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**Research,
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Health & Wellbeing Institute

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The Health and Wellbeing Institute brings together specialists to develop high-impact, sustainable solutions to society’s health and wellbeing challenges.

Our expertise and resources span the full breadth of the Health and Wellbeing agenda, including health and social care service delivery, public health, health leadership, digital health, addiction, nutrition and maximising human performance.

Our aims are to:

Act as a centre for generating ground-breaking ideas through dialogue with a broad range of public, private and third sector leaders to create a powerful voice that influences government policy and practice.

Work with organisations in the health and wellbeing sector to deliver new products, systems change and bespoke training – utilising LSBU’s specialist knowledge, facilities and equipment.

Deliver innovation in health by supporting start-ups, SMEs (Small and Medium Enterprises) and large organisations to develop and deliver novel products, processes or services.

Improving wellbeing through argument

Healthcare and wellbeing are central to the lives of everyone in the UK, and shaping the future of these important areas requires inclusive, open discussion, which is why LSBU set up the Health Debates series – in order to kick start the conversation.

Open to all, the debates bring together leading experts and critical thinkers with workforce and service users to create a space where important and contentious topics can be discussed intelligently, critically and openly. Dr Elaine Maxwell, founder of the debates, explains:

“The LSBU Health Debates series was designed to create a space for considering key policy issues affecting health professionals in England. We wanted to target a specific audience of influencers and opinion formers, which is why the motions are framed to reflect the current challenges and are debated by leading national figures.”

At every debate the panel, the audience and followers on social media probe topical questions,

discuss potential solutions and identify barriers to change.

Importantly, the debates aren't necessarily about finding answers; they provide a platform where opinions can be articulated and heard and where issues can be discussed.

And as Dr Maxwell points out, the significance of the discussions is already being recognised by opinion formers: “The main points and conclusions of all seven debates have been published in peer reviewed academic journals as well as reported widely in the weekly health news press.”

Warren Turner, Dean of the School of Health and Social Care, is particularly proud of what the debates have achieved: “The LSBU Health Debates have enabled us to provide a safe

environment to discuss a range of topical and weighty issues for the sector. They have brought together senior thought leaders offering a wide range of perspectives and they have been well covered in the nursing and related press. They have also enabled senior colleagues in health and social care to explore often complex issues in detail and from several perspectives and to do so in a public open space. I am proud that LSBU hosts these and to see the impact of the debates in both the development of policy and the improvement of our public services.”

With more debates planned for the coming year, LSBU hopes that they will continue to attract high numbers, inspire rigorous discussion and influence policy at the highest level.

Past debates

Health regulation: public protection or professional burden?

For regulation:
Jackie Smith, Chief Executive of the Nursing and Midwifery Council.

Against regulation:
Dr Peter Carter OBE, former Chief Executive of the Royal College of Nursing.

Are we addicted to sugar? Waistlines, wallets and sugar taxes.

For the motion that we are addicted to sugar:

Malcolm Clark, Sustain.
Dr Mick Armstrong, British Dental Association.

Against the motion that we are addicted to sugar:
Dominic Watkins, DWF.
Emily Barley, People against Sugar Tax.

Will removing the restrictions on nursing student places and NHS funded nursing bursaries and fees increase the supply of registered nurses in the UK?

For the motion:
Elisabeth Jelfs, Director, Council of Deans.
Charlotte Johnson, Newly Qualified Nurse, Papworth Hospital NHSFT.

Against the motion:
Robert Waterson, Newly Qualified Staff Nurse, Guy's and St Thomas' NHSFT.
Serena Ruffoni, Nursing Student, London South Bank University.

A follow-on Nursing and Midwifery strategy to Compassion in Practice will have an impact on the service

For the motion:
Jane Cummings, Chief Nursing Officer, NHS England.
Janet Davies, Chief Executive and General Secretary, Royal College of Nursing.

Against the motion:
Dr Elaine Maxwell, Associate Professor, London South Bank University.
Dr Pete Thomond, Managing Director, Clever Together.

