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Mental health and the jilted generation: Using age-period-cohort analysis to assess differential trends in young people's mental health following the Great Recession and austerity in England

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ABSTRACT

Those born in the United Kingdom post-1979 have been described as a 'jilted generation', materially disadvantaged by economic and social policy; however, it is unclear whether this resulted in their experiencing poorer mental health than previous cohorts. Following the 2008 recession, UK austerity reforms associated with worsening mental health also disproportionately impacted those of younger working-age. This study aimed to identify any historic cohort changes in population mental health, and whether austerity widened generational inequalities. Repeat cross-sectional data from the Health Survey for England (1991–2014) were used to calculate prevalence of psychopathology for those of younger and older working-age (16–30 and 31–64 years) and retirement-age (65+ years), measured by General Health Questionnaire-12 (GHQ) score ≥ 4 (caseness). Descriptive age-period-cohort analysis was performed for 15-year birth cohorts, including the jilted generation (born 1976-90). Logistic regression tested differences in outcome between groups.

Age-specific GHQ caseness between successive birth cohorts did not significantly change for men, and significantly improved between 2.8% (95% CI 0.1%–5.5%) and 4.4% (95% CI 2.2%–6.7%) for women. Secondary analysis adjusting for education partially explained this improvement. Following the recession, GHQ caseness worsened in men of younger and older working-age by 3.7% (95% CI 1.2%–6.2%) and 3.5% (95% CI 2.1%–5.0%) respectively before returning to baseline during austerity. All women experienced non-significant increases post-recession, but trends diverged during austerity with caseness worsening by 2.3% (95% CI 1.0%–3.6%) for older working-age women versus 3.7% (95% CI 1.3%–6.2%) for younger working-age women. Those of retirement-age experienced little change throughout. In summary, mental health has historically improved between successive cohorts, including for the jilted generation. However, the 2008 recession and subsequent austerity could be most impacting those of younger working-age, particularly women, to create a new cohort effect. Policymakers should consider the differential impact economic and social policy may have across society by age.

1. Introduction

Recessions, and the political decisions which follow them, can have significant short- and long-term health and social consequences which potentially make them of great public health importance (Stuckler et al., 2009). For mental health specifically, largely negative consequences have been observed in the aftermath of recessions (Frasquilho et al., 2016), particularly male suicides associated with the immediate spike in unemployment which often follows (Barr et al., 2012). Female mental health appears less acutely affected, for reasons which are unclear (Katikireddi et al., 2012). Such health effects are often unevenly distributed across society, with those in disadvantaged groups more likely to be heavily impacted by unemployment, potentially widening existing health inequalities (Bartoll et al., 2015; Ruckert and Labonte, 2014). There is also growing evidence that the pursuit of austerity policies in the aftermath of economic crises such as the global recession in 2008 (commonly referred to as the Great Recession) may worsen health outcomes and prolong the period of economic recovery (De Vogli, 2014; Stuckler and Basu, 2013).

Our recent work has demonstrated that, following the onset of strict austerity policies in the United Kingdom in response to the Great Recession, there was a widening of gender inequalities in poor mental

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health due to a marked worsening in mental health among women (Thomson et al., 2018). Others offer conflicting opinions on whether socioeconomic inequalities in poor mental health may have narrowed or widened during the same period (Barr et al., 2015; Reibling et al., 2017). However, despite some evidence that the age patterning of suicide mortality associated with the Great Recession may not be quite as would be expected, with the most marked rises occurring in younger rather than older men (Chang et al., 2013), there is little in the literature further considering whether the mental health of particular age cohorts has been disproportionately affected by either the recession or austerity.

The existence of a 'jilted generation' in the UK, including all those born after 1979, has previously been hypothesised to be the result of broad societal changes which occurred following this point with the rise of free market capitalism and individualism (Howker, 2013). This is thought to have led to a phenomenon where young adults are now materially disadvantaged compared with previous generations (BBC News, 2016), particularly in relation to housing (The Office for National Statistics, 2010), employment prospects (The Work Foundation, 2013), and inheritance of extremely high and unsustainable national debt (Hagist et al., 2009).

There is little further consideration found in the literature explicitly considering whether health outcomes may be similarly affected for those in this cohort. It is widely acknowledged these social determinants of health such as income, housing and employment can be thought of as the 'causes of causes' for a broad range of poor health outcomes (Braveman and Gottlieb, 2014), and therefore it could be hypothesised that a similar phenomenon characterised by deteriorating mental health in this group may be observed: 'the jilted generation hypothesis'. However, health is also influenced by other factors which may mitigate any potential influence of these materials disadvantages for this cohort. Improvements in access to education and improving healthcare technologies are likely to confer advantage on this age group relative to previous generations which may balance any material loss (Hahn and Truman, 2015), particularly with the UK described as 'leading the world' in terms of equity of access to health services (Dayan et al., 2018).

