OCTOBER 2021

APPLIED PSYCHOLOGY AND HUMAN FACTORS GROUP

School of Psychology, University of Aberdeen

OVERVIEW:

Congratulations to Dr Lipan!

On the 3rd of August Gabi Lipan passed his PhD viva! The PhD thesis entitled *'Mind the gap: An investigation into the factors influencing student, academic and employer perceptions of required graduate attributes'* was supervised by Dr Amy Irwin, Dr Emily Nordmann and Dr Joy Perkins. The project involved close examination of graduate attributes and culminated in the development of a behavioural marker system designed to enhance observation and assessment of student graduate attributes in the classroom: https://research.abdn.ac.uk/applied-psych-hf/graduate-attributes/

Dr Lipan has already secured a new job as a data literacy coach with Multiverse and we wish him all the best for the future!

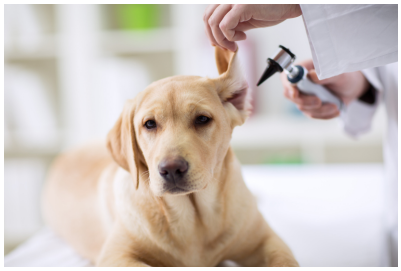
The quarterly APHF newsletter presents an activity summary of the research, industrial and clinical members. If you would like to receive the newsletter direct via email contact a.irwin@abdn.ac.uk.

Introducing - Elly Russell

Elly is a veterinary surgeon and Training Consultant at the Veterinary Defence Society (the UK's leading provider of veterinary indemnity insurance to the veterinary and veterinary nursing professions). Elly is worked in small animal veterinary practice for over 15 years and holds a post graduate qualification in small animal surgery.

She is currently completing a PhD at the University of Lincoln using primarily qualitative methods to explore the intersection between communication and patient safety in veterinary practice, using a human factors approach as a lens to guide this inquiry. Her research has explored the role of communication in veterinary litigation cases, developing a framework describing 'veterinary communication problems' in practice. This has led to a focus on the impact of team communication on the delivery of safe, high-quality care in practice, exploring how we might create the conditions for veterinary teams to communicate in ways that enhance the delivery of safe care. Elly is particularly interested in improving interprofessional communication to help teams collectively navigate the complexity of delivering veterinary care. She is exploring the use of video-reflexive ethnography as a tool to improve team reflexivity, narrow the gap between work as imagined and work as done and to generate context specific solutions to team communication challenges. Elly is a founding member of the Veterinary Communication Special Interest Group within EACH – International Association for Communication in Healthcare and is passionate about developing veterinary communication research approaches and impact.

Elly is passionate about helping veterinary teams deliver safe care through improved communication and in her role as a training consultant at VDS Training works to support veterinary professionals, teams and practices communicate well, achieve great patient outcomes, and to thrive. Elly designs and delivers a range of training to develop veterinary professionals' communication and other non-technical skills in practice.



Moving from academia to industry

By Dr Oliver Hamlet, Axiom Human Factors

During the final months of my PhD, I still wasn't absolutely sure on what my next step would be once I got my thesis submitted. I had always planned to move into industry after finishing my studies, but due to COVID-19 and its impact on the sectors I had initially had in mind, I felt that many of the opportunities that may have been open to me previously were, for that period of time, closed off as companies dealt with the fall out of the pandemic.

I had always liked the idea of having some freedom to align myself with exciting projects and organisations that were forward-thinking in the world of human factors, and having been contacted on several occasions across the last year of my PhD in regards to consultancy work, I thought I'd test the waters and see if I could make some opportunities of my own. I decided to set up Axiom Human Factors.

In the time since, I've driven the length of the UK, assisting with human factors facilitation courses, conducting thematic based incident investigations, and spent a great deal of time using academic rigour to help organisations develop, or else fine-tune, their human factors offering.

