancy amongst a social network, it is likely that those individuals who truant may be absent on the day of data collection; however, you may wish to include those children in the data in order to have a representative sample. Any decision not to exclude nominations must be discussed and justified in depth within an ethics application.

### ***Analysing social networks***

There are many different methods of analysing social networks which depend, in part, on your research questions. A good starting point for analysing social networks is to draw a visual representation of the network data you have collected. This could be achieved by hand, but would be labour intensive and often inaccurate. Alternatively, programs such as UCINET (Borgatti et al., 2002) and R (R Core Team, 2017) can produce visualisations of networks efficiently. Useful network packages in R for visualising data (and much more) include 'sna', 'network' and 'igraph'. An example of a directed social network visualised can be seen in Figure 1.

Following the visual inspection of the network you may then wish to obtain some descriptive statistics. These descriptive statistics may be for the whole network or per individual actor, and once calculated they can then be implemented in further statistical models, such as a regression. Descriptive statistics for the whole network could include network size and density, whereby density represents the number of ties present relative to the number of possible ties and network size. For actor specific statistics we may be interested in the number of nominations they sent and received (but only in a directed network; for undirected networks, the number of ties are simply counted). Ties sent and received are also referred to as out-degree and in-degree statistics, respectively. It is often interesting to examine these statistics because individuals with very high values or extreme low values may indicate some type of social hierarchy

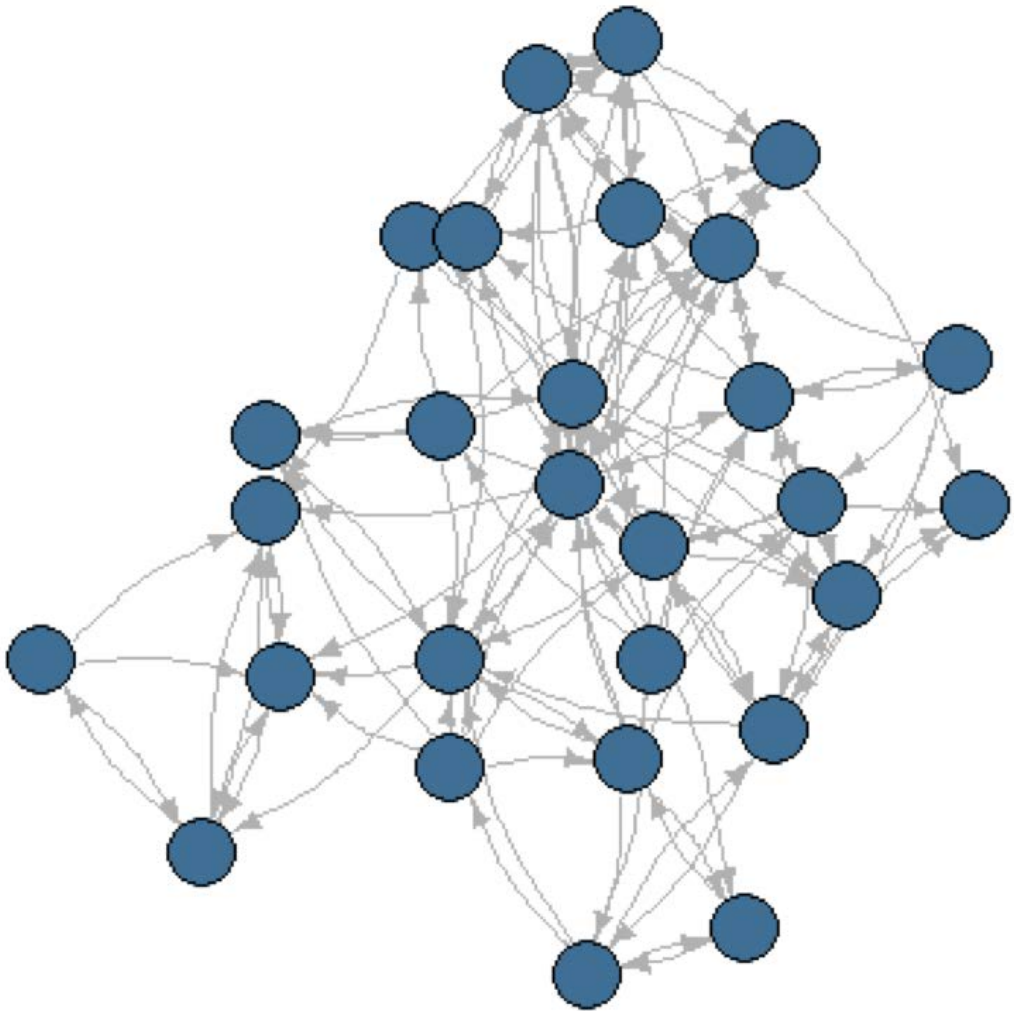


Figure 1: Example of a directed friendship network ( $n = 28$ )

in the network. These out- and in-degree statistics can be further used to calculate an actor's prominence in the network, also referred to as an actor's centrality. There are many different types of centrality scores such as degree, betweenness and closeness. Respectively, these refer to activity in the network, the extent to which actors link other actors together and how close (in network distance) an actor is from other actors in a network. Finally, we are often interested in examining dyads and triads in social networks. Both dyads (relationship between two actors) and triads (relationships between three actors) are commonly

found in most social networks (Wasserman & Faust, 1994). At a dyadic level, we can examine mutual ties between two actors; this is referred to as reciprocity. We may also be interested in asymmetric ties (i.e. those out-going ties which are not reciprocated). Examining social networks at a triadic level is of interest due to triads indicating cliques and clustering within a network. There are many different types of triads which we can measure in a social network (36 in total), each with a slightly different theoretical underpinning. For more information on dyads, triads and other statistical techniques for social networks see O'Malley and Marsden (2008).

### Advanced statistical models

More recently, the rise of complex statistical models known as random graph modelling have increased in popularity within psychology. These models, which can be applied to both cross-sectional and longitudinal data, allow the researcher to model the full complexity of the network. Parameter estimates can be calculated with regards to the social structures, the influence of actor attributes and exogenous factors, all whilst acknowledging the dependent nature of the social network (Lusher et al., 2013). There are various software packages designed to implement these models including, graphical user interface based program 'PNet' (Wangs et al., 2009) and the R package 'sna' for cross-sectional networks, and 'RSiena' for longitudinal modelling. For a more comprehensive overview of these modelling techniques see Lusher et al. (2013).

### Summary

The use of social networks in psychological research can be a very effective way to measure and understand the relationships amongst social entities and the patterns that emerge from these relationships. Social networks can provide very rich data, allowing researchers to test specific hypotheses about social structures and the potential influences and outcomes of these structures. However, it is important that those wishing to use social networks in their research engage with the methodological challenges that social networks can present. As with all research, these methodological decisions need to consider the research question, participants, analysis of data and the impact on research quality.

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# Adolescent perspectives on the links between kindness and wellbeing

Jess Cotney

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*The links between kindness and wellbeing have seen a recent surge of interest from researchers, policymakers and the public. Little is known about these associations in adolescence, a key developmental period for relevant value systems and mental health. An important first step is to explore these concepts from the perspective of adolescents themselves. Six focus groups were conducted with 11- to 15-year-olds, exploring their understanding of kindness and the impact that it has on themselves and others. Preliminary findings support the notion that kindness contributes to well-being for both the recipient and the giver.*

**T**HERE HAS BEEN a surge of interest from researchers in how kindness can promote positive psychological wellbeing (e.g. Binfet, 2015; Lyubomirsky & Layous, 2013), and there is growing evidence – mainly from research with adult populations – that performing kind acts leads to improvements in wellbeing outcomes, including positive affect and life satisfaction (e.g. Dunn et al., 2014). Little is known about the nature and extent of such impacts of kindness in adolescence, even though it is an important period for the development of both relevant value systems (such as self-transcendence, caring for entities outside of oneself) and mental health (Eisenberg et al., 2009). Furthermore, although kindness is considered a potentially important focus for school-based programmes that foster social and emotional development (Binfet, 2015; Helliwell et al., 2015), we know little about how adolescents conceptualise kindness, a construct that refers to prosocial behaviours that are not driven by personal gain or avoidance of punishment (Eisenberg et al., 2006). Further investigation of adolescent conceptions will help to guide future research and identify effective applications in schools.

## Conceptualising kindness

Kindness definitions can be distinguished from broader definitions of ‘prosocial behaviour’ (any action done voluntarily that protects or benefits another person; Eisenberg et al., 2006) because they hinge on a purely other-focused motivational stance. An emphasis is placed on how kind acts cannot be driven by external rewards or punishments. We can expect that this idea will also be at the foundation of adolescents’ conceptions; even young children have been shown to identify the other-focused motivations of kindness (Binfet & Gaertner, 2015). Even so, child-adult disparities in conceptualisations have been noted (e.g. Binfet & Gaertner, 2015). Thus, documenting this topic with youth samples is a crucial first step in ensuring that kindness research is appropriate and relevant to the age group.

## Kindness and wellbeing

As discussed above, the idea that kindness will benefit the recipient is fundamental to its definition. However, it is less certain whether kindness can also be beneficial for the giver. Research with adult populations has shown that positive aspects of wellbeing, such as life satisfaction, are associated with kind behaviours (e.g. Brethel-Haurwitz & Marsh, 2014)

and that fostering kind acts as part of an intervention can lead to improvements in wellbeing outcomes over time (e.g. Alden & Trew, 2013). Early evidence from a pilot intervention with children aged 9–11 years suggests that these positive findings may be replicable with younger populations (Layous et al., 2012), although no such research exists with adolescent samples. An important first step then is to assess adolescents' awareness and understanding of these links. This has not yet been investigated directly, but one study did show that teens have linked prosocial behaviour with experiencing a sense of purpose in life (Hill et al., 2010). We therefore expect that adolescents will be able to identify giver-focused benefits of kindness.

### **Social and psychological mechanisms**

Researchers have begun to investigate the mechanisms that explain how kind behaviour relates to wellbeing outcomes (Lyubomirsky & Layous, 2013). For instance, kind acts tend to have greater effects on wellbeing when they provide opportunity for social connection or promote specific psychological experiences such as feelings of autonomy (Aknin et al., 2013). These investigations are beginning to illuminate the most suitable conditions under which kindness can have a positive effect on wellbeing. Given this, we also seek to uncover social and psychological moderators that are prominent for adolescents.