Is health and social care person centred?

For the motion:
Kath Evans, Head of Patient Experience, NHS England.
John Walsh, Manager, York Street Practice, Leeds.

Against the motion:
Professor Andrée le May, University of Southampton.
Shaun Lintern, Health Service Journal.

Tweets/comments about/ from the debates

Anne Cooper @Anniecoops
Really enjoyed debate re new #nursing strategy last night. Thx @janetRCN @Pete Thomond good conversations #LSBUCiP

Kath Evans @KathEvans
Excellent perspectives by @LesleyJBaillie @maxwele2 of @LSBU quality of care & delivery at heart of both perspectives #LSBUHealthDebates

Kath Evans @KathEvans2
Thank you all so much for an informed & mature debate on nursing workforce @LesleyJBaillie @maxwele2 @LSBU #LSBUHealthDebates

Chris Longhurst @news_rcni
Former @theRCN gen sec Peter Carter congratulates @LSBU_HSC on having 'important' debate. Says nurses must take interest #LSBUHealthDebates

The Health Systems Innovation Lab

The NHS is currently facing one of the most challenging political and financial environments in its near-70 years of existence. In order to survive and flourish for another 70 years, it will need to develop and change quickly, adapting to new ways of working and learning from its own successes and failures.

Through the Health Systems Innovation Lab at LSBU Professor Becky Malby is hoping to address that. The Lab offers a new and unique way to facilitate networking and peer learning within the NHS.

“Scaling up change is a gigantic challenge for any organisation,” says Becky. “The NHS is no different. While some places in the NHS are really good at some things, they are not so good at others, and other parts of the country may have completely different strengths and weaknesses. We’re here to enable place-based change, helping locations improve what they do and learn from each other, and we’re aiming to get people hungry for change – and then empower and enable them to make it happen.”

Change is perhaps more difficult to implement within the NHS than other organisations due to its interconnected nature – changing one seemingly small element can have a knock-on effect into other services and areas. In such an environment, there is no ‘one size fits all’ answer to best practice, so, for Becky, a strong network to discuss and enable change is key.

“It’s about reciprocity,” she says. “It’s not about one place having all the answers, because it never works like that. Places are usually ahead on some things and behind on others, but through sharing and encouraging the spread of knowledge, we can create a network that helps everyone.”

One important element of encouraging that change, Becky feels, is the way the Health Systems Innovation Lab is aiming to give younger career professionals a seat at the table. “Often, health leaders don’t involve the young and emerging leaders in change work, but they are actually often more suited to it,” she says. “They are used to peer-based learning and aren’t caught up in hierarchies. A big part of what we are doing is giving them the support they need to develop a stronger voice in the system. If we’re going to find a solution to this very complex problem, we need to have these young leaders involved in it.

“It’s the kind of project that works brilliantly somewhere like LSBU, because there is such a strong background here of co-production of this kind of learning, and that’s

something the NHS needs to do better – to listen to other voices,” says Becky. “It’s something I’m passionate about too. I’ve been a public servant all my life and worked in clinical teams, as a general manager and more in the NHS, so I know that what we are doing works.”

Although the Lab is still in its infancy, Becky is pleased with some of the early progress that has been made. “It’s already happening, even though we are brand new in this sphere,” she says. “People are starting to work with new peer groups, networking together and sharing insight and intelligence. There’s more to do, but we are off to an encouraging start.”

To find out more about how the Health Systems Innovations Lab is changing the future of the NHS, visit www.lsbu.ac.uk/business/expertise/health-wellbeing-institute/health-systems-innovation-lab



Addictive health behaviours research

Addictive behaviours affect large numbers of the UK population, with 1.6 million people believed to be dependent on alcohol in England and Wales, and 1 in 7 children living with a substance-abusing parent.

As a result, the UK spends billions on services associated with managing addictive behaviours such as healthcare, welfare and policing. Alcohol abuse alone costs taxpayers £21 billion each year.

