

Algorithmically driven exposure to online self-harm content and its association with broader psychosocial risk in 32,000 adolescents

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The OxWell Study Team

The following were members of the OxWell Study Team at the time of this study and contributed to the design, delivery, and ongoing development of the OxWell Student Survey. A full list of past and present team members is available at <https://doi.org/10.17605/OSF.IO/SEKHR>.

Saba Arshad, University of Oxford; Giacomo Bignardi, University of Cambridge; Rohan Borschmann, Oxford Health NHS Foundation Trust and University of Oxford; Rosa C. G. Cheesman, University of Oslo; Johnny Collett, Oxford Brookes University; Francesca Happé, King's College London; Virena Hinze, University of Oxford; Holly Hodges, University of Cambridge; Gaby Illingworth, University of Oxford; Maria Loades, University of Bath; Clare Mackay, University of Oxford; Philip McHale, University of Liverpool; Shona O'Leary, University of Oxford; Shreena Patel, University of Oxford; Gabriela Pavarini, University of Oxford; Lucas Sempe, Queen Margaret University; Simona Skripkauskaitė, University of Oxford; Apostolos Tsiachristas, University of Oxford; Felicity Waite, University of Oxford; Simon White, University of Cambridge; Mirela Zaneva, University of Oxford; Wendee Zhang, University of Oxford.

Table S1. Demographic, interpersonal, and mental health characteristics by frequency and pathway of self-harm content exposure among students who answered the exposure question (N = 28,797)									
	No past-month exposure	Past-month exposure							
		Frequency (n = 9,940)			Pathway (n = 9,802)*				
Variable	N = 18,857	Once or twice N = 5,464	A few times N = 2,638	Several times N = 1,838	Passive-only N = 7,150	Active-search-only N = 263	Active-receive-only N = 292	Mixed N = 1,187	Other-only N = 910
Gender									
Girl/Woman (n = 14,083)	8,116 (57.6)	3,123 (22.2)	1,721 (12.2)	1,123 (7.9)	4,466 (75.8)	131 (2.2)	110 (1.9)	650 (11.0)	532 (89.0)
Boy/Man (n = 13,394)	10,159 (75.8)	2,049 (15.3)	714 (5.3)	472 (3.5)	2,271 (71.3)	87 (2.7)	158 (5.0)	378 (11.9)	293 (9.2)
Trans/Gender Diverse (n = 749)	278 (37.1)	160 (21.36)	135 (18)	176 (23.5)	264 (56.8)	35 (7.5)	14 (3.0)	109 (23.4)	43 (9.3)
Prefer not to say (n = 299)	182 (60.9)	56 (18.7)	27 (9)	34 (11.4)	63 (54.8)	<5	<5	20 (17.4)	24 (20.9)
Don't know/Not sure (n = 236)	99 (41.9)	67 (28.4)	40 (16.9)	30 (12.7)	78 (58.2)	6 (4.5)	6 (4.5)	29 (21.6)	15 (11.2)
Missing (n = 36)	23 (63.9)	9 (25)	<5	<5	8 (66.7)	<5	<5	<5	<5
Year Group									
7 (n = 5,180)	3,812 (73.6)	795 (15.3)	340 (6.6)	233 (4.5)	859 (64.0)	55 (4.1)	63 (4.7)	174 (13.0)	191 (14.2)

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Variable	N = 18,857	Once or twice N = 5,464	A few times N = 2,638	Several times N = 1,838	Passive-only N = 7,150	Active-search-only N = 263	Active-receive-only N = 292	Mixed N = 1,187	Other-only N = 910
8 (n = 5185)	3,432 (66.2)	932 (18)	454 (8.8)	367 (7.1)	1,129 (65.3)	54 (3.1)	61 (3.5)	241 (13.9)	245 (14.2)
9 (n = 5615)	3,541 (63.1)	1,105 (19.7)	570 (10.2)	399 (7.1)	1,471 (72.1)	48 (2.4)	67 (3.3)	271 (13.3)	183 (9.0)
10 (n = 4474)	2,798 (62.5)	916 (20.5)	438 (9.7)	322 (7.2)	1,265 (76.4)	45 (2.7)	42 (2.5)	190 (11.5)	113 (6.8)
11 (n = 2832)	1,798 (63.5)	571 (20.2)	276 (9.7)	187 (6.6)	805 (79.0)	21 (2.1)	20 (2.0)	111 (10.9)	63 (6.2)
12 (n = 2523)	1,591 (63.1)	511 (20.3)	270 (10.7)	151 (6)	766 (82.9)	13 (1.4)	17 (1.8)	88 (9.5)	40 (4.3)
13 (n = 2988)	1,885 (63.1)	634 (21.2)	290 (9.7)	179 (6)	855 (78.4)	27 (2.5)	22 (2.0)	112 (10.3)	75 (6.9)
Ethnicity									
White (n = 18,960)	12,185 (64.3)	3,762 (19.8)	1,786 (9.4)	1,227 (6.5)	4,983 (74.5)	156 (2.3)	174 (2.6)	739 (11.0)	643 (9.6)
Asian/Asian British (n = 3,938)	2,711 (68.8)	686 (17.4)	326 (8.3)	215 (5.5)	915 (75.5)	29 (2.4)	41 (3.3)	155 (12.8)	71 (5.9)

