

Reporting Summary

Nature Portfolio wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Portfolio policies, see our [Editorial Policies](#) and the [Editorial Policy Checklist](#).

Statistics

For all statistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.

n/a	Confirmed
☐	☒ The exact sample size (<i>n</i>) for each experimental group/condition, given as a discrete number and unit of measurement
☐	☒ A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
☐	☒ The statistical test(s) used AND whether they are one- or two-sided <i>Only common tests should be described solely by name; describe more complex techniques in the Methods section.</i>
☐	☒ A description of all covariates tested
☒	☐ A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons
☐	☒ A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals)
☒	☐ For null hypothesis testing, the test statistic (e.g. <i>F</i> , <i>t</i> , <i>r</i>) with confidence intervals, effect sizes, degrees of freedom and <i>P</i> value noted <i>Give P values as exact values whenever suitable.</i>
☒	☐ For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings
☐	☐ For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes
☐	☒ Estimates of effect sizes (e.g. Cohen's <i>d</i> , Pearson's <i>r</i>), indicating how they were calculated

Our web collection on [statistics for biologists](#) contains articles on many of the points above.

Software and code

Policy information about [availability of computer code](#)

Data collection	Data were collected using Qualtrics (Qualtrics, Provo, UT, USA), a commercial online survey platform.
Data analysis	All analyses were conducted in R version 4.5.3. Missing data were handled by multiple imputation by chained equations using the mice package (Van Buuren & Groothuis-Oudshoorn, 2011), with predictive mean matching for continuous variables and polytomous regression for categorical variables, across 500 imputed datasets pooled using Rubin's rules. Custom analysis code is openly available at https://github.com/OxWellStudy/SelfHarm-Content-2025 .

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio [guidelines for submitting code & software](#) for further information.

Data

Policy information about [availability of data](#)

All manuscripts must include a [data availability statement](#). This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our [policy](#)

The data are individual-level adolescent survey responses containing sensitive information on mental health and self-harm. Owing to their sensitive nature and the

privacy and ethical terms under which they were collected, they cannot be deposited publicly. Deidentified extracts of the minimum dataset can be made available to academic researchers on reasonable request, following review by the research team. Requests should be directed to oxwell@psych.ox.ac.uk

Research involving human participants, their data, or biological material

Policy information about studies with [human participants or human data](#). See also policy information about [sex, gender \(identity/presentation\), and sexual orientation](#) and [race, ethnicity and racism](#).

Reporting on sex and gender	This study reports gender, not sex; sex assigned at birth was not collected. Gender was self-reported, derived from one question on gender identity and a second on transgender identity, and categorised as girl/woman, boy/man, trans/gender diverse, don't know/not sure, and prefer not to say. Gender was included as a covariate in all adjusted analyses, and exposure outcomes are reported disaggregated by gender in Supplementary Table S1 and Supplementary Figures S1 and S11.
Reporting on race, ethnicity, or other socially relevant groupings	The main socially relevant grouping was ethnicity, which was self-reported and categorised as White British, Asian/Asian British, Black/African/Caribbean/Black British, Mixed/Multiple ethnic groups, and Other ethnic group, with White British as the reference category in adjusted models. Food insecurity was included as a socioeconomic indicator. These groupings were self-reported by participants and were used to examine whether self-harm content exposure varied across groups and to adjust for potential confounding, alongside the other covariates (gender, year group, bullying, loneliness, online aggression, online coercion, anxiety, and depression). Results disaggregated by ethnicity are reported in Supplementary Table S1 and Supplementary Figures S3 and S13.
Population characteristics	Participants were 32,102 secondary school and further education college students in school years 7 to 13 (aged 11 to 18 years), from 49 schools and colleges in two regions of England (Liverpool and Oxfordshire). Gender was self-reported (girl/woman, boy/man, trans/gender diverse, don't know/not sure, prefer not to say) and ethnicity was self-reported across five categories (White British; Asian/Asian British; Black/African/Caribbean/Black British; Mixed/Multiple ethnic groups; Other ethnic group). Covariate-relevant characteristics measured included food insecurity, bullying, loneliness, online aggression, online coercion, and anxiety and depression symptoms (measured with the RCADS). The full breakdown of sample characteristics is reported in Supplementary Table S1.
Recruitment	Schools were recruited through local authority partners and enrolled students using a parental opt-out model. Students aged 16 and above provided informed consent to participate, and students under 16 provided assent after parents had been given the opportunity to opt their child out of participation. Consent and assent were recorded electronically within the online survey before proceeding. No incentives or other compensation were offered for participation.
Ethics oversight	The OxWell Student Survey was approved by the University of Oxford Research Ethics Committee (reference R62366/RE0017).