While not discussed in these terms, there is some evidence that the jilted generation hypothesis may extend to mental health. Time-trend analysis by Chang et al. found that, in contrast with previous recessions where those over 65 years and middle-aged men were found to experience the sharpest rise in suicide rates (Gavrilova et al., 2000; Chang et al., 2009), across Europe in the year following the Great Recession the highest rise was actually among men aged 15–24 years, which they postulated may be secondary to the fact that rises in unemployment were steepest in this age group (Chang et al., 2013). Work by Coope et al. also showed that in the UK suicide rates had actually been increasing in 16–34 year old men in the period *prior* to the 2008 recession before any rises in unemployment (Coope et al., 2014). Based on this evidence, it may be possible that this post-1979 cohort was both more likely to experience poor mental health prior to the recession, and particularly vulnerable to its effects, which could be explored using age-period-cohort analysis. Of note, both authors explore only the immediate post-recession period when male mental health may be more influenced by macroeconomic factors than female mental health for reasons that are unclear (Frasquilho et al., 2016; Katikireddi et al., 2012), in contrast with the period following economic policy response where austerity policies in the UK may have had more influence on female mental health (Thomson et al., 2018).

Briefly, age-period-cohort analysis centres on trying to tease out the different impacts of each of these influences on health: the impact of *age* across an individual's life course; the impact of living through a specific *time period* where the health of all was affected by some global change in circumstances; and the separate effect of being born into a specific *birth cohort* with shared experiences causing this group to be intrinsically different from other cohorts (Suzuki, 2012). There is little recent research aiming to untangle age-period-cohort effects in relation to mental health in the UK population, and that which exists is inconclusive. Work by Bell et al. using data from the British Household Panel Survey found that more recent cohorts have poorer mental health, potentially supporting the jilted generation hypothesis (Bell, 2014). However, Spiers et al. using a similar approach with data from the Adult Psychiatric Morbidity Study found no evidence of significant cohort effects in poor mental health (Spiers et al., 2011), and in a separate study using the Health Survey for England Rice et al. found the highest prevalence of diagnosed mental illness in the 'baby boomer' cohort (though did not consider those of younger working age) (Rice et al., 2010). Our study aims to add clarity to these conflicting findings using a more descriptive approach to age-period-cohort analysis, overcoming some of the statistical limitations of these studies outlined below.

We aimed firstly to examine long-term trends in mental health in England to determine whether there had been a historic decline in mental health for younger birth cohorts (as per the jilted generation hypothesis), and secondly whether the recession and subsequent austerity policies may have had a differential impact across birth cohorts to create generational inequalities in poor mental health.

2. Methods

2.1. Study design

We used repeat cross-sectional data from the Health Survey for England (HSE), a multi-stage stratified random sample designed to be nationally and regionally representative, spanning 1991 to 2014. Details of the HSE have been published elsewhere (Mindell et al., 2012). Response levels have fallen over time but plateaued recently, remaining reasonably high at 62% in 2014 compared with 68% in 2006 (NatCen Social Research, 1991–2014). Weights for non-response were available from 2003. Relevant data were available for all years except 1996, 2007, 2011 and 2013 when the outcome measure was not administered.

The HSE has run for a considerable time using standardised methods with frequent data collection, allowing consideration of long-term trends. Cross-sectional rather than longitudinal data were used to allow inclusion of birth cohorts who only reached the age of 16 years during the study period, and so would not have been eligible for initial recruitment to longitudinal cohort studies of adults. This approach also avoided residual confounding that could occur using panel data which include whole households for age-period-cohort analysis, as children in included households who are subsequently followed up as adults are likely to share many genetic and environmental influences with others in their household.

2.2. Population

The HSE general population samples were used, and all participants over the age of 16 years were eligible for inclusion. Due to the expected small sample size following stratification by birth cohort, datasets were pooled into two year groupings to stabilise trends.

2.3. Exposure measurement

The UK economy did not enter recession until the last quarter of 2008 (defined by two successive quarters of negative growth in GDP) (Macrotrends, ; aThe Office for National Statistics,), and while austerity policies were announced in mid-2010 (Reeves et al., 2013) it is unlikely that potential health consequences would have fully manifested within this year due to the time taken to achieve full implementation. To avoid misclassification of individuals we therefore defined in advance all pooled two year periods up to and including 2008 'pre-recession', the period 2009/10 the 'recession period', and 2012/14 the 'austerity