Relatedly, there is little evidence of adolescents' knowledge regarding the social and psychological mechanisms that drive kindness. There is evidence, for instance, that empathy (e.g. Sahdra et al., 2015) is an important developmental antecedent of enacting kindnesses, and social-contextual factors such as the level of 'liking' between peers (Moore, 2009), can influence kind behaviour in youth. Yet adolescents' subjective awareness of these issues is yet to be explored. We therefore seek to illuminate adolescents' understanding of the socio-cognitive and social-contextual factors that may act as facilitators or barriers to kindness in youth.

### **The current study**

This report will outline some preliminary themes from a qualitative study conducted as part of the author's doctoral research. A primary aim of the study is to document adolescents' perceptions of kindness, a gap in the current literature. This will help to ensure that future research in this area is authentic and relevant to youth populations. A further aim is to explore adolescents' perceptions of kindness-related wellbeing outcomes, as well as the social and psychological processes that affect it. To this end, six focus groups were conducted with 11–12- and 14–15-year-olds. To our knowledge, this is the first study to apply qualitative techniques to investigate these links. This method provides a safe space for participants to share their views, and therefore offers a valuable opportunity to gain an in-depth understanding of kindness from an adolescent perspective. Given the lack of prior research with this age group, specific *a priori* predictions were not formulated.

### **Method**

#### ***Participants***

Participants were 32 pupils from UK secondary schools in year 7 (11–12 years; 8 male, 10 female) and year 10 (14–15 years; 4 male, 10 female).

#### ***Procedure and analysis***

Six semi-structured focus groups were conducted with 11- to 15-year-olds, exploring in detail their conceptualisations of kindness (including its behavioural forms, antecedents and outcomes). Three groups were aged 11–12 years (year 7) and three groups were aged 14–15 years (year 10). The size of the groups ranged from three to eight pupils. Pupils only attended one group each. Questions were focused on: definitions and examples of kindness; reasons for kindness; variations in kindness; and emotions associated with kindness. Examples from the discussion guide include: 'What does the word kindness mean to you?' and 'What impact does kindness have?'. Each focus group lasted 45–60 minutes and consisted of up to eight

pupils. Discussions were audio-recorded and transcribed verbatim. An inductive thematic analysis was used to identify commonly occurring themes within the dataset.

### **Preliminary results**

Preliminary results suggest that adolescents hold a multifaceted and mature understanding of kindness, involving both behavioural and motivational components. They identified ten different categories of kind behaviour. They also discussed social-contextual antecedents of kindness (e.g. certain features of social relationships) as well as specific self- and other-focused goals that drive kindness. As expected, adolescents adhered to the notion that prosocial acts can only be considered kind if they are driven by other-focused motivation. Preliminary inspection of the data shows

that participants identify wellbeing benefits for the recipient and the giver, mentioning social, emotional, health and instrumental outcomes of kindness. Detailed findings are currently being considered for publication in a peer reviewed journal.

This work offers new data on our understanding of kindness in adolescents and shows that they are aware of and have experienced the wellbeing benefits of kindness. The findings have important implications for the design and efficacy of kindness-based wellbeing interventions in schools.

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# Inhibitory control is predicted by age of alcohol use onset but not by cumulative alcohol and binge drinking exposure during adolescence: A retrospective study

Adam McNeill

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*Evidence suggests that alcohol is neurotoxic to adolescent neurodevelopment, while other research has found that poor inhibitory control (IC) is predictive of future alcohol involvement. This study aimed to assess the relationship between adolescent alcohol consumption and (IC). Adolescent alcohol consumption was measured using the Life Time Drinking Questionnaire (cumulative exposure, binge drinking and age of onset) and the stop-signal task was used to measure IC. Cumulative exposure and binge drinking did not predict IC; however, age of onset did. These findings suggest that IC deficits serve as a risk factor for the initiation of alcohol consumption behaviour. Further implications are discussed.*

**C**ONTEMPORARY theories of addiction suggest measures of impulsivity to be a central determinant of alcohol and drug use. Impulsivity is defined by three distinct factors: (i) impulsive decision making; (ii) loss of attention; and (iii) inhibitory control (IC) (de Wit, 2009). Deficits in IC have been shown to predict heavy and problem drinking in community, non-alcohol dependent samples (Murphy & Garavan, 2009) and hazardous drinking in social drinkers (Christiansen et al., 2012). However, it is not yet understood whether constructs of impulsivity are precursors to alcohol use or a consequence.

It has been suggested that cognitive deficits such as IC are precursors to the onset of adolescent alcohol use, and therefore serve as a potential risk factor for heavy and problem drinking (e.g. Khurana et al., 2013). Several longitudinal studies have found IC to be predictive of later alcohol use and problems (Nigg et al., 2006; Wong et al., 2006). This suggests that psychological developmental changes

predate alcohol involvement, and the rate at which IC development progresses is a significant factor in predicting onset of alcohol consumption. That is, slower development may predict earlier onset of alcohol use. However, these longitudinal studies did not investigate the neurotoxic effects of alcohol consumption on the development of IC.

Other researchers suggest that alcohol consumption during adolescence is neurotoxic, effecting neurodevelopment and having a lasting effect on cognitive abilities (e.g. Hanson et al., 2011). Prefrontal regions in the brain associated with IC continue to develop into adolescence, and thus are more susceptible to the suggested neurotoxic effects of alcohol (Spear, 2000). MRI studies show that, compared with non-drinking adolescents, adolescents who drink exhibit significant differences in brain structure and function (Medina et al., 2007), and reduced cognitive performance (e.g. IC and working memory; Townshend & Duka, 2005). This suggests

that the extent of alcohol involvement during adolescence is predictive of the development of IC.

Longitudinal studies encompassing adolescent development can directly investigate the directional relationship between IC and alcohol involvement. To our knowledge only one such study has prospectively examined the bidirectional relationship between IC and alcohol use in adolescents: Fernie et al. (2013) found that IC predicted alcohol consumption at subsequent six month follow-ups, but alcohol use did not predict IC. This suggests that deficits in IC are predictive of alcohol use, but alcohol use does not impair subsequent IC. However, the study sample presents relatively low levels of alcohol use. An imaging study found that binge drinking in adolescents is associated with reduced activity in prefrontal regions and impaired cognitive function (e.g. motor impulsivity and spatial working memory) compared to non-binging adolescents (Scaife & Duka, 2009). This finding suggests that those with greater overall alcohol use and binge drinking during adolescence will present with greatest deficits in IC.

### **Present study**

The present study assessed alcohol involvement retrospectively across the course of adolescence, from the age of onset to the current day, using a modified version of Alcohol Use History Questionnaire. The aim of the study was to investigate the relationship between adolescent alcohol involvement and IC. It is hypothesised that age of onset, and cumulative and binge exposure will predict IC.

### **Method**

#### ***Participants***

Ninety-three participants (56 per cent female) between 16 and 18 years of age ( $M = 17.20$ ,  $SD = .68$ ) were recruited from further education institutions across Merseyside and Cheshire, northern England. Participants were recruited from a range of educational courses, including

academic and vocational. The study was sanctioned by the University of Liverpool Research Ethics Committee.

#### ***Self-report measures***

##### *Time Line Follow Back*

(TLFB; Sobell & Sobell, 1990)

Participants were required to retrospectively self report the number of units of alcohol consumed each day in the previous 14 days.

Alcohol Use Disorder Identification Test (AUDIT; Saunders et al., 1993). The AUDIT consists of 10 items measuring alcohol consumption and its consequences, scored between 0–40. Scores  $\geq 8$  are indicative of hazardous drinking (defined as patterns of alcohol consumption with the potential to cause harm to health).

Lifetime Drinking History Questionnaire (LDH; Skinner & Sheu, 1982). The LDH retrospectively assesses patterns of alcohol involvement, abuse and dependency, capturing data from the onset of regular alcohol use to the current day. Participants were asked to think back to the age they started drinking ('a whole drink, not just a sip'; Fuller, 2010). They then provided estimates for frequency of drinking occasions in days per month for the time period, and the average and maximum number of drinks they consumed on drinking occasions. This process was repeated for each subsequent year of adolescence. From this data cumulative alcohol exposure was calculated by multiplying the average number of drinks by the monthly frequency and then multiplying this number by 12 (for the number of months between the ages). Binge exposure was calculated by multiplying the maximum number of drinks by 12. Both cumulative and binge exposure were calculated for each age range and the values for all the age ranges were summed, this was repeated for each participant. It is worth noting that this is the first study we are aware of to use the LDH with adolescent participants; nonetheless adolescents are generally accurate at reporting their current alcohol use (Koning et al., 2010).

**Behavioural measure**

Stop-signal task (Logan et al., 1997). The stop-signal task consists of two concurrent tasks: a ‘go’ task, which is a choice reaction task where participants categorise Xs and Os, and the stop task, in which an auditory tone (the stop signal) following a delay is used to indicate to participants that they should inhibit their response to the go signal.

The auditory tone was delivered on 25 per cent of trials (stop trials) through headphones. On the stop trials tones were delivered at fixed delays of 50ms, 150ms, 250ms and 350ms following the presentation of the ‘go’ stimulus. The stop-signal task used all delays on an equal number of occasions and in a random order. In accordance with the ‘horse race’ model, the degree of difficulty in inhibiting responding increases as the delay between the go stimulus and the stop signal increases (Logan et al., 1984). Participants received three experimental blocks of 64 trials and were allowed a short break between each block.

**Procedure**

Participants were tested in a quiet, isolated room within their respective educational institute. All rooms were cleared of external stimuli. An information sheet was provided and informed consent obtained. Participants then completed the TLFB and AUDIT. The researcher explained both questionnaire measures and was available to answer any questions the participant had while completing them. The researcher then took the participants through the LDH. Each component of the LDH was explained clearly and participant questions answered. The researcher then explained the SSRT to participants and provided opportunity for the participant to ask questions regarding the task before the participant completed the practice trial. Each participant was fully debriefed at the end of the session, with the opportunity to have any questions they may have answered by the researcher. Each partici-

**Table 1: Descriptive statistics and intercorrelations between TLFB, AUDIT scores, age of onset, cumulative alcohol consumption, binge drinking and SSRT**

	Mean	SD	1	2	3	4	5	6	7
1. Age	17.20	.69	–	.07	.04	.27*	.21	.11	–.06
2. TLFB	16.06	23.51	–	–	.72***	–.37***	.71***	.63***	.10
3. AUDIT	8.42	5.68	–	–	–	.52***	.85***	.85***	.19
4. Age of onset	14.35	1.34	–	–	–	–	–.56***	–.60***	–.28**
5. Cumulative	225.80	337.19	–	–	–	–	–	.87**	.12
6. Binge	200.26	157.76	–	–	–	–	–	–	.20*
7. SSRT	313.46	150.74	–	–	–	–	–	–	–

AUDIT = Alcohol Use Disorder Identification Test. SSRT = Stop-Signal Reaction Time. TLFB = Timeline Follow Back. Alcohol consumption (TLFB) measured in UK units, 1 unit= 8g alcohol; AUDIT, potential scores range from 0 (minimum) to 40 (maximum). Age of onset is the age participants first consumed an alcoholic beverage. Cumulative alcohol consumption was calculated from the Alcohol Use History Questionnaire; average number of alcoholic drinks multiplied by the frequency and then 12 (number of months in year) for each age phase, then a total was calculated by summing each age phase. Cumulative binge drinking was calculated from the Alcohol Use History Questionnaire; maximum number of alcoholic drinks was multiplied by duration (12 months) for each age phase, total was calculated by summing each age phase. SSRT was calculated from the Stop-Signal task; percentage errors were calculated at each stop-signal delay (SSD), then that was used to calculate stop-signal reaction time (SSRT) based on reaction time distribution at each SSD then these values were averaged to compute a SSRT value. Higher scores are indicative of poorer inhibitory control.