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		Frequency (n = 9,940)			Pathway (n = 9,802)*				
Variable	N = 18,857	Once or twice N = 5,464	A few times N = 2,638	Several times N = 1,838	Passive-only N = 7,150	Active-search-only N = 263	Active-receive-only N = 292	Mixed N = 1,187	Other-only N = 910
Black/African/Caribbean/Black British (n = 1,779)	1,249 (70.2)	286 (16.1)	141 (7.9)	103 (5.8)	344 (66.2)	30 (5.8)	24 (4.6)	81 (15.6)	41 (7.9)
Mixed/Multiple Ethnic Groups (n = 1,911)	1,184 (62)	375 (19.6)	202 (10.6)	150 (7.8)	485 (67.9)	24 (3.4)	25 (3.5)	107 (15.0)	73 (10.2)
Other ethnic group (including Arab) (n = 1,624)	1,116 (68.7)	265 (16.3)	133 (8.2)	110 (6.8)	323 (65.0)	16 (3.2)	18 (3.6)	86 (17.3)	54 (10.9)
Missing (n = 585)	412 (70.4)	90 (15.3)	50 (8.5)	33 (5.6)	100 (60.6)	8 (4.8)	10 (6.1)	19 (11.5)	28 (17.0)
Food insecurity									
Never or hardly ever	17,581 (67)	4926 (18.8)	2285 (8.7)	1452 (5.5)	6400 (74.9)	188 (2.2)	240 (2.8)	944 (11)	774 (9.1)
Some of the time	1,022 (50.4)	440 (21.7)	291 (14.3)	276 (13.6)	617 (62.4)	49 (5)	39 (3.9)	172 (17.4)	112 (11.3)
Often	177 (43.1)	79 (19.2)	55 (13.4)	100 (24.3)	111 (47.6)	24 (10.3)	11 (4.7)	66 (28.3)	21 (9)
Missing	77 (68.1)	19 (16.8)	7 (6.2)	10 (8.8)	22 (64.7)	<5	<5	<5	<5

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Variable	N = 18,857	Once or twice N = 5,464	A few times N = 2,638	Several times N = 1,838	Passive-only N = 7,150	Active-search-only N = 263	Active-receive-only N = 292	Mixed N = 1,187	Other-only N = 910
Bullying frequency									
I have not been bullied in the past couple of months (n = 22,619)	15,615(69)	4,100 (18.1)	1,814 (8)	1,090 (4.8)	5,345 (77.4)	117 (1.7)	164 (2.4)	700 (10.1)	586 (8.5)
Once, twice or a few times (n = 3,673)	2,026 (55.2)	864 (23.5)	449 (12.2)	334 (9.1)	1,101 (67.7)	63 (3.9)	65 (4.0)	224 (13.8)	174 (10.7)
2 or 3 times a month (n = 707)	347 (49.1)	155 (21.9)	118 (16.7)	87 (12.3)	239 (67.7)	12 (3.4)	13 (3.7)	52 (14.7)	37 (10.5)
About once a week (n = 683)	350 (51.2)	143 (20.9)	96 (14.1)	94 (13.8)	185 (56.6)	27 (8.3)	17 (5.2)	61 (18.7)	37 (11.3)
Several times a week (n = 936)	403 (43.1)	177 (18.9)	142 (15.2)	214 (22.9)	250 (47.5)	40 (7.6)	30 (5.7)	141 (26.8)	65 (12.4)
Missing (n = 179)	116 (64.8)	25 (14)	19 (10.6)	19 (10.6)	30 (52.6)	<5	<5	9 (15.8)	11 (19.3)
Loneliness frequency									
Hardly ever or never (n = 13,387)	10,641 (79.5)	1,843 (13.8)	607 (4.5)	296 (2.2)	2,140 (79.2)	40 (1.5)	86 (3.2)	186 (6.9)	252 (9.3)

