

**Methods** A secondary cross-sectional data analysis was performed using National Survey on Drug Use and Health (NSDUH) data from 2015 to 2017 and including 126,463 individuals with 8,241 identifying as SM. The NSDUH is an annual, nationally representative survey of the civilian, non-institutionalised US population aged twelve or older which estimates the prevalence and associated determinants of substance use and mental illness. Multivariable logistic regression models were used to quantify disparities in substance use among SM and to examine its link with sociodemographic factors and mental health.

**Results** SM showed higher levels of past-year substance use, misuse of prescription drugs and lifetime chemsex drug use relative to heterosexuals. Gay men showed the highest level of chemsex drug use. Bisexual women exhibited higher levels of use of cocaine, crack, heroin, methamphetamine and misuse of benzodiazepines relative to heterosexual women. Among women, lesbians showed higher odds for use of chemsex drugs and misuse of Oxycontin. Urbanity, being uninsured, and having an unmet need for mental health treatment were associated with significantly higher levels of substance use, including chemsex drug use. SM also experienced significantly higher levels of socioeconomic vulnerability, which were associated with increased odds for drug use.

**Conclusion** This study is among the first nationally representative samples that analysed the link between sociodemographic factors and unmet need for mental health treatment on substance use among SM. It emphasises the multifactorial aetiology of vulnerability to substance use and highlights the distinct disparities in, and underlying mechanisms for substance use among SM. Higher levels of substance use and misuse observed among SM have public health implications due to the negative health outcomes they may involve in the long-term. Of particular interest is the link established between substance use and mental health issues, considering the lack of tailored approaches aimed at addressing comorbidities and specific health needs of SM, especially given the structural barriers (i.e., stigma, discrimination and criminalisation of substance use) those populations face in accessing health services. Critical gaps in the literature remain and large-scale studies inclusive of SM individuals are needed to establish causal links.

**P71 LONELINESS AND PERSONAL WELLBEING IN YOUNG PEOPLE: THE MODERATING EFFECTS OF SOCIAL WELLBEING AND SOCIO-DEMOGRAPHIC FACTORS**

Emily Long\*, Claire Goodfellow. *MRC/CSO Social and Public Health Sciences Unit, University of Glasgow, Glasgow, UK*

10.1136/jech-2021-SSMabstracts.159

**Background** Loneliness a growing public health concern. This is particularly so in light of the Covid-19 pandemic which has highlighted the detrimental psychosocial consequences of loneliness. Loneliness is a particularly pervasive problem among young adults, but despite this, most research examining loneliness is among older adults. Loneliness is a known risk factor for poor health and personal wellbeing. However, the extent to which other aspects of social wellbeing (e.g., isolation, social support) may mitigate the relationship between loneliness and personal wellbeing is unclear. Loneliness is often

used interchangeably with related, yet distinct aspects of social wellbeing, such as isolation. Therefore, it is difficult to differentiate factors that relate to loneliness, factors that relate to other components of social wellbeing, and the possible interactions between these constructs. Consequently, we aim to examine the interplay of loneliness and isolation on personal wellbeing.

**Methods** We make use of cross-sectional sample of 965 young people aged 16–24 from the 2018 wave of the Community Life Survey to conduct regression-based analyses. This allows us to evaluate for a direct effect of loneliness on personal wellbeing, and for an interaction effect between loneliness and isolation to determine if the presence of both loneliness and isolation is predictive of poorer wellbeing. Finally, we use moderated regression to assess whether individual, social, and community level factors influence the relationship between loneliness and personal wellbeing.

**Results** Preliminary results identify that loneliness is consistently associated with poorer personal wellbeing among young people. Isolation neither predicts wellbeing, nor moderates associations between loneliness and wellbeing. Factors such as trust in one's neighbourhood, not acting as a carer, and being a fulltime student were associated with greater wellbeing. At the individual level, a moderating effect of sex was found, and social factors (e.g., being able to count on friends) moderated the association between loneliness and wellbeing.

