

This is the Author Accepted Manuscript file. The published article can be found here:

The British Journal of Psychiatry (2021) doi: 10.1192/bjp.2020.258

<https://www.cambridge.org/core/journals/the-british-journal-of-psychiatry/article/abs/psychological-distress-selfharm-and-attempted-suicide-in-uk-17year-olds-prevalence-and-sociodemographic-inequalities/01B1D33B67CD8D00A81EA4COE6CD1BE8>

Psychological distress, self-harm and attempted suicide in UK 17-year olds: Prevalence and socio-demographic inequalities

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Summary

In a large (N=10,103), nationally representative sample of 17-year-olds 16.1% experienced high psychological distress in last 30-days, 24.1% self-harmed in previous 12-months and 7.4% ever attempted suicide. Females, White adolescents, sexual minorities and those from more socioeconomically disadvantaged families had worse mental health outcomes; with exception of no detected differences in attempted suicide by ethnicity and in self-harm by socioeconomic position. Some noteworthy findings include: 1) narrower gender-gap in self-harm at age 17 (M=20.1%; F=28.2%) compared to 14 (M=8.5%; F=22.8%), 2) 2-4 times higher prevalence in sexual minority adolescents – 39.3% high distress, 55.8% self-harmed, 21.7% attempted suicide – compared to 13.4%, 20.5% and 5.8% in heterosexual adolescents.

Introduction

There has been a growing policy focus on young people's mental health. Three-quarters of lifetime mental illness are first experienced in adolescence, making prevention efforts in the first two decades vital (1). The experiences of adolescent mental health difficulties also displays stark socio-demographic differences (2), with far-reaching consequences for widening inequalities and adverse social, economic and health outcomes throughout life (3).

Prevalence estimates from the Millennium Cohort Study (MCS) indicated that almost 16% of 14-year olds reported high levels of depressive symptoms, and 15.7% reported self-harming (4). Estimates from the 2017 Mental Health of Children and Young People in England (MHCYP) Study, the only other source of nationally generalizable prevalence rates, reported that 16.9% of 17-19 year olds had a diagnosable mental disorder (2).

In this paper, focusing on mental ill-health at age 17 in the MCS, we present prevalence of high psychological distress in last 30 days, 12-month prevalence of self-harm and lifetime prevalence of

attempted suicide. We delineate inequalities in these mental ill-health outcomes by sex, ethnicity, sexuality and socioeconomic position.

Methods

Participants

Participants are from the age 17 sweep of the Millennium Cohort Study (2018-19), a UK birth cohort study of individuals born at the start of the millennium. At age 17, 10,625 families participated, of which 10,345 completed the self-report survey, with 10,103 completing a mental health measure, our analysis sample (mean age: 17.18 sd=0.34, 51.3% female; 80.9% White, 3% mixed race, 10.9% Asian, 3.6% Black and 1.6% other ethnicities; 26.7% in poverty). 10.6% identified as non-heterosexual at age 17 (6.5% bisexual, 2.5% gay or lesbian and 1.6% other). Details of the study design, variables and attrition can be found at: <https://cls.ucl.ac.uk/cls-studies/millennium-cohort-study/>.

Measures

Psychological distress: Participants responded to the K6 measure of psychological distress (5). It asks respondents how often in the last 30 days they felt e.g. hopeless; with five response options ranging from none of the time to all of the time. Total scores range from 0-24, higher scores indicating greater distress. The scale has moderate and severe thresholds, and we use the severe threshold (≥ 13) considered indicative of serious mental illness (5, 6), hereafter referred to as 'high psychological distress'.

Self-harm was reported in response (yes or no) to the question "During the last year, have you hurt yourself on purpose in any of the following ways?": cut or stabbed, burned, bruised or pinched, overdose, pulled out hair, other."

Attempted suicide was reported in response to "Have you ever hurt yourself on purpose in an attempt to end your life?" and coded yes or no.