Table S1. Demographic, interpersonal, and mental health characteristics by frequency and pathway of self-harm content exposure among students who answered the exposure question (N = 28,797)

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	No past-month exposure	Past-month exposure							
		Frequency (n = 9,940)			Pathway (n = 9,802)*				
Variable	N = 18,857	Once or twice N = 5,464	A few times N = 2,638	Several times N = 1,838	Passive-only N = 7,150	Active-search-only N = 263	Active-receive-only N = 292	Mixed N = 1,187	Other-only N = 910
Yes (n = 2,105)	708 (33.6)	513 (24.4)	402 (19.1)	482 (22.9)	780 (56.3)	77 (5.6)	59 (4.3)	333 (24.0)	135 (9.8)
No (n = 25,387)	17,458 (68.8)	4,648 (18.3)	2,071 (8.2)	1,210 (4.8)	6,021 (76.9)	157 (2.0)	207 (2.6)	754 (9.6)	687 (8.8)
Prefer not to say (n = 1,000)	494 (49.4)	251 (25.1)	129 (12.9)	126 (12.6)	289 (57.8)	23 (4.6)	22 (4.4)	87 (17.4)	79 (15.8)
Missing (n = 305)	197 (64.6)	52 (17.1)	36 (11.8)	20 (6.6)	60 (65.2)	6 (6.5)	<5	13 (14.1)	9 (9.8)
RCADS Anxiety T-score, mean (SD)	44.7 (14.6)	53.7 (14.6)	59.8 (15.7)	66.9 (18.8)	56.2 (15.5)	67.3 (18.8)	57.5 (18.4)	65.1 (18.4)	57.7 (16.9)
RCADS Depression T-score, mean (SD)	46.4 (13.0)	55.6 (14.9)	61.9 (15.7)	69.9 (18.3)	58.3 (15.7)	71.5 (19.2)	58.5 (17.7)	68.0 (17.9)	59.8 (16.9)

Note. Data are presented as N (%). Cells with fewer than five observations are suppressed to reduce the risk of disclosure and are reported as “<5”

* Pathway totals exclude 138 participants who reported exposure but did not report a pathway

Figure S1. Frequency of exposure to self-harm content by gender
Distribution of exposure frequency across gender categories.