**Conclusion** Results suggests that the presence of both loneliness and isolation does not increase risk of poor personal wellbeing among young people. Rather, the subjective experience of loneliness is independently detrimental to wellbeing. Our results also identified that being of female gender was associated with increased risk of loneliness impacting on personal wellbeing, but that strong emotional support may act as a protective factor against loneliness, and therefore improve personal wellbeing. It is also important to foster community trust and engagement to improve wellbeing, and that young people with caring responsibilities may be particularly at risk of low personal wellbeing.

**P72 ONLINE GAMING AND WELL-BEING IN THE ENGLISH LONGITUDINAL STUDY OF AGEING**

<sup>1</sup>Pamela Almeida-Meza\*, <sup>1</sup>Dorina Cadar, <sup>1</sup>Andrew Steptoe, <sup>2</sup>Carrie Ryan. <sup>1</sup>*Department of Behavioural Science and Health, University College London, London, UK;* <sup>2</sup>*Department of Anthropology, University College London, London, UK*

10.1136/jech-2021-SSMabstracts.160

**Background** Play and games are considered important contributors to healthy ageing; however, it is not clear how online gaming contributes to this association. We aimed to explore the impact of online gaming on older adult well-being.

**Methods** Using data from 3,067 participants aged 50 years and older from the English Longitudinal Study of Ageing, we performed multiple regressions and logistic regressions to assess the association between online gaming at (wave 6, 2012/13) and quality-of-life, loneliness, and depression at (wave 9, 2018/19) over a follow up of up to 7 years. Quality-of-life was assessed using the CASP-19 scale, loneliness was assessed using the UCLA Loneliness scale, and depression was assessed using the Centre for Epidemiologic Studies Depression Scale. Adjustment for covariates was carried out gradually: Model 1 adjusted for age, sex and marital status, model

2 further adjusted for education and work status, model 3 included depression and self-rated health, and finally, model 4 included all covariates as well as physical activity, smoking and alcohol consumption. Additionally, interactions with age, sex, marital status, education, and work status were investigated.

**Results** The analytical sample had an average age of 65 years (SD=7.01). We found that 22% of respondents engaged in gaming. Furthermore, of those participants who gamed, 65% were females and 48% were between 61 to 70 years old. Interaction analyses indicated that for younger individuals ( $\leq 65$  years), gaming predicted lower scores in the self-realization sub-scale of the CASP-19 ( $\beta = -0.33$ , 95% CI -0.62 to 0.04,  $p = 0.03$ ) in comparison to  $>65+$  gamers. Furthermore, for widowed individuals, gaming predicted lower scores in CASP-19 ( $\beta = -2.63$ , 95% CI -4.68 to 0.58,  $p = 0.01$ ), indicating a lower quality of life in comparison to married, or single participants. Further analysis indicated that widowed individuals had lower scores in the self-realization ( $\beta = -0.90$ , 95% CI -1.68 to -0.11,  $p = 0.03$ ) and pleasure sub-scales ( $\beta = -0.62$ , 95% CI -1.17 to -0.07,  $p = 0.03$ ) of CASP-19. There was also a marginal association for widowed individuals who game and lower scores in the autonomy subscale ( $\beta = -0.58$ , 95% CI -1.18 to 0.12,  $p = 0.06$ ). There were non-significant associations between gaming and loneliness and depression.

**Conclusion** Online gaming might be independently associated with lower levels of quality of life, particularly in terms of pleasure, self-realisation, and autonomy. This association might be modified by the individual's age and marital status. Widowed individuals who game appear to be more likely to report a lower sense of self-realisation, pleasure, and autonomy with some implications for their well-being.

### P73 USING PEER RESEARCH METHODS: TO EXPLORE HIGH MORTALITY RATES AMONG PEOPLE WITH MULTIPLE COMPLEX NEEDS

<sup>1</sup>Emma A Adams\*, <sup>1</sup>Rachel Perry, <sup>1</sup>Jill Harland, <sup>2</sup>Angela Broadbridge, <sup>3</sup>Emma L Giles, <sup>4</sup>Grant J McGeechan, <sup>1</sup>Amy O'Donnell, <sup>1</sup>Sheena E Ramsay. <sup>1</sup>Population Health Sciences Institute, Newcastle University, Newcastle upon Tyne, UK; <sup>2</sup>Fulfilling Lives Newcastle Gateshead, Gateshead, UK; <sup>3</sup>School of Health and Life Sciences, Teeside University, Middlesbrough, UK; <sup>4</sup>Centre for Applied Psychological Science, Teeside University, Middlesbrough, UK