Note that full information on the approval of the study protocol must also be provided in the manuscript.

Field-specific reporting

Please select the one below that is the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

☐ Life sciences ☒ Behavioural & social sciences ☐ Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see nature.com/documents/nr-reporting-summary-flat.pdf

Behavioural & social sciences study design

All studies must disclose on these points even when the disclosure is negative.

Study description	Quantitative, observational, cross-sectional study using self-report survey data from the OxWell Student Survey.
Research sample	32,102 students in school years 7 to 13 (aged 11 to 18) from 49 secondary schools and further education colleges in two regions of England (Liverpool and Oxfordshire), from the OxWell Student Survey. Gender and ethnicity were self-reported, with a range of socioeconomic backgrounds (full characteristics in Supplementary Table S1). The sample is large and diverse but was recruited through participating schools rather than national probability sampling, so it is not nationally representative. This analysis used the February to March 2025 wave (Release 13) of the survey.
Sampling strategy	Schools and colleges were recruited through local authority partners, and all eligible students within participating institutions were invited under a parental opt-out model (a convenience sample at the institution level). No formal sample-size calculation was performed; the sample reflects the students in participating schools who completed the relevant items. The resulting sample (n = 32,102) provides ample power for the multinomial regression analyses.
Data collection	Data were collected via an online self-report questionnaire administered through Qualtrics and completed by students on school devices during the school day, taking approximately 15 minutes. As an anonymous observational survey there was no experimental condition; blinding to condition or hypothesis is not applicable.
Timing	Data were collected between February and March 2025, with a small number of schools completing in April 2025.
Data exclusions	Analyses were restricted to participants who were asked and answered the self-harm content exposure items (school years 7 to 13),

Data exclusions	giving an analytic sample of 32,102; this restriction follows from the survey design. Missing covariate data were handled by multiple imputation, and a complete-case sensitivity analysis included 25,113 participants.
Non-participation	As the survey was administered anonymously within schools under a parental opt-out model, the number of eligible students invited, opting out, or absent was not recorded at the individual level, so a response rate or non-participation figure cannot be calculated. Parents were able to opt their child out of participation, and students could decline to answer any question.
Randomization	Participants were not allocated to experimental groups; this was an observational survey. Potential confounding was addressed by adjusting all multinomial models simultaneously for gender, year group, ethnicity, food insecurity, bullying, loneliness, online aggression, online coercion, anxiety, and depression

Reporting for specific materials, systems and methods

We require information from authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, system or method listed is relevant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.

Materials & experimental systems

n/a	Involved in the study
☒	☐ Antibodies
☒	☐ Eukaryotic cell lines
☒	☐ Palaeontology and archaeology
☒	☐ Animals and other organisms
☒	☐ Clinical data
☒	☐ Dual use research of concern
☒	☐ Plants

Methods

n/a	Involved in the study
☒	☐ ChIP-seq
☒	☐ Flow cytometry
☒	☐ MRI-based neuroimaging

Plants

Seed stocks	Report on the source of all seed stocks or other plant material used. If applicable, state the seed stock centre and catalogue number. If plant specimens were collected from the field, describe the collection location, date and sampling procedures.
Novel plant genotypes	Describe the methods by which all novel plant genotypes were produced. This includes those generated by transgenic approaches, gene editing, chemical/radiation-based mutagenesis and hybridization. For transgenic lines, describe the transformation method, the number of independent lines analyzed and the generation upon which experiments were performed. For gene-edited lines, describe the editor used, the endogenous sequence targeted for editing, the targeting guide RNA sequence (if applicable) and how the editor was applied.
Authentication	Describe any authentication procedures for each seed stock used or novel genotype generated. Describe any experiments used to assess the effect of a mutation and, where applicable, how potential secondary effects (e.g. second site T-DNA insertions, mosaicism, off-target gene editing) were examined.