Recently, my time has been split between working from home in Aberdeen and traveling to England to assist clients in person. Generally, my home-based work involves working with clients on their existing HF materials or else helping them shape their approach towards modern thinking in human factors – in that regard a lot of my day to day from home is very similar to PhD work, aside from the fact that the world outside of academia is very fast moving and things need to be streamlined and compiled very quickly.Luckily, over a PhD, you get very used to trawling through information at a decent pace! My time away is often spent being the academic back-up in human factors facilitation sessions or helping to develop solutions to HF related issues. It's an awesome experience to work with individuals who have tremendous experience across high-risk industry, and my role has very much been to meet that experience with underpinning theory – to sort of lift the hood now and again and talk about what's going on from a scientific perspective. It's been a steep learning curve; a lot of driving, hotel stays, and navigating across the country, but it's been incredibly rewarding!

Media

BBC News: As part of farm safety week PhD student Ilinca-Ruxandra Tone talked about her recent interview study with farmers, discussing the factors influencing situation awareness - a key non-technical skill vital for safe and effective farm work. Key issues identified by farmers included stress and fatigue. Read more here: https://www.bbc.co.uk/news/uk-scotland-north-east-orkney-shetland-57861180

PODCASTS

Dr Oliver Hamlet took part in an Australian podcast with hosts Andy and Matt for the Australasian College of Paramedics. Oliver has worked extensively with Helicopter Search and Rescue teams and developed a human factors behavioural marker system known as HeliNOTS as part of his PhD. The discussion for the podcast covers areas such as, Non-Technical Skills, limitations and barriers to previous research and the impact of lifestyle factors on operator readiness.

Access the podcast here: https://paramedics.org/podcasts/16

New collaboration with STARS Air Ambulance

By Jason Arthur, STARS, and Sofia Johansson, UG Psychology student

Jason Arthur:
STARS Air Ambulance is a non-profit helicopter EMS (HEMS) provider in western Canada (www.stars.ca), recently Transport Canada implemented new fatigue management rules for all pilots. STARS saw these new regulations as an opportunity to partner with the University of Aberdeen as these new rules brought on challenges that required academic level research to be conducted. After seeing the high-quality work being produced by the Psychology and Human Factors Department, STARS approached Dr. Irwin to seek interest in what has developed into a joint effort in researching fatigue management for HEMS pilots.

Sofia Johansson along with Oliver Hamlet founder of Axiom Human Factors and PhD graduate from the department have been working under the direction of Dr. Irwin where Sofia has completed interviews with pilots throughout the STARS organization to better understand the challenges a 24/7 HEMS operation can bring. This will help in better developing a tailored made fatigue management program for STARS.

Sofia Johansson:
As a joint honours student in psychology and business management, having the opportunity to do my thesis within the field of applied organisational psychology really excited me! I was lucky to be selected by my supervisor Dr Amy Irwin to conduct research into fatigue management of the HEMS pilots at STARS Canada for my undergraduate thesis project.

The project has allowed me to apply the theoretical knowledge I have gathered over my degree, put my skillset to the test and really take ownership of my own research, which I believe has helped me to grow and gain confidence in my own abilities. Despite time zone challenges and a big bunch of nerves on my end, conducting the interviews themselves have been eye opening and very insightful; there really is no better way to get rich, in-depth data! I believe that as much as I have appreciated the pilots' time and thoughtful responses to my questions, they too appreciated having their opinions, thoughts and ideas heard.

People Factor Consultants internship project

By Scott Moffat, People Factor Consultants and Gabriel Brame, UG Psychology student.

People Factor Consultants took on an intern over the summer to support their ongoing Human Factors research and applied work.

Scott Moffat:
Having Gabriel as our summer intern was extremely useful and beneficial to our company. The main task we gave Gabriel was to conduct research for the projects we are currently involved in. Gabriel did an exceptional job with this research and he even found some articles which we had not previously seen/considered. Gabriel was a major part of the PFC set up during the summer and if all interns are to show his level of enthusiasm and maturity then we will definitely be asking for another summer intern in the future. Fantastic work Gabriel, thank you!