While costs matter, it is the human consequences that present the real tragedy. It is vital that we increase our understanding and knowledge of how addictive behaviours operate so that we can change and manage them for the benefit of everyone.

The Addiction and Health Psychology group at LSBU are at the forefront of this endeavour, carrying out internationally recognised research into a range of addictions.

The group take a psycho-social view of addiction, as Dr Dan Frings explains: “We don’t limit ourselves to chemical substances or behaviours recognised in clinical manuals. We see addictive behaviours as any which are habitual, hard to control and difficult to stop yourself doing. So, potentially, a wide range of behaviours can be seen as addictive from drugs, to eating, to checking social media.”

This broad definition is reflected in the variety of work they do. They have undertaken research into every addiction you can think of, from methadone use, e-cigarettes, gambling and alcohol (both problematic and everyday) to crack addiction, sexual compulsivity, eating behaviours, social media use, chocolate consumption, sugar consumption, smoking and novel psychotropics.

The group are currently working on numerous projects. They are always on the look-out for new partners and new projects to further their understanding of addictive behaviours.

The Pub Lab

The research team have use of a fully stocked bar-laboratory, known as the Pub Lab, which allows them to conduct social experiments. It’s equipped with cutting-edge technology, including cameras and microphones, and offers a level of experimental control that wouldn’t be possible in a normal pub environment.

Mini case studies

Responsible drinking messages backfire, leading people to drink more

Research found that poster materials promoting responsible drinking were associated with increased consumption among undergraduate students, suggesting that poster campaigns to reduce alcohol harms may be having the opposite effect to that intended.

Personality traits predict problematic social media use

The research found that personal and social variables appear to explain perceived frequency of Facebook use and problematic Facebook use among adolescents. Both need to be taken into account by researchers and educational practitioners.

- Emotional stability, extraversion, conscientiousness and norms directly predicted problematic Facebook use.
- Gender, group norms and social identity predicted perceived frequency of Facebook use.

E-cigarettes: Low nicotine liquid leads to higher consumption

The study explored whether e-cigarette users engage in more intensive puffing when they switch from a high to a low nicotine strength e-liquid.

- Liquid consumption and puff number were higher, and puff duration longer, in the low nicotine strength condition.
- Blood nicotine delivery remained significantly higher in the high nicotine strength condition reaching 34mg/mL in just 10 minutes (equivalent to levels achieved via cigarette smoking).
- With the recent implementation of the Tobacco Products Directive in Europe this year, those using nicotine levels exceeding 20mg/mL will be obliged to switch to a lower nicotine strength e-liquid.
- Our results suggest that such individuals will increase their liquid consumption which may, in turn, increase exposure to potential toxicants and carcinogens in e-liquid aerosol.

The group work with and alongside other organisations to carry out their research, including:

- Cambridge University (Behaviour and Health Research Unit)
- Drinkaware
- HAGA
- King’s College University London
- Lifeline
- Norwich Medical School, UEA
- Queen Mary University
- Queensland University, Australia
- Roswell Park Cancer Institute, US
- Turning Point
- UK SMART Recovery
- University of Manchester
- University of Padova
- University of Porto
- Westminster Drug Project

Bespoke partnerships

Is flexibility the key to effective partnerships?

According to Professor Sally Hardy and her academic departmental team in the School of Health and Social Care, the most important aspect of working with external partners is to remain flexible and responsive.

You might say being flexible is a cliché and a phrase that gets bandied about a lot, almost to the point of being meaningless, so what makes Professor Hardy's team different in how they work effectively?

For a start, they're speaking from experience; the team work on a number of collaborative projects each year, delivering bespoke transformational programmes. These organisation-wide programmes aim to bring about change based on best evidence, best practice and sustainable stakeholder engagement. Projects include applied research, creative service evaluations, stakeholder and team development,

and policy/practice-driven innovations.

From the start, collaboration and iteration is built into every stage of their project work. This allows the team not only to develop tailored solutions based on specific needs but, perhaps more importantly, engaging in the project work at a collaborative level allows clients and their stakeholders the chance to flourish.