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

**Table 2: Multiple regression analysis with gender, TLFB, AUDIT, cumulative alcohol use and binge drinking as predictors of Inhibitory control (SSRT)**

Variable	R <sup>2</sup>	F change	β
Step 1	.002	F(1,83) = .14	
Gender			-.04
Step 2	.05	F(3,80) = 2.80*	
Gender			-.004
TLFB			-.14
AUDIT			.04
Age of onset			-.31*
Step 3	.10	F(2,78) = .001	
Gender			-.01
TLFB			-.14
AUDIT			.04
Age of onset			-.32*
Cumulative			.01
Binge			-.01

β values represent standardised β coefficients. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

pant received a £5 high street shopping voucher as compensation for their time.

## **Results**

### ***Descriptive statistics***

Table 1 contains the descriptive statistics and intercorrelations between age, current alcohol consumption (TLFB), scores on the AUDIT, onset age of drinking, cumulative alcohol consumption, cumulative binge drinking and stop-signal reaction time.

### ***Multiple regressions:***

#### ***Predicting SSRT performance***

The regression model controlled for age of onset in step 2 to assess effects of alcohol exposure on IC, explaining 9.7 per cent of the variance in SSRT performance. However, overall the regression model was not significant,  $R^2 = .10$ ,  $F(2, 78) = 2.00$ ,  $p = .12$ . Neither cumulative alcohol exposure ( $\beta = .01$ ,

$p = .98$ ) or binge exposure ( $\beta = .01$ ,  $p = .96$ , significantly predicted SSRT performance suggesting that neither cumulative nor binge exposure are associated with IC. However, none of the other variables were significant in predicting IC; see Table 2 for complete regression model.

The second regression model, controlled for cumulative and binge exposure this time in step 2 of the model to assess the effects of age of onset on IC, explained 9.7 per cent of the variance in SSRT performance. Overall, the regression model was statistically significant ( $R^2 = .10$ ,  $F(2, 78) = 5.22$ ,  $p = .025$ ). Age of onset significantly predicted IC ( $\beta = -.32$ ,  $p = .025$ ). This suggests earlier onset age of alcohol use is associated with poorer SSRT performance. However, the other variables remained non-significant in predicting IC; see Table 3 for complete regression model.

Table 3: Multiple regression analysis with gender, TLFB, AUDIT, cumulative alcohol use and binge drinking as predictors of inhibitory control (SSRT)

Variable	R <sup>2</sup>	F change	β
Step 1	.002	F(1,83) = .14	
Gender			-.04
Step 2	.04	F(4,79) = .70	
Gender			.02
TLFB			-.17
AUDIT			.11
Cumulative			.08
Binge			.10
Step 3	.10	F(1,78) = 5.22*	
Gender			-.01
TLFB			-.14
AUDIT			.04
Cumulative			.01
Binge			-.01
Age of onset			-.32*

β values represent standardised β coefficients. \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001

**Discussion**

The current study aimed to assess the relationship between IC and retrospective adolescence alcohol use. We predicted that both cumulative and binge alcohol exposure would predict IC, such that those with greater exposures would present the greatest deficits in IC. Neither predictions were supported by the current findings. Finally, we hypothesised that the earlier the age of onset for alcohol use the greater the deficit in IC. As expected, this was supported by the current study’s findings.

The findings from the current study fail to support the literature demonstrating the neurotoxic effects of alcohol use during adolescent neural development. Previous studies have suggested that heavy and problematic drinking is associated with differences in neural development, such as reduced

volume of prefrontal regions (Medina et al., 2008) and impaired cognitive function (e.g. motor impulsivity) (Scaife & Duka, 2009). In contrast to participant consumption in Fernie et al. (2013), levels of consumption and binge drinking in the current study are high. However, findings from this study support the directionality of the relationship found by Fernie et al., suggesting the alcohol exposure does not influence the development of prefrontal regions of the brain associated with IC, and thus IC itself. Rather, IC predicts future alcohol consumption.

Furthermore, the current findings suggest that earlier age of onset predicts poorer IC. This may suggest that deficits in IC serve as a significant risk factor for the initiation of alcohol consumption. This finding coincides with previous postulations that prefrontal



regions of the brain continue to develop during adolescence (Spear, 2000), and hence IC is underdeveloped, which our findings suggest could lead to alcohol involvement. This is further supported by evidence that delayed maturation of self-control processes lead to increased risk-taking behaviour such as alcohol use (Steinberg, 2007). In the context of the current findings this could suggest that those with slower developing self-control processes engage in alcohol use, and not that alcohol use affects development of such processes. Therefore, these findings support those that suggest IC is predictive of subsequent alcohol involvement (Nigg et al., 2006; Wong et al., 2006), with poorer developed IC more likely to engage in alcohol use.

### Conclusion

The current findings suggest that poor IC serves as a precursor to alcohol use. It is posited the developmental deficits in IC found in early adolescence serve as a risk factor for the initiation of alcohol use. However, given the limitations of the present study with respect

to its retrospective nature, future research is required to look longitudinally starting prior to alcohol use to truly measure the effects of both psychological development of executive function and impact of alcohol use on said development. Only then can we understand the impact each is having on the development of alcohol use and problems. For example, if poor IC is a risk factor for initiation of alcohol use and alcohol use is neurotoxic during development, it could serve to exacerbate the development of executive functions such as IC and further contribute to the development of alcohol use and problems. Furthermore, the study cautiously suggests that relatively low alcohol involvement has a minimal effect on the development of IC. Therefore, more research is required incorporating 'at-risk' samples and specifically looking at dose dependency effects on the developmental process.

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# Designing conference poster presentations

Alice Rees

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*Attending conferences is one of the more exciting aspects of undertaking a PhD. It gives you the opportunity to meet some of the best minds in your field, and to meet other PhD students, and perhaps most importantly it is a chance to showcase your work. Conference presentations are often either a talk or a poster. To have got to this point in your education it is reasonable to assume that you have given a few oral presentations. It is less common to have given a poster presentation. This article aims to give you some useful hints and tips for designing and presenting posters at conferences.*

**P**OSTER PRESENTATIONS can be a great way to network and talk about your research. However, it is not uncommon for there to be hundreds of posters in a single session, so it is important to try and make your poster as appealing as possible. Here are some hints and tips for designing poster presentation:

1. *What is your story?* Perhaps the most important thing when designing a poster is for you to be clear what your story is. You will be limited in time and space, so it is vital that you are able to distil your work into a few key points. Remember, this is not a paper.
2. *Title!* People have no obligation to come to your poster, so you need to hook them in. The title is the first thing people will see, so you need to take some time to think about how best to phrase it. Make sure you use the largest font size on the poster for your title, so that it is clearly visible at a distance (a good guide is legibility from five feet away).
3. *Posters are a graphic medium so you should make use of graphics.* Photographs, diagrams, graphs and charts are brilliant ways of conveying complicated information to an audience, especially when that audience will have spent hours listening to talks.
4. *Don't rely too heavily on text.* Large blocks of text can be off-putting and some information is more easily understood in graphical forms, such as results. Using bullet points can help get the key information across without overloading a reader with large blocks of text.
5. *Don't be afraid of blank space.* Blank space can help you divide your sections up and prevent your poster from feeling overcrowded. Remember, sometimes less is more.
6. *Make it easy to read.* This means using appropriate typefaces at appropriate sizes. Whilst some typefaces might be more fun to use, they are not always easy to read. You are better off sticking to an easily readable typeface (e.g. Times New Roman). Similarly, it can be tempting to use a smaller font size to try and fit more information in, but this just makes it unnecessarily hard to read, and no one wants to have to carry a magnifying glass around with them. For your title and headings think *big*. Large font sizes will help to catch people's attention. But make sure that YOU DON'T WRITE ALL IN CAPITALS because this is more difficult to read than a mixture of capitals and lower case. A good way to check whether your poster will be legible is to print it out in A4. If you can easily read all of the text in A4 then you will have no problem when the poster is full size.

7. *Make the reading order obvious.* There is nothing worse than trying to read a poster and finding that you've missed out some key information because of the way it is laid out. Simple things like numbering or arrows can make a world of difference when trying to find your way through a poster.
8. *Check the guidelines!* Conferences will have specifications for the size and orientation of posters. Make sure that you check these because they often correspond to the size of the board that you will be provided with.
9. *Poster presentations aren't all about the poster.* You need to be prepared to give people a short presentation on your poster. Some people will be happy to just read it, others will want you to talk them through it. Prepare a five-minute 'elevator-pitch' that covers all the important information you want people to take away from your poster.
10. *Colour scheme.* Black and white posters are not particularly eye catching, but the use of colour can be difficult. Whilst the choice of which colour to use is one of personal preference, be consistent: pick two or three related colours and stick with them. But be aware that certain colour combinations are difficult to read (e.g. blue on black, or green on red).

There is no right or wrong way to do a poster. Everyone has their own preferences and after doing a few you will learn what works and what does not. This list should provide you with some useful starting points to get your poster presentation underway.

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## Hints and Tips:

# Reaching beyond the ivory tower: Hints and tips for postgraduates starting out with public involvement or engagement work

Emma Nielsen

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*In psychological research there is an increasing focus on public involvement and engagement activities. Alongside moral and expertise arguments, many leading funders require consideration of these aspects of research in grant applications. In this article I reflect on my experience of public involvement and engagement work as a doctoral research psychologist and outline some hints and tips for developing involvement and engagement activities.*

**A**T THE HEART of my research are people. I am interested in understanding how people respond to and deal with the difficult things that they face in their lives so as to better understand the social and psychological factors related to self-harm and suicidality. This matters so that we know how to best help people and that we can understand more about how to support prevention measures and promote wellbeing and ‘recovery’. Without people contributing their experiences, my research would not be possible. If I do not get my research ‘out there’, it may as well not have happened. Other people are even central to my funding; without taxpayers my PhD would not be.