10.1136/jech-2021-SSMabstracts.161

**Background** Multiple complex needs (MCN) is one of a number of terms used to describe people facing co-occurring issues of homelessness, substance misuse, offending, and mental ill-health. When considered in isolation, homelessness, substance misuse, mental ill-health and offending, each contribute to high mortality rates; however, when co-occurring this effect is amplified. A large amount of the mortality research to date within MCN populations has been epidemiological. Despite acknowledge of the benefits of conducting research *with* individuals rather than *on*, there is limited involvement of peer research methods in current studies exploring mortality and MCN. This research aimed to explore the perspectives of people with lived experience of MCN and professionals who support them on the perceived reasons underlying high mortality rates among people with MCN.

**Methods** Using peer research methods, three focus group discussions (21 participants) were conducted within the North

East of England to explore the perspectives of people with MCN, frontline staff, and managers/commissioners.

**Results** Findings from this study provide valuable perspectives of people with MCN and those that provide them with support on what may be perceived factors underlying premature mortality. Mental ill-health and substance misuse (often co-occurring dual diagnosis) were perceived as influencing premature mortality among MCN groups. Perceptions of opportunities for identify people at-risk included critical life events (e.g. bereavement, relationship breakdown) and transitions (e.g. release from prison, completion of drug treatment). Early prevention, particularly supporting young people experiencing adverse childhood experiences was also highlighted as a priority.

**Conclusion** High mortality in MCN groups may be reduced by addressing dual diagnosis, providing more support at critical life events, and investing in early prevention efforts. The novelty of this study is it has shown the value of listening to and conducting research with individuals with experience of MCN. It enabled an exploration of an issue that directly affects their community and supported understanding of the personal perspective of a handful of people with MCN and their carers on what may have informed premature mortality among their networks, as well as identifying perceived avenues for possible preventive interventions within the local region. Furthermore, the insights specific to opportunities for service provision take into consideration the intricate nature of MCN and improve service access and navigation.

### P74 A LIFECOURSE PERSPECTIVE ON HISTORICAL DEMOGRAPHIC PATTERNS OF CIRCULATORY SYSTEM DISEASE AND ALL-CAUSE MORTALITY IN TWENTIETH CENTURY AUSTRALIA

<sup>1</sup>Cecily C Kelleher\*, <sup>2</sup>Gabrielle Kelly, <sup>1</sup>Ricardo Segurado, <sup>1,3</sup>Jonathan Briody, <sup>4</sup>Alexander M Sellers, <sup>5</sup>Janet McCalman. <sup>1</sup>School of Public Health, Physiotherapy and Sports Science, University College Dublin, Dublin, Ireland; <sup>2</sup>School of Mathematics and Statistics, University College Dublin, Dublin, Ireland; <sup>3</sup>School of Economics, University College Dublin, Dublin, Ireland; <sup>4</sup>Department of Medicine, Royal Adelaide Hospital, Adelaide, Australia; <sup>5</sup>School of Population and Global Health, University of Melbourne, Melbourne, Australia

10.1136/jech-2021-SSMabstracts.162

**Background** Circulatory System Disease (CSD) patterns vary over time and between countries, related to lifestyle risk factors across the life course, associated in turn with socio-economic circumstances. Current global CSD epidemics in developing economies are similar in scale to those observed previously in the United States and Australia. We examine from a lifecourse perspective the historical context in Australia for the rise and decline of CSD based on the published scientific literature and population trends. Past epidemiological studies focused on the relative advantage of those of Southern European compared to those of British or Irish origin. Historical retrospective cohort studies in populations including world war one veterans and maternity hospital data have shown early life influences on later health outcomes.

**Methods** We employed data from census-derived place of birth by age bracket and sex from 1891 to 1986, based on digitised paper record. CSD mortality rates were available from 1907 to 2016 and age-specific rates were computed for the general population. All-cause mortality for the foreign-born (fb) from 1910 to 1980 was not readily available, as