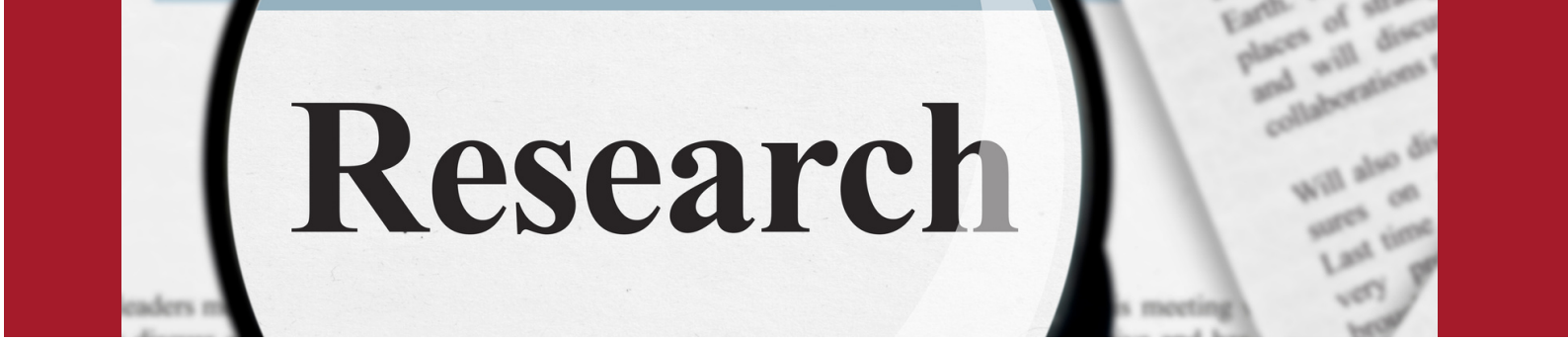
Gabriel Brame:
It has been a privilege to be able to work with People Factor Consultants (PFC) as an intern during two months over the summer. I applied for this internship because of my growing interest in the field of Human Factors and Applied Psychology. Going into it, I was particularly interested in gaining more knowledge of Non-Technical Skills, as this would be the topic that I would investigate during my undergraduate thesis. I was pleased when, amongst other activities, I was asked to help PFC by undertaking research in this area which they would then use to further develop their HF courses with recent research. Doing this research not only gave me a greater understanding of the field, relevant concepts and techniques that are used, but it also gave me an opportunity to apply what I have learnt in my Psychology degree. The weekly meetings with Scott Moffat also gave me insight into how this research would be implemented and how the consultancy part of the company works for the benefit of their clients.

Microcredentials and workforce development

Dr Joy Perkins, University of Aberdeen

The economic disruption caused by the COVID-19 global health pandemic has heightened awareness of workforce upskilling, reskilling, and career change. Recent research funded by the Quality Assurance Agency (QAA) Scotland for the project, '***Exploring the Potential of Micro-credentials and Digital Badging***' has also highlighted the need for employers and universities to reach out to each other, so that both understand how best to unlock the potential of micro-credentials, to reshape workforce development and short course learning.

Universities and employers are, therefore, at a critical juncture with these smaller, more flexible units of learning, so- called 'micro-credentials', and how best to use these in professional development, lifelong learning, and recruitment activities. Read more about micro-credentials in our opinion piece, 'Scoping the Potential of Micro-credentials to Develop the Workforce' here.



Creating a model of deviance normalisation

By Nejc Sedlar, PhD student, University of Aberdeen

Laws, rules, and expected norms regarding how we ought to behave exist throughout all domains of our daily life, be it when driving, playing sports, or operating within a workplace. We often think of these as the guidelines that keep things in check and enable human systems to function smoothly. High-risk industries, such as aviation, healthcare, and energy, depend on these rules to ensure the safety of operations, protecting both the physical wellbeing of operators and the integrity of the work process. Adhering to expected standards and procedure can however prove challenging in industry contexts where emphasis is increasingly placed on efficiency and production outputs.

High-risk industry organisations face the challenge of balancing safety against production pressure demands. In light of these demands many violations can appear relatively harmless at face value when they provide the corner-cutting benefits of improved productivity; e.g., skipping safety checks to save time. When such behaviours are regularly engaged in without immediate negative consequence, a process known as normalisation of deviance (NoD) is said to take place. Through NoD, behaviours and practices that may otherwise be deemed risky or unacceptable become normalised as routine and set precedents for what is seen as permissible.Unfortunately, the consequences for regularly engaging in deviant practices are often only fully understood after the occurrence of a serious accident or disaster, with human error cited as a leading cause of numerous high-profile incidents. In many of these cases the behaviours responsible are rarely one-off instances of rule violation, and investigations often uncover long standing patterns of compromised safety practices.

