**LEICESTER LIFESTYLE AND HEALTH RESEARCH GROUP**

**Development of a lifestyle intervention to improve the health and wellbeing of construction plant operators**

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**Section 2 – *Project Information***

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| **Project Title** | **Development of a lifestyle intervention to improve the health and wellbeing of construction plant operators** |
| **Project Summary**  |
| **Project Highlights:**

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| 1.  | This studentship will provide comprehensive and novel data on the lifestyle behaviours and health of plant operators |
| 2.  | This studentship will co-develop a lifestyle intervention for an understudied population which will have the potential to set exemplar standards within the construction industry |
| 3.  | This studentship will involve working with one of the UK’s largest earthworks contractors |

*Background:* Although a key sector of the UK economy, the construction industry is structured to be the “inevitable detriment of construction worker health”1. In addition to being a safety risk, construction is a high-risk job for the burden of chronic diseases and poor mental health1. Construction workers have higher prevalence of smoking2,an unhealthy diet3, physical inactivitycompared with other industries, as well as high rates of musculoskeletal disorders, poor mental health, and a higher prevalence of overweight and obesity4,5. In particular, construction plant operators (who use heavy equipment and machinery on buildings sites) spend their working shifts sitting down for up to 12 hours, with little to no opportunity for movement. These characteristics increase the chronic disease risks exponentially. However, in the construction industry there has been a large emphasis on ergonomics and injury prevention, but limited focus on addressing other health risk factors. *Aim:* To co-design a multi-component behaviour change intervention to improve the health and wellbeing of plant operators.*Objectives*:1. To understand the experiences and views of the working context of plant operators, and to identify key factors that influence lifestyle behaviour in their allocated environment.
2. To describe 24-hour physical behaviours in plant operators.
3. Develop a lifestyle intervention underpinned by appropriate behaviour change theories.
4. Assess the feasibility and acceptability of the developed lifestyle intervention.

*Methods:* Step 1: Scope the specific needs of this target population by carrying out a mixed-methods study including a self-report survey, secondary data from routine medical assessments, accelerometer-assessed 24-hour physical behaviour data, and qualitative semi-structured in-depth interviews and focus groups. This step will help define in detail the programme goals, including target behaviours and potential behavioural outcomes. Step 2: Develop an evidence-based intervention using information gathered from Step 1 and evidence available from the literature. In addition to occupation-specific insights, the intervention will be guided by a theoretical framework to develop intervention programmes, and underpinned by relevant behaviour models and theories for behaviour change. We will gather feedback on the intervention from key stakeholders, including plant operators, and refine the intervention as needed to develop an intervention that is fit-for-purpose.Step 3: Conduct a pre post study to assess the feasibility of delivering and evaluating the developing behaviour change intervention.*Expected outcomes and impact:* In collaboration with one of the UK’s largest earthworks contractors, we will develop an intervention to improve the daily work experience and lifestyle behaviours of plant operators. |
| **References** |
| 1. Sherratt, F. Shaping the discourse of worker health in the UK construction industry. Construction Management and Economics. 2018; *36*(3): 141–152.
2. Asfar T, McClure LA, Arheart KL, et al. Integrating worksite smoking cessation services into the construction sector: opportunities and challenges. Health Educ Behav. 2019;46(6):1024-1034.
3. Okoro CS, Musonda I, Agumba J. Evaluating the influence of nutrition determinants on construction workers' food choices. Am J Men's Health. 2017;11(6):1713-1727.
4. Duffy SA, Cohen KA, Choi SH, McCullagh MC, Noonan D. Predictors of obesity in Michigan Operating Engineers. J Community Health. 2012 Jun;37(3):619-25. doi: 10.1007/s10900-011-9492-1.
5. Centraal Bureau voor de Statistiek. Zelfgerapporteerde medische consumptie, gezondheid en leefstijl. 2009. [http://statline.cbs.nl](http://statline.cbs.nl/)
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