By now it is hopefully clear that others are integral at every stage of my research. As a psychologist I imagine that they are central to yours too. Consequently, the notion of an argument ‘for’ public involve-

ment<sup>1</sup> and engagement<sup>2</sup> (INVOLVE, 2017) may seem unnecessary and the reasons self-evident: the general public are stakeholders who hold valuable knowledge and expertise, involvement can make research more relevant, and arguably people have a democratic right to be involved (in research which affects them and which is often taxpayer funded). Indeed, if your research relates to people and you are interested in people then it makes sense to work *with* people too.

Involvement and engagement work takes more than motivation and an appreciation of necessity. These activities take planning and often require support, skill development and resources. In trying to start out with these activities we can face challenges. As postgraduates, we are often guided by departmental priorities and working within the parameters determined by funders, graduate schools and supervisors, who

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<sup>1</sup> Involvement in research refers to active involvement between people who use services, carers and researchers, rather than the use of people as participants in research (or as research ‘subjects’). Many people describe involvement as doing research with or by people who use services rather than to, about or for them (see [www.invo.org.uk/resource-centre/jargon-buster/page/2/?letter=I](http://www.invo.org.uk/resource-centre/jargon-buster/page/2/?letter=I)).

<sup>2</sup> Where information and knowledge about research is provided and disseminated, for example science festivals, open days, media coverage (see [www.invo.org.uk/resource-centre/jargon-buster/?letter=E](http://www.invo.org.uk/resource-centre/jargon-buster/?letter=E)).

may or may not favour involvement and engagement. Furthermore, the outcomes of involvement and engagement activities are sometimes less tangible or less well regarded than a high-impact journal article or an international conference presentation. So, as early careers researchers (ECRs) where can we start? This article considers hints, tips and ideas for what we can do and how we can *be the change*.

### **1. Start where you are, with what already exists**

Find out what is already going on. Your school or university may have established engagement or involvement activities, or there may be a blog or a video project that you could contribute to. I first began in involvement by volunteering an afternoon to showcase some of the psychophysiological research methodologies we use within our department at a Brain Awareness Week event for sixth form students. This event was hosted within our school. Outside of the university there may be established science-specific engagement events (e.g. Pint of Science, British Science Week) or opportunities aimed towards ECRs (e.g. PubhD) already running in your area.

Getting involved in existing activities is a great starting place for a number of reasons. Firstly, it gets your name out there and lets people know that you are interested. If people know what you do and that you are keen, they might get in contact with you in future about upcoming opportunities. In my experience one opportunity often serves a catalyst for the next. Last year, a post that I wrote for an existing blog led to two requests to write for charities in my field. This proved to be an invaluable opportunity to: (i) start important conversations, and (ii) network.

Secondly, trying out different things gives you a chance to find out what fits best for you. Maybe writing press releases and speaking to the media is your thing. Equally, it might not be; perhaps you feel more comfortable writing blog posts or

accessible research summaries (e.g. The Mental Elf; [www.nationalelfservice.net/mental-health](http://www.nationalelfservice.net/mental-health)). Contributing to existing activities is probably also much more amenable to your timetable and current commitments. Whilst setting up your own blog might seem an attractive option, it is also quite a commitment and will likely require greater attention. Many charity and institute blogs accept guest contributions. Writing guest posts may be more sustainable in the first instance and help you to reach different audiences by the variety of your contributions.

### **2. Keep it simple, do what you can**

Keep your plan simple and be clear about what you are trying to achieve. There are a number of important considerations to make, including whether you are you aiming to do engagement or involvement activities (or both) and at what stage(s) of the research your planned activity will take place. For example, it may be that you would like to have people involved in shaping your research questions prior to starting a project. Alternatively, your data collection may already be in progress and you might be planning ways to disseminate your research or seek feedback on your findings.

Be realistic about what you can aim to achieve *at this point*. Admittedly, it is easy to get carried away with the excitement of planning, but it is crucial to think carefully about what is feasible given the time and resources available to you. This is another moment where having a mentor or peers to run your ideas past can be a real asset. Remember that your postgraduate study is in essence a period of apprenticeship and training. It is a great time to test ideas and outline how you want to work as an academic, but it is not your defining moment. The involvement and engagement activities that you do at this stage of your career do not have to be *the* optimal piece of work you could imagine if you had all the time and funding available because, chances are, you do not.

Think creatively about what you can do. It may be that you do not have scope for a focus group before finalising your study questions, but are able to ask participants for feedback on the study which you could use to inform your next study. Set out to do something realistic and achievable, and do it well. Learn everything you can from that experience and take that forwards into planning your next project. There is no one best option, *per se*. The best thing you can do is often the thing that you can do well at this stage.

### **3, Plan, but remember it is not all about you**

As with conference presentations and manuscript submissions, involvement and engagement activities require thought, planning and practice. Involvement and engagement work often also requires flexibility. Remember that people may have different schedules to you or different priorities. When planning activities remember to think about when and where it would be best to host your event. The university setting is not always a good (or feasible) option for the people you wish to reach. It may be important to consider the feasibility of planning an alternative venue. Community venues often work particularly well, and there is great scope for out-of-the-box thinking here. I have previously been involved in events held in a full range of settings, from cafés to a city centre ‘pop up village’ event, a Scout hut to a contemporary arts gallery. When to hold the activity also requires careful consideration. Depending on the audience you are aiming to reach you might have to be flexible around timings (e.g. do you need to consider school hours and school holidays?). Throughout the planning, keep in mind that this is a collaborative process. It is not about you deciding, or about people coming to you. It is about working together. It is surprisingly easy to inadvertently alienate people. Try to be aware of your assumptions and challenge them. Aim to build in flexibility where you can, and if in any doubt ask people what works for them.

Supervisors are great, but they are also academic and/or clinical experts. While they undoubtedly have a lot to add when planning and can give really useful feedback, ensure that you also get feedback from those not professional in your field. They might have some great ideas to bring (indeed, my sister contributed this point), and be able to help you with ‘jargon busting’ and even thinking about novel avenues for engagement. For example, perhaps your press release could be improved with a quote from someone with lived experience who has helped shape your research or who can comment on their relevance to their life. Perhaps the piece could be co-produced.

### **4. Be present, be visible**

Have a presence. Take pride in what you are doing and share updates of your activities (e.g. via your school’s social media profiles or research group’s website). Remember that being self-reflective is valuable. Be honest about what went well, what could have been better and what you have learnt from your involvement/engagement activities. Invite people to share their ideas and feedback with you. Social media can be really useful here – set up a Twitter account (and use it).

Do not be afraid to measure the impact of what you are doing (e.g. how do attendees at an engagement event rate their knowledge of your topic pre and post attending?). As an ECR, publications really count. Consider whether it would be possible to write up your project, particularly if you are doing something novel. Show people that involvement and engagement work makes a difference. Publishing is likely to further your own research career, but it may also inspire others to progress forward with their own involvement and engagement ideas.

### **4. As ECRs we are more than the sum of our parts**

Postgraduate study can often feel quite isolating, but there is a whole community of ECRs out there (e.g. #ECRChat, #PhDChat).

Community is something which we can all be part of and can all contribute to. For example, a colleague and I established an online journal club in our field, #ECRSASJC. This now functions as a platform for broad discussion and resource sharing. It is important to ‘combine forces’. It may be that someone has faced the same difficulty you are currently wrestling with and could share some ideas. Perhaps you have had a great success with an involvement or engagement activity that you think others could learn from. We are so much more if we pool our experiences and work together.

Involvement and engagement work can be resource heavy, but you do not have to be an island – perhaps it would be possible to group together with other ECRs on a shared project. I have previously been part of a number of ECR teams delivering involvement and engagement activities, and this teamwork has taken many guises, from co-hosting Twittercasts and running the Institute of Mental Health blog ([www.imhblog.wordpress.com](http://www.imhblog.wordpress.com)) to co-founding a network focused on engagement work (Early Career Researcher Youth And Public Engagement on Self-harm ([www.yapsecr.wordpress.com](http://www.yapsecr.wordpress.com)) and hosting the first network symposium (#ECRYAPS16). Indeed, many of the ideas discussed in this article originate from shared discussions with colleagues. Working with others gives you the chance to air and develop ideas and to maximise impact, and in many instances represents the only feasible means to achieving your aims and running your activity.

## 5. Dream big, find mentors

Your current involvement and engagement work may be an end unto itself. However, you might have a larger project in mind which you are working towards in incremental steps (e.g. acquiring the knowledge and experience you will need to submit a grant to support the larger project, or piloting an idea to demonstrate the feasibility of a novel format for engagement before scaling up the event). Personally, I have found that:

(i) it is often helpful to have a goal to work towards, and (ii) it is often easier to develop a plan under the guidance of a well-selected mentor. There are some great involvement and engagement projects already underway, run by impressive and passionate people (who could be future collaborators). Reach out to those that inspire you – send them an e-mail or plan to catch up with them at a conference – and make use of this inspiration and expertise. By asking questions you might find that there are people in close proximity who are already doing a great job. Perhaps there will be a chance to hear about their work or get involved in something they are working on. They may also be able to give you pointers about potential opportunities (e.g. grants). Never underestimate the value of great mentors.

Hopefully, the hints and tips contained within this article have given you some ideas for what you might be able to do to be the change. Moving forwards, remember that the costs for engagement can and should readily be included in RCUK grant and fellowship applications. There are also specific funding opportunities available for public engagement (e.g. the Wellcome Trust portfolio; [www.wellcome.ac.uk/funding/public-engagement-fund](http://www.wellcome.ac.uk/funding/public-engagement-fund)).

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## Hints and Tips:

# Using a crowdsourcing platform to collect data for your PhD research

Gail McMillan

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*Recruiting participants for research can be an arduous process. However, with the advent of online recruitment services, called crowdsourcing platforms, recruitment and research can be conducted quicker than ever before. I have used one crowdsourcing platform, Prolific (until recently called Prolific Academic), to conduct my PhD research. In this article I have gathered some hints and tips for using a crowdsourcing platform to conduct research based on my experience of using Prolific.*

**R**ECRUITING participants for postgraduate research can be a time consuming process, and is often costly and a source of stress for students. The difficulties involved in recruitment especially ring true for students who are gathering data on vulnerable or hard-to-reach groups such as those with a health condition. This had been my experience as my PhD is investigating people with chronic pain. So imagine my relief when I found a group of tens of thousands of people who were not only willing to participate in research, but who were actively looking to do so. Moreover, recruitment could be completed from your own computer and within a day. This was possible through the crowdsourcing platform Prolific.