A flexible approach is also key to how the team remain motivated to push the boundaries, particularly when "the organisation is left in a better position than when they came to us... but it's also beneficial for the University because we gain further knowledge from the experiential work that we do to further inform the next project."

So how do they work?

They kick off all their projects with a conversation. This gives the team the opportunity to get to know the organisation's vision and values, and to work out together what it is they really need to focus on. Sally explains: "We work in an iterative way with clients, enabling them to refine their requirements. We aim to provide real solutions to real-life situations, which

is one of the things that makes our approach stand out."

The departmental team draw from their own professional, academic and clinical experience, which provides essential understanding in how best to speed up commissioning and, ultimately, the inclusive collaboration process. "Most organisations have quite a clear idea of what they need. They come to us with a rough outline and then we can usually elaborate and develop ideas based upon what we have expertise in, and often have already dealt with through past experience. Although every organisation is unique and different, themes of work come up, many are quite similar at a fundamental level of engaging in sustainable transformation, so we have now achieved knowledge and evidence of a number of responses that seem to fit quite well," explains Armin Luthi, team member with a special interest in evidence-based therapeutic interventions.

They find that the most common issue at the commissioning stage is the potential mismatch between what the organisations state they want and what the workforce need or are expecting. Agility is absolutely key in bridging that gap, as Sally explains:

"Often by the time you get to meet the workforce they are expecting something very different to what the organisation has requested. There is a period of negotiation around what the organisation think they need. We often have to go back to the organisation and say we've come in to deliver this but your staff are actually asking for this, so we can deliver on both by doing this... which is where we can be more flexible in terms of how we deliver and what we deliver. That works well, when you have a synergy."

Taking the time to get the commissioning right, allowing for flexibility and employee input is clearly beneficial as it makes for a smoother implementation phase, but the iteration doesn't stop once implementation is under way, as Sally points out: "We like to have a reciprocal dynamic process where we're constantly offering up a supportive challenge and getting feedback from participants who in turn feedback to their parent organisations. We constantly evaluate what we're doing so that we can adapt and get the best results for everybody."

Feedback is also vital for encouraging and maintaining staff engagement which is critical to the success and sustainability of any project, particularly for any long-term schemes such as organisational change programmes, where a culture of change needs to become self-sustaining.

The results speak for themselves. In the last year the team have worked with several large NHS organisations developing policy to practice changes, as well as private organisations seeking workforce development opportunities, and smaller localised evaluation programmes.

Ultimately, the level of flexibility depends on the organisation's budget, project deadlines, and the complexity of the intervention. However the approach is designed to give the best results within these constraints. "I think it's that level of flexibility and responsiveness that is developing our reputation. LSBU is the partner to choose if you want to develop bespoke programmes of activity, based on the philosophies and values of your organisation and pragmatically, achieved within your budget."

The results speak for themselves. In the last year the team have worked with several large NHS organisations developing policy to practice changes, as well as private organisations seeking workforce development opportunities, and smaller localised evaluation programmes.

Human Performance Centre

At LSBU's Human Performance Centre (HPC), scientists with expertise in biomechanics, human and exercise physiology, sports psychology, perceptual-motor control, nutrition, biochemistry and engineering work with cutting-edge technology to improve health, wellbeing and human performance. Their work is underpinned by internationally recognised research expertise.

The team collaborate with individuals, businesses and communities to promote healthy lifestyles, elite performance and innovation.

The HPC also provides efficiency-testing services to generate supporting evidence for Intellectual Property and marketing claims.

Their vision is to deliver market-leading and innovative science services to the sector that generate success for clients under three branded themes – InnovateWell, PerformWell and LiveWell.

InnovateWell

The HPC's scientists are experts in generating and delivering new ideas to market. If you have a product idea, they can assist you through the stages of development from fundamental discoveries, product testing and development up to implementation and evaluation.

