week post-diagnosis than salaried survivors. The self-employed had received less financial compensation when absent from work post-cancer, and more self-employed, than salaried, survivors reported a negative financial change due to the cancer. There were differences between self-employed and salaried survivors in physical job demands, work ability and quality-of-life but the direction and magnitude of the differences differed across countries.

Discussion Self-employed and salaried CS differ when it comes to RTW-related outcomes, but the patterns vary between countries. Support should be provided to self-employed survivors to help them balance their health needs with those of their business.

834 FULL-SHIFT HAND-ARM VIBRATION MEASUREMENTS AMONG ROCK DRILLERS

^{1,2,3}Thomas Clemm*, ³Karl-Christian Nordby, ^{1,3}Bente Ulvestad, ¹Margun Dahle, ⁴Karl Færden, ²Magne Bråtevit. ¹Occupational Health Department, Mesta AS, Bergen, Norway; ²Department of Global Public Health and Primary Care, University of Bergen, Norway; ³National Institute of Occupational Health, Oslo, Norway; ⁴Department of Occupational medicine, Oslo University Hospital, Oslo, Norway

10.1136/oemed-2018-ICOHabstracts.1489

Introduction Rock drills expose workers to high levels of hand-arm vibration, and extensive use of these tools give an increased risk of hand-arm vibration syndrome. Hand-arm vibration exposure can be difficult to estimate by using the task-based method because of an intermittent exposure pattern and changing working conditions throughout the work shift. New advances in measurement technology make it possible to perform full-shift measurements at the workplace.

Methods Hand-arm vibration exposure for rock drillers/rock face stabilisers in Norway was assessed by full-shift field measurements with Svantek SV103 vibration metres on both right and left hand simultaneously.

Result The mean daily vibration exposure for the rock drillers was 4.9 m/s²(A8) (range 2.7–8.8) for the right hand and 4.4 m/s²(A8) (1.0–7.0) for the left hand, based on 17 full-shift measurements. The mean exposure magnitude from the tools was 14.0 m/s² (9.2–20.0). For 12 of the 17 measurements the exposure was highest on the dominant hand.

Discussion The full-shift method was practical to implement in the field measurements, and should be considered as an alternative to the task based method. This method has the potential to reduce the uncertainties associated with unpredictable changes in exposure like changing hardness of the rock. The daily exposure to hand-arm vibrations for the rock drillers was high compared to the occupational exposure limit. Thus, implementation of efficient strategies to reduce vibration exposure is important.

850 OCCUPATIONAL HEALTH AND THE SOCIAL DETERMINANTS OF HEALTH: IDENTIFYING THE ETHICAL ISSUES

Jacques Tamin*. Honorary Senior Lecturer in Occupational Medicine, COEH, University of Manchester

10.1136/oemed-2018-ICOHabstracts.1490

Introduction 'Job security increases health, wellbeing and job satisfaction. Higher rates of unemployment cause more illness and premature death'. Encouraging individuals to be at work can be beneficial, but it also raises questions such as: Do the socially disadvantaged have access to opportunities to improve their health? Do they have fair access to health-enhancing 'good' work? OH professionals can have an important influence in matters of health and work, both at 'front line' and policy levels. This paper identifies the ethical issues that arise in the wider social determinants of health (SDOH) discourse, from an OH perspective.

Methods An applied ethics analytical approach was used to examine the relationship between OH and SDOH, especially in terms of worklessness arising from ill-health. The capability approach as a theory of justice was used. Specifically, a concept of health justice when one is unable to work through ill-health or disability was explored.

Results Areas of ethical concern:

- The medicalisation of the ill-health assessment process, whereas societal factors are ignored.
- The extension of 'responsibilisation', i.e. making individuals responsible for their ability to work as well as for their health.
- Ethical tensions for OH practitioners when their relationship with the worker may not be the traditional 'doctor-patient' one.

Discussion Unemployment, job insecurity and sickness absence are serious problems, impacting on the health of individuals and society, and a financial burden to employers and the State. However, although it may be desirable for individuals to be in employment to improve their health, there is also a danger that those unable to work become stigmatised. So, 'tackling' these problems should be done in fair and ethical ways. A first step is identifying the ethical issues.

87 MUSCULAR ACTIVATION IN VIBRATION PERTURBED HUMAN WALKING AND MODELLING

¹Francesco Felici, ¹Ilenia Bazzucchi, ²Enrico Marchetti, ³Marco Tarabini, ²Angelo Tirabasso, ²Raoul Di Giovanni, ²Alessandro Lunghi, ²Florian Sacco, ¹Cristian Ieno, ⁴Luigi Fattorini. ¹University Foro Italico of Roma, Department of Movement, Human and Health Sciences; ²Italian National Institute for Insurance against Accidents at Work, Department of medicine, epidemiology, workplace and environmental hygiene, Monte Porzio Catone (RM), Italy; ³Politecnico di Milano, Department of Mechanics, Polo Territoriale di Lecco; ⁴Sapienza University of Roma, Department of Physiology and Pharmacology 'V. Erspamer'

10.1136/oemed-2018-ICOHabstracts.1491

Introduction Walking on vibrating floor causes a complex exposure pattern and the superimposition of walk and vibration may induce early muscular fatigue.¹ The problem is relevant in many fields, as sea platform or railway transports. The present study studies the leg muscular activation and stride phases during walking under vibration to derive a muscle model in these circumstances.

Methods Subjects walked on a treadmill positioned on a 6-DOF vibrating table. Vibration was imposed at four frequencies (4, 8, 12, 16 Hz) along vertical and transversal direction. The walking speed was set at 1.25 m/s. Surface electromyography (sEMG) of four muscles was recorded. Stride phases were recorded using accelerometers and stride length was