### **Prolific academic**

Prolific is a crowdsourcing platform which is specifically tailored for research. The service recruits participants to a participant pool in a number of ways including social media, student populations, and word of mouth. The participants are vetted to ensure that they are reliable; for example, Prolific Academic work with a company to identify fraud and verify participants during the joining process. Participants also cannot change some of their demographic details, such as ethnic group, to allow access to

more surveys. Research on the reliability of data gathered from crowdsourcing websites suggests that participants act in similar ways to student populations but provide a more diverse, more experienced sample. Studies have shown that online samples provide equal or better quality data than students with regard to reliability of scales, test-retest reliability and internal validity, and responses to replications of experimental studies are consistent with previous findings (Behrend et al., 2011; Berinsky et al., 2012; Goodman et al., 2013; Shapiro et al., 2013; Sprouse, 2011). These studies were conducted on participants who use the crowdsourcing platform Amazon Mechanical Turk (MTurk). Prolific participants have been shown to be more honest and naïve participants and provide better quality data than its competitors such as MTurk (Peer et al., 2017).

Using this method of recruitment does come with its own caveats. Having used the Prolific service for my own research, I would like to share what I have learned and offer several hints and tips to those who feel that this recruitment method will answer all of their research prayers:

### **1. Don't be afraid to ask for help**

The Prolific team have excellent customer service, which I took full advantage of,

being a first-time user. The Prolific website has some information about the service and a blog section which has useful hints and tips about how to get the most out of the service. I highly recommend reading the blogs. However, I (and my supervisor!) still had some questions about what goes on behind the scenes. I used the instant messaging service to communicate with the team about my individual needs and concerns. For example, you can contact the Prolific team to ask about setting your own screening questions. Some screening questions, such as age and gender, are pre-set. However, as my research is investigating chronic pain, I asked the service to set two pre-screening questions about chronic pain. Setting pre-screening questions allowed me to advertise my research to those who had reported that they had chronic pain, making it less likely to get responses from participants who did not fit the criteria. The Prolific team always replied to any questions I had within a few days.

## **2. Be prepared for the cost of the service**

The Prolific website has a cost calculator to help you budget for the cost before you begin. Participants are paid for taking part in the research. The amount they are paid is decided by the researcher (minimum £5 an hour) and participants can view how much they will be paid before they take part. The service also charges a 12.5 per cent fee, plus 10p per participant. For example, a study of 30 participants which takes 15 minutes will cost £45.19 if paying £5 per hour (based on a cost calculator accessed from [www.prolific.ac/about/pricing](http://www.prolific.ac/about/pricing) on 23 January 2017). However, a much larger study which takes longer can cost hundreds of pounds. Therefore, you may need to apply for funding before you use the service. Once you have funding in place, you top up your account and then you can launch your research. Be aware that the initial cost calculation may not reflect the end cost. For example, one

thing I had not budgeted for was participants who completed the survey but did not fit the inclusion criteria or had given insufficient answers. This data had to be excluded and I then had to recruit more participants to reach my sample size. This issue arose more frequently than I had anticipated. (See points 4–7 for more tips about how to protect against this.)

## **3. Test out your survey before you launch it**

I used Qualtrics, a free service which allows you to build surveys, as a platform for my research. Prolific is compatible with many services including Qualtrics, Cognilab and SurveyMonkey, among others. I built my survey on Qualtrics and then asked some PhD colleagues to complete it as if they were participants. This testing process highlighted several issues with the display of the survey, which I was able to resolve before I launched it on Prolific.

## **4. Use techniques to ensure data quality**

As stated above, the blog section of the Prolific website offers many hints and tips for getting the most out of your data. You can use pre-screening filters to determine which participants are eligible for your study, based on your inclusion and exclusion criteria. Only those who meet these predetermined criteria can view your study and take part. You can ensure that participants only take part in your study once by asking them to provide their Prolific Participant ID. The researcher is able to view the data before approving payment for the participant, thus encouraging high quality data. If a participant's responses are not approved, the study will be advertised again to recruit the number of participants necessary. Prolific also recommends that researchers use inattention checks and instructional manipulation checks to reduce 'satisficing'. Satisficing in research is when participants choose to provide a minimally acceptable response instead of their true response due to tiredness, boredom or desire to complete

the study quickly. An example of an inattention check is including an item like so within a survey: 'It's important to pay attention in this study, please click strongly disagree'. If an inappropriate response is given then the researcher can choose not to approve the participant's payment, in which case the survey is available again for another participant.

### **5. Make inclusion/exclusion criteria clear**

As any good researcher would do, I specified the inclusion and exclusion criteria to participate in my study in the information sheet. Participants were then asked to consent to the condition that they may not receive payment if they completed the survey when they did not meet the criteria for participation. Despite stating in the consent form that this may lead to non-payment, some participants were paid the full amount or given a partial payment even though their data could not be used. As stated above, this led to unanticipated extra costs. I would advise making the conditions of participation clear on information sheets, consent forms and in the description section of the Prolific advertisement for your study. In my experience, surveys were either completed in error or the participant had misunderstood the conditions of participation.

### **6. Contact your participants if necessary**

If you decide not to approve a participant for payment, you can leave them a message to explain your reasoning. However, you can also contact your participant if you require clarification. Quite often, if I contacted a participant to advise them that I would not be approving their data, they responded (usually with an apology for any inconvenience they had caused), and gave further explanation as to why they had participated. Many times the issue could be resolved, they received full payment and their data could be used. Sometimes, they would receive full or partial payment if they had made an honest mistake. In these

cases, it is within your discretion to decide if the data is reliable and can be used in your research.

### **7. Check the quality of the data before approving it**

Prior to approving payment for participants, it's important to review the data to ensure it meets your standards for quality. If you used instructional manipulation checks were they appropriately answered? If you were timing participants on a task, were the responses made within reasonable time limits? Did it only take five minutes to complete a 40 minute survey? Are questionnaire responses contradictory? Of course, each researcher will have their own standards for data quality. If the data will need to be discarded, you may choose not to approve the participant's payment. Prolific thrives on high quality participants, but it is always important to check your data.

### **Final thoughts**

While I felt that using a crowdsourcing platform required more planning when designing a study, there were certainly advantages. Initially, it took four hours after launching my research to receive 60 responses (my sample size) from participants with chronic pain. Including checking the data and re-advertising as required, it took two days in total to have a complete data set. No other method of data collection can provide data from a diverse range of participants so quickly. This method of recruitment may also provide access to people who would not normally be able to participate in research such as people with disabilities who may find it difficult to travel, busy parents and people who live in more remote areas. However, online data collection using crowdsourcing platforms is a relatively new and emerging method, meaning there is still much to learn about ensuring that the conclusions drawn from the research are valid. As a broad discussion of the validity of results using crowdsourcing samples is not within the scope of this

article, I recommend reading Chandler and Shapiro (2016) for a more comprehensive review. Overall, I would recommend using a crowdsourcing service such as Prolific, but would advise taking time to consider the design of the study so that you can be confident in your results.

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## Hints and Tips:

# Is prioritising sleep the first step in academic self-care? Tips for getting a good night's sleep during postgraduate study

Kirsten Russell

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*Undertaking a PhD provides an invaluable opportunity to train and develop as an independent researcher. However, PhDs can also be challenging and it is easy to abandon academic self-care in the face of heavy workloads and imminent deadlines. Sleep is often the first thing we sacrifice, with many seeing it as a waste of time and hindrance to productivity. However, adequate sleep is vital for optimal health, wellbeing and daytime functioning. In this article I argue that prioritising sleep could be an important first step in good academic self-care and provide some tips on how to develop good sleep practices.*

POSTGRADUATE STUDY provides an exciting opportunity to undertake invaluable training that will develop a wide range of skills applicable to life and your future career. Conducting original research in an area that you are passionate about, attending national and international conferences, disseminating your findings, and networking with inspiring early career researchers and academics are just some of the advantages of undertaking a Master's degree or PhD. However, there is no denying that postgraduate programmes can also be a daunting and challenging experience. The need to produce research that is novel and worthy of publication whilst also trying to strengthen your CV in the hope of enhancing future job prospects can at times lead to a seemingly endless list of tasks to complete. As a result, it is easy to abandon self-care to increase your chances of achieving more. The reality is, however, that doing so is often counterproductive to accomplishing your goals, and most importantly in maintaining good physical and mental health.

Eating healthily, exercising regularly and obtaining enough good quality sleep are all key to practising good self-care. However, daytime sleepiness, sleep deprivation and

irregular sleep schedules are highly prevalent amongst university students (Hershner & Chervin, 2014; Lund et al., 2010). Further, as a result of trying to balance academic and social demands, good sleep practices (also known as sleep hygiene) tend to be poor in this population (Hershner & Chervin, 2014). This may be the case as in today's fast paced 24/7 society, sleep is often not considered a priority but as unproductive and a waste of time. Sleep is often mistakenly seen as a time of complete mental and physical inactivity and we sacrifice sleep in favour of activities we feel are more important. However, the reality is that research shows we will benefit across almost all aspects of physical and mental functioning if we make time for adequate sleep (Shochat et al., 2014; Hershner & Chervin, 2014).

### **The role of sleep in academic self-care**

Professor Russell Foster, Head of the Sleep and Circadian Neuroscience Centre at Oxford University, recently suggested sleep is the most important thing that we do. Research evidence has consistently demonstrated that obtaining 7–9 hours of good quality (refreshing) sleep is vital for a healthy body and healthy mind.

Poor sleep can be a risk factor for developing physical and mental health problems in the future and can also worsen existing health conditions (Kyle et al., 2010). In terms of physical health, insufficient sleep duration, inadequate sleep quality and irregular sleep patterns are often associated with a variety of negative outcomes including obesity (Fatima et al., 2016) and cardio-metabolic impairments, such as increased blood pressure and diabetes (Knutson, 2010). Further insufficient sleep contributes to poorer immune function (Bryant et al., 2004), potentially increasing susceptibility to viruses and other infections.

With regards to mental and emotional wellbeing, poor sleep is associated with depression (Baglioni et al., 2011), anxiety (Harvey et al., 2011), difficulties regulating emotions (Gruber & Cassoff, 2014), lower self-esteem (Rogers et al., 2012) and reduced life satisfaction (Roberts et al., 2008). Research has also demonstrated that the quality and quantity of sleep can impact how you perceive and react to stressful situations (Minkel et al., 2012; Minkel et al., 2014). That is, sleep loss both lowers the threshold at which an individual will experience an event as stressful, and results in an increased cortisol (stress hormone) response to the event. Further, sleep disturbance has been associated with self-harming and suicidal thoughts and behaviour (Bernert et al., 2015).