PerformWell

Tailor-made PerformWell programmes cater for coaches, elite athletes, teams and recreationally active sports people as well as those who want to initiate exercise. The team at the HPC, led by a BASES-accredited physiologist, work closely with clients to assess, advise and monitor performance.

LiveWell

The LiveWell programme is designed to help improve health and wellbeing through individually tailored assessments, lifestyle interventions and guidance. The HPC also offer short educational seminars on topics related to human health and performance.

Collaboration and partnership

The HPC has a history of success, not just in helping elite athletes to improve performance but also in creating and testing highly successful and innovative products.

Over the last decade the team have worked with a range of elite organisations including the Football Association, Elite Cycling, Westway Tennis, London Borough of Waltham Forest Swimming Club, as well as a range of individual professional athletes.

Examples of successful products that have benefited from product testing and development at the Human Performance Centre include nutritional products (e.g. CherryActive®, Firefly Tonics), footwear technology (e.g. FitFlop™) and health and fitness-promoting equipment (e.g. Revitive®, FLEXI-BAR®, FitVibe®).

The Human Performance Centre has extensive experience working with health industries, sports practitioners, local communities, local authorities and other research organisations. Get in touch and let us know how the team's services could help you, your company, or your idea to succeed.

Walk this way

Based on established scientific expertise in the biomechanics of barefoot and shod human walking, the research work of Dr Dave Cook and Dr Darren James has provided scientific underpinning to the creation, investigation and development of the highly successful recreational footwear FitFlop™ with impact on the orthopaedic and health footwear industry.

The innovative nature of the 'Microwobbleboard™' technology incorporated into the footwear has been acknowledged in a patent recognising the LSBU team as the lead researchers behind the concept.

The shoe is now sold in 22 countries and counts talk show host Oprah Winfrey, supermodel Heidi Klum, actress Julianne Moore and Olympic long jumper Jade Johnson among its fan base.

Hypoxic training

The HPC has had a long and valuable relationship with the Altitude Centre, the UK's number 1 altitude training specialist. Beginning with a Knowledge Transfer Partnership in 2010, the HPC has run a series of research projects to design, test and validate their hypoxic training protocols, and define what levels of hypoxia are ideal for optimising individual performance. This research has helped the Altitude Centre to become a world leader in hypoxic training consultancy services and equipment, with their UK clients alone winning 8 Golds, 2 Silvers, and 1 Bronze in the Beijing Olympics.

Facilities

The Human Performance Centre has access to world-class equipment and methodologies:

- hypoxic and environmental chambers
- Qualisys 8-camera 3D-motion analysis system and 5 Kistler platforms
- 3D accelerometry
- footscan pressure distribution platform

- breath-by-breath gas analysis systems
- blood pressure, cardiac output and heart rate monitors
- surface electromyography
- peripheral muscle and nerve – and transcranial brain – stimulation
- eye-tracker
- doppler ultrasound and flow-mediated dilation
- systems for blood lactate; cholesterol; lipid profile; haemoglobin and haematocrit measurements
- near-infrared spectroscopy
- laser doppler flowmetry and imaging
- digital bioimpedance scales
- flow cytometry

These allow for the measurement of:

- movement kinetics and 3D kinematics
- strength, power, flexibility and balance
- speed, agility and quickness
- respiratory function (oxygen uptake and metabolism)
- peripheral and central cardiovascular function
- neuromuscular function and coordination
- central and peripheral fatigability
- visual perception and action
- brain and muscle oxygenation
- blood and muscle biochemistry
- body composition and metabolism
- inflammatory status
- cognitive performance
- team play analyses



Sight unseen

Perceptual blindness is a phenomenon that we've all suffered from at one time or another. It's got nothing to do with the 'physical' elements of our sight, and everything to do with how we psychologically process what we are taking in. It can best be described as when someone fails to 'see' something that, when pointed out, is completely obvious.