Inequality indicators: Sex was recorded at birth. Ethnicity was parent-reported in childhood. Sexual identity was self-reported at age 17. Socioeconomic position was based on household income at age 14 which was OECD equivalised and categorised into quintiles; poverty status is based on having below 60% of median income.

Analysis: Prevalences have been weighted to account for both the complex survey design and non-response to follow-up, to generate nationally representative estimates. Details of loss to follow up, data access, analysis software and code are presented in the supplement.

Results

The overall prevalence of high psychological distress was 16.1% (95% CI: 14.7-17.7), 12-month prevalence of self-harm was 24.1% (95% CI: 22.6-25.7), and lifetime prevalence of attempted suicides was 7.4% (95% CI: 6.6%-8.3%).

Fig1 includes prevalences of high psychological distress, self-harm and attempted suicide by sex, ethnicity, sexuality and SES (FigS1 shows distributions of psychological distress by these factors).

Females reported higher average psychological distress, with 22% experiencing high psychological distress compared to 10% of males. Females also reported higher levels of self-harm (28%) and attempted suicide (10.6%) than males (20% and 4.3%). FigS2 shows types of self-harming behaviour by sex.

High psychological distress and self-harm were most prevalent in White respondents (Fig1). Attempted suicide rates were similar across most ethnic groups, with the lowest prevalence reported by Asian adolescents.

Large disparities were observed by sexuality with over half of sexual minorities having reported self-harming (55.8%) and about one-fifth (21.7%) attempted suicide (compared to 20.5% and 5.8% in heterosexual adolescents).

Prevalences of high psychological distress and suicide attempts demonstrated a socioeconomic pattern, with some evidence of an income gradient, especially in attempted suicide where rates in the two poorest income quintiles are twice (around 12%) than for adolescents from higher income families (around 6%). Self-harming behaviour is not patterned by family income, being similar across income quintiles.

Discussion

This paper highlights: 1) high prevalences of psychological distress, self-harm and attempted suicide among 17-year olds, and 2) sex, ethnic, socioeconomic and sexuality based inequalities in who experiences these difficulties at this age.

High prevalences have also been recently reported elsewhere with 15.4% of 17-19 year olds having reported ever self-harming or attempted suicide (2). In contrast, lifetime self-harm prevalence in the UK adults was 6% (7) and high psychological distress based on the K-6 in US adults was for instance 8.6% (6).

Our findings reflect well-established higher prevalences in females. However, the male-female gap in self-harm at age 17 (males 20.1%, females 28.2%) was considerably narrower than at earlier ages (males 8.5% , females 22.8% (4), highlighting the greater increase in self-harming in males between ages 14 and 17.

Ethnic differences were similar to reported elsewhere for this generation whereby White adolescents report the highest levels of distress (2). An exception is attempted suicide, which demonstrated few ethnic differences. The reasons for observed ethnic differences in distress and self-harm and the lack of ethnic differences in attempted suicide might include inequalities in support and access to services in ethnic minority groups (8).

Sexual minority adolescents report the highest prevalences, with around 2 - 4 times the rates of self-harm and attempted suicide compared to their heterosexual peers. These findings highlight the need to better support this group and for parents, educators and clinicians to be aware that sexual minority adolescents might be struggling and need appropriate support, as they often also suffer from greater bullying, assault and a host of adverse co-occurring mental health related outcomes (9).

The distribution of psychological distress scores (FigS1) highlighted that although the mean scores in the socioeconomically disadvantaged group are higher, they are also more dispersed, with more disadvantaged adolescents reporting both higher and lower distress. Of note prevalence of

attempted suicide was almost double (around 12%) in the poorest two quintiles compared to the other income groups.

Like all longitudinal cohorts, MCS suffers from non-random attrition, and although this is accounted for by weights in analyses it is possible that the loss-to-follow-up of more disadvantaged participants might result in underestimation of prevalences. At age 14, the symptom measure included was different, precluding making any direct comparisons in distress prevalences between ages 14 and 17.