As well as having the potential to impact significantly on overall health and wellbeing, sleep quality and duration can also influence academic performance (Hershner & Chervin, 2014). Sufficient sleep is required to achieve optimal levels of cognitive function, including: attention, memory, learning, and higher order executive functions (Dewald et al., 2010). Further, studies have shown that sleep can inspire creative insight. Rapid eye movement (REM) sleep in particular is important in finding the hidden links between ideas, a process which is essential for creative problem solving (Stickgold & Walker, 2004), and a key skill for any researcher attempting to generate novel research ideas for their PhD! As a result, restricting sleep to

allow extra time for working or studying is an ineffective strategy for increasing academic achievement (Lee et al., 2015).

Overall, these findings demonstrate that insufficient sleep impacts upon how we feel (mentally and physically), the quality of work that we produce, and how we interact with our friends, family and colleagues (Kyle et al., 2010).

### **How to improve sleep during postgraduate study**

Your behaviours and sleeping environment can significantly impact how you sleep each night. Sleep hygiene refers to a variety of practices and habits that can be implemented to help achieve a good night's sleep.

#### ***1. Maintain a consistent sleep-wake schedule***

Aim to go to bed and rise at the same time each day (even on weekends!). Getting into the habit of sleeping at set times reinforces the natural sleep-wake cycle in your body. By establishing a sleep routine, you will find it easier to sleep at that time every day. Staying up late on weekends and sleeping in the next day creates 'social jet lag' (misalignment between your internal biological clock and the external social timing). This makes it harder to go to sleep and get up early on Monday morning, which can lead to a sleep debt.

#### ***2. Prepare your bedroom for sleeping***

Use your room only for sleeping. When you engage in other activities, such as studying, writing or watching TV in your room you will struggle to doze off and will find it more difficult to relax. Ensure your room is dark, cool, quiet and comfortable and avoid the use of devices that can disrupt sleep, such as phones, tablets and laptops. Light emitted from these devices can promote unwanted wakefulness. You need to retrain your brain to associate your bed with only sleep.

#### ***3. Use the hour before bed to wind down and build your own bedtime routine***

Aim to spend the hour before bed winding down and getting your brain and body ready

for sleep. Creating a night-time routine can help with this. It is important to use this time to relax by engaging in activities like reading or listening to music. Avoid activities that will stimulate your brain, such as working, exercise, watching TV, or using game consoles, computers or mobile phones. Try to deal with any anxiety or stress before bed, so that it does not keep you awake. Manage your activities effectively during the day to minimise worry at night. Some experts suggest writing down tasks you are worried about in a notebook before bed. This will help to get them out of your head and form a plan of action. We are better equipped to problem solve during the day than just before sleep. Engaging in some relaxation techniques before bed can also assist with shutting off your brain from worries or stresses. These may include yoga, mindfulness, or progressive muscle relaxation.

#### ***4. Limit caffeine, nicotine and avoid alcohol close to bedtime***

Caffeine and nicotine are stimulants that can cause us to feel very awake and alert. This disrupts our normal sleeping pattern and reduces our ability to fall asleep and stay asleep. Avoid consuming caffeine in the six hours before bed time (be aware that caffeine can be found in chocolate and soft drinks too). Try to cut down nicotine consumption in the evening. Alcohol may help you fall into a deep sleep quickly, but as it is absorbed into your system sleep becomes fragmented and our ability to stay asleep is disrupted. As a result, you will wake up feeling sleepy and unrefreshed. Avoid alcohol for four hours before bed time and make sure you keep hydrated. Avoid becoming reliant on alcohol to fall asleep.

#### ***5. Avoid naps***

Sleep is thought to be regulated by two separate biological mechanisms in the body (Borberly, 1982). The first process (Process S) can be thought of as an hourglass-like timer that creates 'sleep pressure'. Put simply, the longer you stay awake the more pressure there is to fall asleep. When we fall asleep, the pressure is relieved. The second process

(Process C) provides an overall timing mechanism for sleep regulation. When we nap, we disrupt the sleep promoting signal and make it more difficult to drop off at night. This can lead to a vicious cycle of sleep disruption. As a general rule you should save sleep for night-time. However, if you feel the need to nap then keep it between 10–15 minutes and ensure it is before 3pm.

It is important to note that behaviourally-induced sleep deprivation is not the only cause of daytime sleepiness. Students are also at risk of developing sleep problems and disorders that cannot be solved by employing good sleep hygiene in isolation. If you experience severe sleep problems (e.g. insomnia, nightmares or circadian rhythm sleep disorders) for an extended period of time, it is recommended that you seek professional help.

#### **Could prioritising sleep be the first step in academic care?**

It is easy to sacrifice self-care in the face of heavy workloads and imminent deadlines, and sleep is often the first thing we abandon. However, this is not sustainable and can lead to burn out. It has been demonstrated that good sleep offers benefits in terms of the way we feel, both mentally and physically, as well as encouraging increased focus and the ability to work efficiently. Further cross-sectional evidence has demonstrated that adequate sleep is positively related to other aspects of academic self-care. Sufficient sleep is associated with other health promoting behaviours such as healthy diet, physical activity, proper stress-management, life appreciation and responsibility regarding health (Chen et al., 2006). As such, prioritising sleep is an important first step in good academic self-care. So even if you feel that you don't have time to sleep, find it anyway! It is time to wake up to the importance of a good night's sleep.

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Conference Review:

# The IEPA 10th International Conference on Early Intervention in Mental Health: 'Looking Back, Moving Forward'

Milan, Italy, October 2016

Anna McLaughlin

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*The International Early Psychosis Association (IEPA) Early Intervention in Mental Health Conference is held biannually and attracts speakers from a wide range of backgrounds, encompassing psychology, psychiatry, medicine, administration and public policy. This article highlights some of the exciting new research surrounding the role of stress in the pathophysiology of psychosis.*

**I**N OCTOBER 2016 I was lucky enough to attend the IEPA Early Intervention in Mental Health Conference held in Milan, Italy. This year's event was a three-day affair packed with 34 symposia, 22 oral sessions, over 500 poster sessions and more than 1000 delegates in attendance. While the conference predominantly focused on the study and prevention of psychosis, the programme was incredibly varied, with topics that spanned basic neuroscience and pharmacology through to new interventions and service assessments. One recurring theme that I was particularly struck by during the conference was the importance that researchers and clinicians alike placed on the influence of stress in psychosis, so in this review I will discuss two of the symposia I attended that investigated stress in psychosis, in addition to my own poster presentation.

One the first day of the conference the most exciting symposium I attended described preliminary findings from the European gene-environment interactions (EU-GEI) study, which collected neuroimaging data from twelve mental health centres across Europe, Australia and China.

This is one of the largest prospective, longitudinal neuroimaging studies of individuals at ultra-high risk for psychosis, collecting data from 369 subjects over a period of five years. Dr Matthew Kempton (King's College London) spoke first on how urbanicity, which refers to the impact of living in highly populated urban areas rather than rural environments (Vlahov & Galea, 2002), and early cannabis use was found to increase the risk of developing a psychotic disorder, as well as reducing cortical thickness. Tamar Kraan, a PhD student at the University of Amsterdam, then discussed how a history of child abuse increased the risk not only for developing a psychotic disorder, but also depression, post-traumatic stress disorder and anxiety symptoms. Dr Ulrich Reninghaus (Maastricht University) then explained how elevated stress-sensitivity may provide a mechanistic link for why these high-risk individuals developed psychotic symptoms. The final talk by Dr Tom Pollak (King's College London) took the focus in a slightly different direction, highlighting a novel area of research suggesting that some cases of psychosis could be attributed to autoimmune dysfunction. His

data showed that pathogenic autoantibodies, such as the N-methyl-D-aspartate receptor auto-antibody, were more prevalent in individuals at high-risk for developing a psychotic disorder than in healthy controls, suggesting disruption to the blood-brain barrier.

I was particularly fascinated by the possibility of stress causing immune system dysfunction in psychosis, so on the second day I attended a symposium on 'Immunotherapies for psychosis and depression: Promising new lead or blind alley'. My current employer, Dr Valeria Mondelli (King's College London), presented data supporting a strong role for activation of the immune system in psychosis. Dr Mondelli discussed two studies from our group. The first showed that increased inflammation was present at the onset of psychosis and that higher levels of inflammation were associated with non-response to antipsychotic treatment (Mondelli, 2015); the second that increased inflammation at the onset of illness predicted greater weight gain during treatment (Russell, 2015). This was followed by compelling data from Dr Golam Khandaker's group (University of Cambridge) showing that increased inflammation at age nine increased the risk of developing depression, psychotic experiences and psychotic disorder at age 18. Dr Khandaker has since published further data on this topic, showing that inflammation in adolescence increases the risk of developing schizophrenia at age 27 in a linear, dose-response association (Metcalf et al., 2017). Early life adversity and childhood trauma were suggested as potential triggers for this increased inflammation, further suggesting a causal role for stress in the pathophysiology of psychosis. Overall, I found the theories presented in this symposium to have a strong evidence base, and the potential for stress to activate the immune system presented a clear and unique new target for intervention and therapy in early psychosis.

On the third and final day of the conference, I was incredibly excited to present

my poster during the lunchtime session. The poster focused on the findings of my MSc dissertation project, where I analysed neuroimaging data from individuals with schizotypy. Schizotypy is the presence of psychotic-like symptoms in clinically healthy individuals, making the study of schizotypy valuable for understanding the pathophysiology of schizophrenia. My results showed that individuals with schizotypal symptoms demonstrated an interaction between glutamatergic neurotransmission and resting-state brain activity which was not found in the control group. Glutamate is the major excitatory neurotransmitter in the human brain, and alterations in glutamate neurotransmitters have been observed widely in patients with schizophrenia (Merritt et al., 2016). Excess glutamate is believed to increase resting-state activity, leading to the development of psychotic symptoms (Schobel et al., 2013). Therefore, my findings provided exciting new evidence that even individuals with psychotic-like symptoms demonstrate subtle neurobiological differences implicated in clinical psychosis. Presenting my poster was a highly positive and rewarding experience, and the insight I gained from talking to experts within my field has equipped me with valuable insight to incorporate into the write up of this study.

In summary, the wide coverage of the conference allowed me to gain a holistic perspective of psychotic disorders, learn about emerging research into the pathophysiology of psychosis, early intervention programmes and data from longitudinal studies. The only drawback of attending such a large conference was that many of the symposia and oral sessions clashed, so on occasion I found that several talks I had wanted to attend were running simultaneously. However, this is inevitable with such a large programme and the IEPA have recently started recording oral sessions and making them available online. Overall, I would highly recommend attending the IEPA Early Intervention in Mental Health

conference, as it caters to all research and clinical backgrounds.