For this reason there is considerable interest in breaking down the NoD phenomenon within high-risk industries to allow for the development of interventions. We have recently conducted a systematic review on the NoD phenomenon within high-risk industries in order to collate the current understanding of the phenomenon. Combining insights from a number of industry perspectives ranging from healthcare and firefighting to chemical production, we constructed a preliminary model of NoD development where we attempt to demonstrate how the organisational context and its demands interact with human factors to sustain NoD. Focusing on the continuous and cyclical nature of NoD, our model attempts to showcase the maintenance and development of the phenomenon, identifying elements of production pressure, procedure/environment design, culture and leadership as key contributing organisational factors. These affect operators perceptions or tolerance towards risk and the organisation's ability to institute pre-emptive actions to prevent the continuation of deviant practices and their potential escalation.

Our hope is that our model will offer a clearer representation of NoD, and that by identifying key organisational influences we may provide new insights that will aid in the development of targeted intervention strategies. At present the model is still preliminary, and through our current focus on gathering data from incident reports we hope to obtain evidence that will help validate, refine, and enhance the model so that it may provide a more accurate representation of NoD within high-risk industries.

BPS Survey: The impact of Covid-19 on students, staff and departments of Psychology in UK Universities.

By Dr Ceri Trevethan, University of Aberdeen
Recent online surveys carried out by the BPS into the impact of Covid-19 on the delivery of teaching and research on psychology students and academic staff highlighted:

TEACHING AND LEARNING:

· Change to online teaching delivery had a greater negative impact for disabled students, international students and those with caring responsibilities
· Change to online teaching delivery resulted in a significant increase is workload for staff
· PhD students noted decreased opportunities to present their work and research findings
· Students indicated a preference for return to face to face supervision and small group teaching

RESEARCH:

· Staff reported high increased workload and less time for research
· Female staff and those with caring responsibilities most significantly impacted

WELLBEING:

· Large majority of staff and students reported decline in wellbeing since Covid-19
· Students with disabilities and those with caring responsibilities indicated most significant decline

Download the full report here.

CLIENT INCIVILITY IN VETERINARY PRACTICE

By Dr Amy Irwin, University of Aberdeen

Rudeness or incivility are generally understood to be unpleasant behaviours that violate the social norms of a workplace. Everyone is likely to experience incivility at work at some point - with estimates suggesting 98% of workers will experience rudeness at least once. Since these are fairly common, and relatively low level behaviours (at least in comparison to aggression and bullying) you would be forgiven for assuming that the experience of rudeness at work wouldn't have much of an impact - but sadly you would be wrong. Rudeness, particularly persistent rudeness, can result in the target experiencing stress, emotional upset and fatigue, and can have an adverse impact on work performance, among other things.

The likelihood of experiencing rudeness, and the associated impacts, is higher for front facing industries - such as veterinary practice. In our recent study examining the experience of client incivility in veterinary practice our interviewees reported client incivility could result in stress, withdrawal from clients and even function as one of the reasons for a career change. Participants had developed coping strategies but emphasised the importance of a supportive practice. Read the full results here.

Preprints and papers

PREPRINTS (papers submitted to journals but not yet published - these can all be accessed for free).

Irwin, A., Tone, I-R. & Sedlar, N. (*pre-print).* Developing a behavioural marker system for farmer non-technical skills (FLINTS). Access here: https://psyarxiv.com/un5by

PAPERS (papers in press and published in academic journals)

Irwin, A., Hall, D. & Ellis, H. (*in press).* Ruminating on rudeness: Exploring the experience of client incivility in veterinary practice. *Veterinary Record.*

Irwin, A., Milhulkova, J., Berkeley, S. & Tone, I-R. (*in-press).* No-one else wears one: Exploring farmer attitudes towards All Terrain Vehicle helmets using the COM-B model. *Journal of Safety Research.*

CONTACT DETAILS

If you would like further information about any of the projects featured in the newsletter, would like to join the APHF as an associate member, or would like to explore a potential collaboration with the team please contact Dr Amy Irwin (APHF lead) in the first instance:
Email: a.irwin@abdn.ac.uk

Alternatively take a look at the APHF website: https://research.abdn.ac.uk/applied-psych-hf/

APHF Applied Psychology & Human Factors Group