Age 17 marks an important age before many key life transitions, including the ending of compulsory education and moving away from home. With the ending of support from Child and Adolescent Mental Health Services (CAMHS) around this critical age, many young people fall through the gaps between CAMHS and adult mental health services, potentially further worsening outcomes at the precise time when support is most required (10). These findings underline the urgent mental health support-need in this generation. On the cusp of adulthood, they warn of a further widening in health, economic and social inequalities.

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Funding: The Millennium Cohort Study is primarily funded by the Economic and Social Research Council with co-funding from a consortium of government departments.

Acknowledgements: We are grateful for the co-operation of the Millennium Cohort Study families who voluntarily participate in the study. We thank the Economic and Social Research Council and the co-funding by a consortium of UK government departments for funding the MCS through the Centre for Longitudinal Studies (CLS) at the UCL Institute of Social Research. We would also like to thank a large number of stakeholders from academic, policy-maker and funder communities and colleagues at CLS involved in data collection and management. The funders of the study had no role in study design, data collection, data analysis, data interpretation, or writing of this report.

Author Contribution: PP and EF conceptualised the study and interpreted the data. PP conducted the analysis and drafted the manuscript. Both authors approved the final version and consented to its publication.

Data Availability: The Millennium Cohort Study data are available to all researchers, free of cost from the UK Data Service (<https://www.ukdataservice.ac.uk>).

Ethics Statement: Ethics approvals for the age 17 sweep were obtained from the National Research Ethics Service (NRES) Research Ethics Committee (REC) North East – York (REC ref: 17/NE/0341). Participants provided informed consent before completing the assessments.

Declaration of interest: The authors have no conflicts of interest to declare.

References

1. Royal College of Psychiatrists. No health without public mental health. The case for action.: Royal College of Psychiatrists; 2010.
2. NHS Digital. Mental Health of Children and Young People in England, 2017: Summary of Key Findings. London: Government Statistical Service; 2018.

3. Clayborne ZM, Varin M, Colman I. Systematic Review and Meta-Analysis: Adolescent Depression and Long-Term Psychosocial Outcomes. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2019;58(1):72-9.
4. Patalay P, Gage SH. Changes in millennial adolescent mental health and health-related behaviours over 10 years: a population cohort comparison study. *International journal of epidemiology*. 2019;48(5):1650–64.
5. Kessler RC, Green JG, Gruber MJ, Sampson NA, Bromet E, Cuitan M, et al. Screening for serious mental illness in the general population with the K6 screening scale: results from the WHO World Mental Health (WMH) survey initiative. *International journal of methods in psychiatric research*. 2010;19(0 1):4.
6. Prochaska JJ, Sung HY, Max W, Shi Y, Ong M. Validity study of the K6 scale as a measure of moderate mental distress based on mental health treatment need and utilization. *International journal of methods in psychiatric research*. 2012;21(2):88-97.
7. McManus S, Gunnell D, Cooper C, Bebbington PE, Howard LM, Brugha T, et al. Prevalence of non-suicidal self-harm and service contact in England, 2000–14: repeated cross-sectional surveys of the general population. *The Lancet Psychiatry*. 2019;6(7):573-81.
8. Edbrooke-Childs J, Patalay P. Ethnic Differences in Referral Routes to Youth Mental Health Services. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2019;58(3):368-75. e1.
9. Amos R, Manalastas EJ, White R, Bos H, Patalay P. Mental health, social adversity, and health-related outcomes in sexual minority adolescents: a contemporary national cohort study. *The Lancet Child & Adolescent Health*. 2020;4(1):36-45.
10. Singh SP, Paul M, Ford T, Kramer T, Weaver T, McLaren S, et al. Process, outcome and experience of transition from child to adult mental healthcare: multiperspective study. *British Journal of Psychiatry*. 2018;197(4):305-12.

Figure legend

Figure 1. National prevalence estimates of 1) high psychological distress (K-6 score ≥ 13), 2) 12-month prevalence of self-harm and 3) lifetime prevalence of self-harm with suicidal intent (attempted suicide), by sex, ethnicity, sexuality, and income at age 17 years in the UK Millennium Cohort Study