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## Conference Review:

# American Association of Suicidology 50th Annual Conference

Donna Littlewood

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*The 50th Annual Conference of the American Association of Suicidology drew a diverse range of attendees, who share an interest in suicide prevention. This provided a unique opportunity to disseminate findings of two studies from my PhD research to fellow researchers and psychologists, as well as other healthcare professionals, crisis centre staff and volunteers. Delegates also included people who have lost a loved one to suicide or had lived experience of suicidal thoughts and behaviours. By bringing together the different stakeholders in suicide prevention, this conference provided a mixed and thought-provoking programme.*

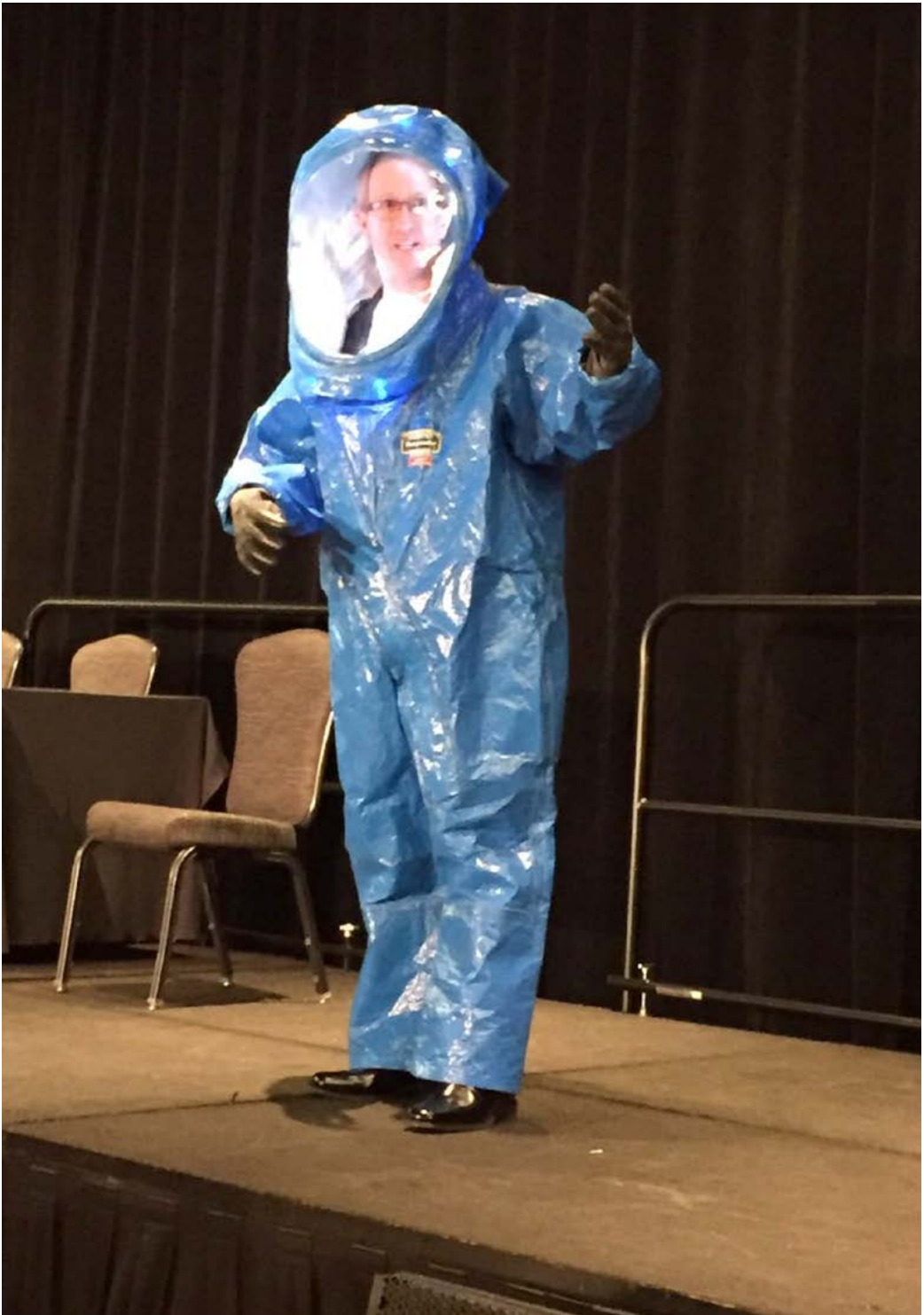
**A** RECORD BREAKING 1400 people attended the 50th annual conference of the American Association of Suicidology in Phoenix, Arizona. The conference successfully attracts a diverse range of delegates, including researchers, clinicians, crisis centre volunteers, people bereaved by suicide, and people with lived experience of suicide. In coming together with the common goal of suicide prevention, the conference had a very humbling atmosphere, where academic hierarchies have no place, and each person's viewpoint holds equal weight.

During her opening address, the incoming President Dr Julie Cerel noted that despite the many successes over the past 50 years since the Association's inception, the suicide rate has risen in the US across the previous decades (Centers for Disease Control and Prevention, 2016). She called for delegates to focus on innovation, decreasing stigma and increasing communication with people outside of those working towards suicide prevention.

The conference programme commenced with a series of plenary's and TED-style talks in the morning before breaking into symposium and paper presentations in the afternoon.

One of the highlights for me was a TED talk from Dr David Covington, who took

to the stage in a full hamzat suit to tell the story of the fear that spread across the US relating to the Ebola virus. Dr Covington argued for the need to spread stories of courage rather than fear, by shining a light on the stories of people who have survived suicide attempts, and found the courage to continue. This focus on changing the narrative from preventing death to promoting life struck a chord with me. My own research seeks to understand how poor sleep acts as a risk factor for suicide, and in that sense is reflective of the largely risk-based approach research takes to preventing suicide. However, throughout the conference there was a compelling argument to re-address the balance by partially shifting focus to developing understanding of resilience and how people find meaning and reasons for living after suicidal experiences. A good example of this is the 'Live Through This' project, which is a collection of stories of suicide attempts told by the survivors. The project was created by a fellow survivor and psychology graduate, Dese'Rae L. Stage, who is now working with researchers at the University of Louisville to conduct qualitative analysis on the interviews. The main aims of this analysis is to understand how people make sense of their attempt, and



David Covington delivering 'The story of Ebola and what it means for suicide prevention'  
(Image credit: @CarlDunnJr via Twitter) (Video available at [www.youtube.com/watch?v=C15DaU8A6vM](http://www.youtube.com/watch?v=C15DaU8A6vM))

how they find positive changes following an attempt. The importance of finding meaning was also emphasised in a plenary by Dr Robert Neimeyer, whose work includes the experience of grief amongst those bereaved by suicide. His work has illustrated how difficulties in finding meaning fully mediate the relationship between suicide loss and complicated grief. Furthermore, he has developed therapeutic interventions focused on helping people construct meaning during the grief process.

Finally, I was grateful for the opportunity to present findings from two empirical studies conducted as part of my PhD programme. The scheduling gods assigned my oral communication to 'Predictors of suicide risk', which was held in one of the larger break-out rooms, drawing an audience of around a hundred people. As much as I would like to believe that they were all there to hear about my latest work into sleep and suicide, the opening speaker was Professor Thomas Elli, a prominent clinician and researcher whose books and journal publications have focused on evidence-based psychotherapeutic interventions for suicide prevention. My presentation focused on an experience sampling methodology (ESM) study which examined the bi-directional relationship between objective and subjective sleep parameters and suicidal thoughts. ESM refers to the real-time repeated collection of data points multiple times each day over a specific time period. This methodology has been underutilised in suicide research, which is surprising given that suicidal thoughts are known to fluctuate (e.g. Witte et al., 2005). Following the presentation, I was approached by early careers researchers from different institutions across the US, keen to hear more about developing and conducting ESM studies. I am hopeful that these contacts may lead to future collaborations. At the poster session, I presented mixed-methods research on the short- and long-term impact of participating in suicide research. In accordance with previous work (e.g. Biddle et al., 2013), participation in suicide-related

research is generally associated with more positive than negative outcomes. In addition, we showed that positive outcomes can be enduring, with participants reporting increased self-understanding and a personal sense of altruism 5–13 months after participation. This work spoke more broadly to the wide range of researchers in attendance, but also to those who were representing the work of crisis contact centres.

The conference was truly an invaluable experience. It allowed me to disseminate my research and answer questions on two research studies which felt like good preparation for my viva voce. It also gave me a wider understanding of the differences between the UK and US research environments, which will serve me well should I manage to turn any of my new contacts into collaborators in the future.

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# Book Review

## *Quit Smoking: Sheldon Mindfulness*

Dr Cheryl Rezek

(Sheldon Press, 2016)

Reviewer: Liam Knox

I would like to thank Dr Cheryl Rezek and Sheldon Mindfulness for creating a well presented and thoroughly useful book. *Quit Smoking* is an example of how self-help books should be composed, with well researched references, easy to follow passages and guided meditations. This book has a wealth of positives, but one of its principle strengths is the understanding shown for the smoking cessation process, and the non-judgemental writing which makes it accessible and effective for even the most addicted smoker. I would recommend this book to people at all stages of the smoking cessation process.

*Quit Smoking: Sheldon Mindfulness* is a relatively short book (a little under 90 pages) which pleasantly equips the reader with some simple mindfulness techniques to begin, or continue, their road to smoking cessation. This book is easy to read, but also includes a diverse range of references, which demonstrate the author's knowledge of the subject area and background reading. This gives the book more credibility compared to other available materials, whilst also allowing a reader to digest the material quite easily in one afternoon.

The book starts with a short section about how it can be useful for the reader, but avoids bombarding them with statistics about the damaging effects of smoking for one perfect reason: 'You [already] know how harmful it is'. The author then explains addiction, the stress response and some very straightforward mindfulness techniques that can help the reader deal with all phases and types of cravings. Thus, the book represents a useful tool for individuals at all stages of smoking cessation.

Mindfulness techniques, however, cannot just be carried out once to solve a complex addiction. This makes the fact that the book



is small a great advantage. Being slightly under A5 page size means it will easily fit inside a coat pocket, just in case the reader needs to read up on a particular mindfulness technique to beat a craving. Additionally, the end of each chapter is finished with a summary box, so that information can be quickly recapped if needed.