Dr Hillary Katz has undertaken research into perceptual blindness, working alongside LSBU colleague Jamie Smith-Spark. "The circumstances that lead to perceptual blindness are not well understood, but they can have serious consequences," he says. "For example, someone might drive into a street having looked left, but failed to see an approaching cyclist – not because they didn't see them, but because they had perceptual blindness."

Hillary and Jamie became interested in perceptual blindness after considering it as a possible explanation as to why quality control staff working for Sainsbury's failed to see errors on labels that, once pointed out, were obvious.

The pair were commissioned to carry out research at five processing plants in the UK and one in Spain. It was funded by Sainsbury's and the Technology Strategy Board to the tune of over £400,000.

The problem? Despite multiple checks and quality control, mistakes on labelling were commonplace. Failures in what seems at first glance to be a straightforward manual task were resulting in foodstuffs being recalled on a regular basis, with huge financial costs and needless carbon footprint liabilities.

At the end of their research, the pair had identified three different techniques used by those responsible for checking labels, and determined that one in particular was more effective than the others. That best practice was then adopted across all the plants, resulting in a reduction in undetected errors.

The principles of the research now form the basis of a device produced by one of the research partners, software developers Muddy Boots. It's already helping food companies halve the amount of time they spend checking labels, as well as helping to improve accuracy.

Hillary and Jamie intend to take the research further, looking at specific and general cognitive factors that predict the efficiency of performance when it comes to checking tasks. They're pleased that the applied nature of their initial work with Sainsbury's has helped them get their research moving in this area. As Hillary says: "Funding research is always challenging, but it is made easier if there is a real-world problem that businesses or governments want to solve. Those are usually ones with significant cost implications."

"For example, someone might drive into a street having looked left, but failed to see an approaching cyclist – not because they didn't see them, but because they had perceptual blindness."

A little respect

Spending time in hospital is understandably something most people want to avoid. For many, an experience that is fraught with fear and uncertainty is made worse by a loss of privacy, respect and dignity during their hospital stay. LSBU's Professor Lesley Baillie is looking to change that.

“My interest in dignity was triggered by a personal experience with a family member,” says Professor Baillie. “It led me to reflect that I frequently referred to dignity when teaching students about nursing care but I started to question what dignity really means in practice, whether it means different things to different people. From there, I started conducting my own research into dignity, and it is something I am still exploring today.”

Since completing a PhD looking at patient dignity in 2007, Professor Baillie has worked tirelessly to push the topic to the forefront of the health agenda. In 2008, she worked with the Royal College of Nursing (RCN) as an expert consultant on its ‘Dignity at the heart of everything we do’ campaign, exploring barriers and opportunities for delivering dignified care and developing a working definition of dignity.

“They approached me as a result of research I had already carried out for my PhD,” says Professor Baillie. “The work we’ve done together since has helped to establish a national

understanding of what dignity in healthcare means, something that has been adopted by NHS Trusts to inform dignity policies.”

The collaboration resulted in changes to national codes of practice that include same-sex accommodation, an improved design to the universally loathed hospital gown, and increased privacy around the hospital bed. Professor Baillie also helped the RCN develop a variety of resources including a facilitators’ pack that was used by nurses all over the country.

“For work in healthcare, dignity is everyone’s business. A patient’s

experience of dignity is affected by everything that happens to them,” says Professor Baillie. “People often just focus on the privacy element of dignity, but it is multi-faceted and complex and there is no one simple thing that can ‘fix’ dignity. People are unaware how important interactions are in diminishing or threatening dignity. There are plenty of aspects of hospitals that can diminish dignity, but a lack of control is absolutely key. In hospital, people have very little control over what they can do, and people often feel very disempowered.”

The collaboration resulted in changes to national codes of practice that include same-sex accommodation, an improved design to the universally loathed hospital gown, and increased privacy around the hospital bed.



London South Bank University has been transforming lives, businesses and communities for more than 125 years

When it first opened, the aims of the University were to improve the employment opportunities for the people of south London and to support the community by providing access to relevant applied knowledge.

The core of our mission remains unchanged today.



Our Borough Road building in 1892 and today.

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