The book is accompanied by audio downloads to lead the reader in guided meditations and mindfulness exercises, but written transcripts of some of these downloads are given, so the reader can get a taste of what these encompass. The descriptions of the exercises are effectively explained and are aimed at all types of readers. Originally being sceptical of the effectiveness of mindfulness techniques, I was worried when asked to 'breathe into my toes'. The book quickly extinguishes any worries or prejudices a reader may have, however, and insists that this is meant metaphorically, acknowledging that the reader should just imagine the air reaching various parts of the body as they

relax. There is also a section introducing meditation to sceptics.

The book gently asks readers to give it a go, whilst at no point preaching that mindfulness is the only way to give up smoking; in fact there is a very thorough section of various medication that may be taken to help smoking cessation, alongside encouraging readers to seek medical help should they suffer rather common psychological side effects from the withdrawal process.

Quite possibly the number one positive that can be taken from this book is its realistic stance it takes on relapsing. Instead of berating the reader for failing to quit

a harmful habit, the book calmly reminds them that smoking cessation is not a state, but a work in progress. Giving up completely without any aids is successful for about five per cent of individuals, so the book encourages readers to learn from their failures and get back to trying to give up, by using mindfulness as just one of the many tools available.

### Correspondence

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- Great addition to the CV.
- Engage with the wider academic community.
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Or scan the QR code





# Dates for your Diary

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## **11–12 December 2017**

Division of Sport and Exercise Psychology Conference, *Glasgow*

## **10–12 January 2018**

Division of Occupational Psychology Annual Conference, *Stratford-upon-Avon*

## **11–12 January 2018**

Division of Education and Child Psychology Annual Conference, *Brighton*

## **17–18 January 2018**

Division of Clinical Psychology Annual Conference, *Cardiff*

## **Talks**

### **7 December**

The Evidence for Game Based Assessments in Recruitment, *London*

### **12 December 2017**

Using Research Evidence to Improve Educational Outcomes for Children and Young People, *London*

### **13 December**

The Future for Clinical Psychology and how it is represented, *Birmingham*

### **31 January**

‘Your brain on booze’: The Effects of Alcohol on the Brain, Behaviour and Cognition, by Dr Sally Adams, *Bristol*

### **31 January**

‘Learning in or opting out: Understanding how context constrains women’s career choices’, Professor Michelle Ryan, Exeter Psychology in the Pub, *Exeter*

### **28 February**

‘Differentiating Between Anger and Rage Can Inform Your Practice’, Sue Parker Hall, Exeter Psychology in the Pub, *Exeter*

**The Society’s website has a full list of BPS events: [www.bps.org.uk/events](http://www.bps.org.uk/events)**

# PsyPAG Committee 2017/2018

Position	Currently held by	Due for re-election
<b>Core Committee Members</b> corecommittee@psypag.co.uk		
Chair	Holly Walton chair@psypag.co.uk	2019
Treasurer	Jammy Stacey treasurer@psypag.co.uk (For claim forms: payments@psypag.co.uk)	2019
Vice Chair	Ryc Aquino vicechair@psypag.co.uk	2018
Communications Officer	Catherine Talbot ct500@exeter.ac.uk	2018
Information Officer	Becky Scott info@psypag.co.uk	2019
<b>Quarterly Editors</b> quarterly@psypag.co.uk		
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Marta Isibor marta.isibor@yahoo.co.uk		2018
Claire Melia c.r.melia@keele.ac.uk		2019
Philippa Carr carrp5@uni.coventry.ac.uk		2018
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Division of Clinical Psychology	Tom Merrill tom.merrill@liverpool.ac.uk	2018
Division of Counselling Psychology	Fraser Smith FSMITH30@caledonian.ac.uk	2019
Division of Educational and Child Psychology	Ramona Rusu 1301642@buckingham.ac.uk	2019
Division for Academics, Researchers and Teachers in Psychology	Ryan Gamble rg1009@york.ac.uk	2017
Division of Forensic Psychology	Andrew Duggan AJ.Duggan@outlook.com	2018

Position	Currently held by	Due for re-election
<b>Division Representatives (Contd.)</b>		
Division of Health Psychology	Alison Middleton alisonmiddleton93@yahoo.co.uk	2018
Division of Neuropsychology	Athina Tripli A.Tripli1@unimail.derby.ac.uk	2019
Division of Occupational Psychology	Aleksandra Tsvetanova aleksandratsvetanova9@gmail.com	2018
Division of Sport and Exercise Psychology	Darren Britton dbritton@bournemouth.ac.uk	2018
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Developmental Psychology Section	Rachel Jane Nesbit Rachel.Nesbit.2012@live.rhul.ac.uk	2018
History and Philosophy of Psychology Section	Vacant	
Psychology of Sexualities Section	Vacant	
Mathematical, Statistical and Computing Section	Derek Burns d.burns@shu.ac.uk	2018
Psychobiology Section	Hannah Avery hannah.lavery@northumbria.ac.uk	2019
Psychology of Education Section	Scott Orr scott.orr@strath.ac.uk	2019
Psychology of Women Section	Rose Lobban roselobban@yahoo.co.uk	2018
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Qualitative Methods Section	Nia Coupe (on maternity leave) niacoupe@manchester.ac.uk Maternity cover: Liam Knox Lik2@aber.ac.uk	2018
Social Psychology Section	Becky Scott Becky.Scott@hud.ac.uk	2018
Transpersonal Psychology Section	Paul Sharpe Paul.sharpe@plymouth.ac.uk	2018

Position	Currently held by	Due for re-election
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London and Home Counties Branch	Natalie Gentry nwg5@kent.ac.uk	2018
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<b>Other Committees</b>		
Standing Conference Committee	Kerry McKellar kerry.l.mckellar@northumbria.ac.uk	2017
Undergraduate Liaison Officer	Tara Emily Walker tarawalker2010@hotmail.co.uk	2018



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# DOP Annual Conference 2018

10–12 January 2018 – Crowne Plaza, Stratford-upon-Avon

## Evolution $\frac{+}{\text{or}}$ Revolution



The DOP Conference 2018 will showcase the ongoing excellent work in psychological research and practice, and provide an opportunity for discussion, debate and challenge on how we can best utilise our skills to continue to make a meaningful impact in the world of work.

### Confirmed keynote speakers

Professor John Antonakis, *University of Lausanne*

Professor Robert Hoffman, *The Institute for Human & Machine Cognition (IHMC), Florida*

Dr Elaine Pulakos, *President of PDRI, USA*

Dr Edwin A. Locke, *R.H. Smith School of Business, University of Maryland*

Professor Karina Nielsen, *Sheffield University Management School*

### What else can I expect?

- Seven streams of presentations to choose from
- Advice sessions on qualifications and careers
- Networking, social and entertainment programmes
- Welcome and support for first-time and international delegates
- Exhibition, poster displays and fringe events. Please email for information on the exhibition and sponsorship packages we can offer [michael.niskin@cpl.co.uk](mailto:michael.niskin@cpl.co.uk)

### Programme

Draft programme is available online (see address below).

**Registration is still open!**

w: [www.bps.org.uk/dop2018](http://www.bps.org.uk/dop2018) e: [dopconf@bps.org.uk](mailto:dopconf@bps.org.uk) t: +44 (0)116 252 9555

# The British Psychological Society

Promoting excellence in psychology

## Your structural review

We need to change. And we need to change quite significantly in many areas. This starts with what we are here for.

### **What is the Society's vision?**

People, organisations and communities are equipped with the everyday psychological knowledge to navigate a complex world. Everyone can access evidence-based psychology to enhance their lives, communities and wider society.

To achieve this we need to be better at focusing on our aims, and have a structure that supports activities which are designed to achieve those aims.

### **How will the structural review help achieve this?**

The review will provide a simplified structure that better facilitates impact, is clear and transparent in terms of accountability, speeds up decision making and is better resourced.

### **What has been proposed?**

The Structural Review Group has been instrumental in devising and driving the current proposals. Recommendations have been made for changes to the whole BPS structure, including its governance (Trustees, Representative Council and its Boards) and its member networks (Divisions, Special Groups, Sections, Branches and Faculties).

### **Why is this happening now?**

Over time the number of networks has grown and in many ways this is welcomed as it's a sign of a healthy and growing discipline. However, the current number of networks means that resources can be spread too thin for us to make the kind of co-ordinated and sustained impact our members want to see.

### **How can I get involved?**

Our members' input in this ongoing process is vital and more consultations are in the pipeline. We are still looking for feedback so please add your voice and ask any questions you may have ([structuralreview@bps.org.uk](mailto:structuralreview@bps.org.uk)).

Further information about the review and the recommendations can be found at:

<https://beta.bps.org.uk/about-us/our-structural-review>.

[www.bps.org.uk](http://www.bps.org.uk)



The British Psychological Society

# PSYPAG

## About PsyPAG

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**PsyPAG** is a national organisation for all psychology postgraduates based at UK institutions. Funded by the Research Board of the British Psychological Society, PsyPAG is run on a voluntary basis by postgraduates for postgraduates.

PsyPAG's aims are to provide support for postgraduate students in the UK, to act as a vehicle for communication between postgraduates, and represent postgraduates within the British Psychological Society. It also fulfills the vital role of bringing together postgraduates from around the country.

- PsyPAG has no official membership scheme; anyone involved in postgraduate study in psychology at a UK institution is automatically a member.
- PsyPAG runs an annual workshop and conference and also produces a quarterly publication, which is delivered free of charge to all postgraduate psychology departments in the UK.
- PsyPAG is run by an elected committee, which any postgraduate student can be voted on to. Elections are held at the PsyPAG Annual Conference each year.
- The committee includes representatives for each Division within the British Psychological Society, with their role being to represent postgraduate interests and problems within that Division or the British Psychological Society generally.  
We also liaise with the Student Group of the British Psychological Society to raise awareness of postgraduate issues in the undergraduate community.
- Committee members also include Practitioners-in-Training who are represented by PsyPAG.

### Mailing list

PsyPAG maintains a JISCmail list open to *all* psychology postgraduate students.

To join, visit [www.psypag.co.uk](http://www.psypag.co.uk) and scroll down on the main page to find the link, or go to [tinyurl.com/PsyPAGjiscmail](http://tinyurl.com/PsyPAGjiscmail).

This list is a fantastic resource for support and advice regarding your research, statistical advice or postgraduate issues.

### Social networking

You can also follow PsyPAG on Twitter ([twitter.com/PsyPAG](https://twitter.com/PsyPAG)) and add us on Facebook ([tinyurl.com/PsyPAGfacebook](http://tinyurl.com/PsyPAGfacebook)).

This information is also provided at [www.psypag.co.uk](http://www.psypag.co.uk).

[www.psypag.co.uk](http://www.psypag.co.uk)

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