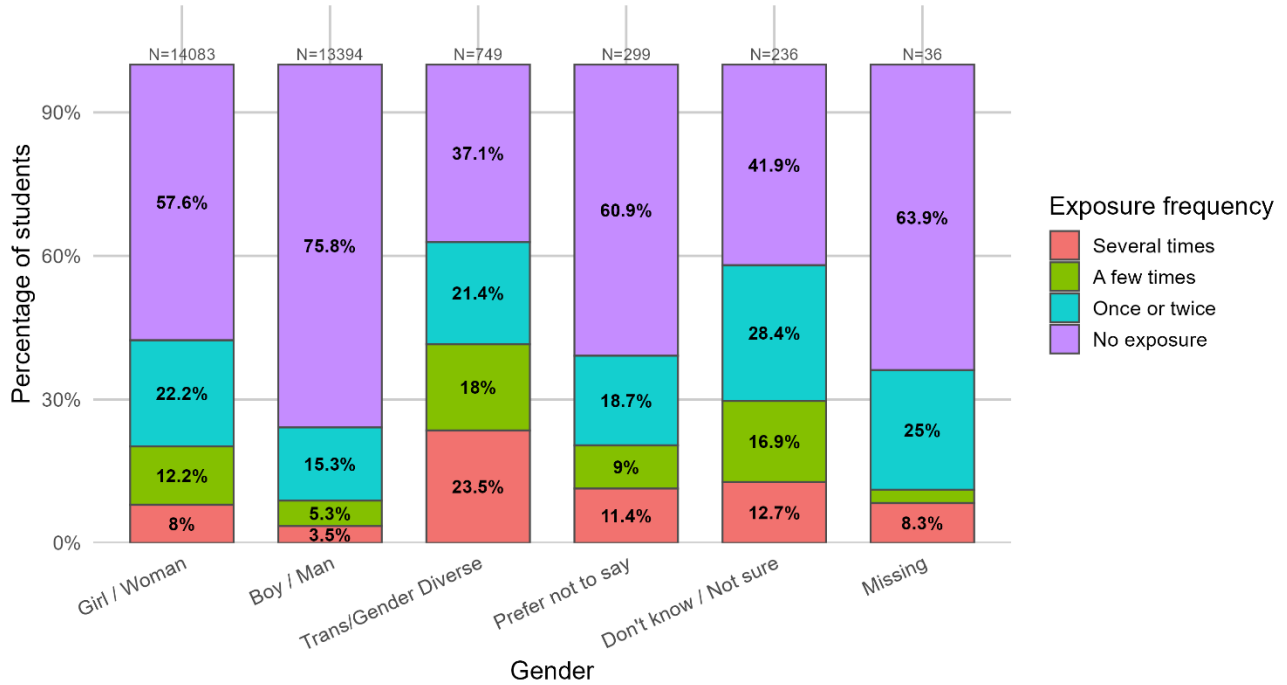


Figure S2. Frequency of exposure to self-harm content by school year
Patterns of exposure frequency across school year groups.

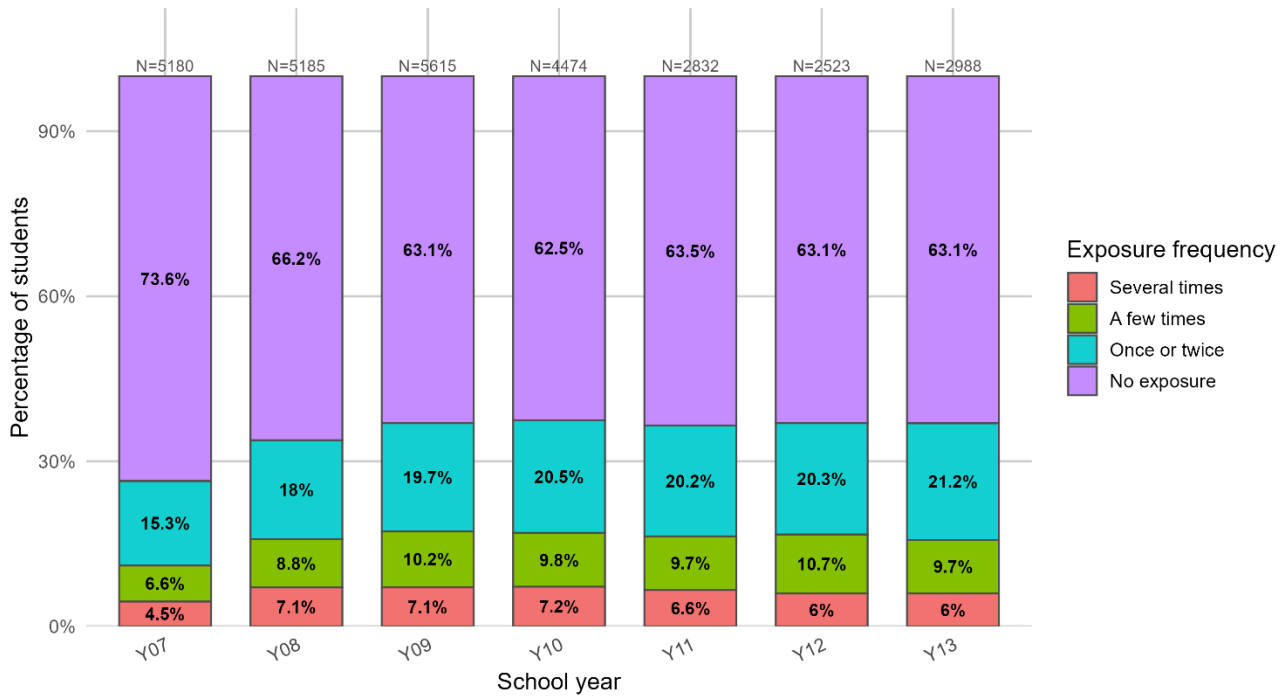


Figure S3. Frequency of exposure to self-harm content by ethnicity
Exposure frequency compared across ethnic groups.

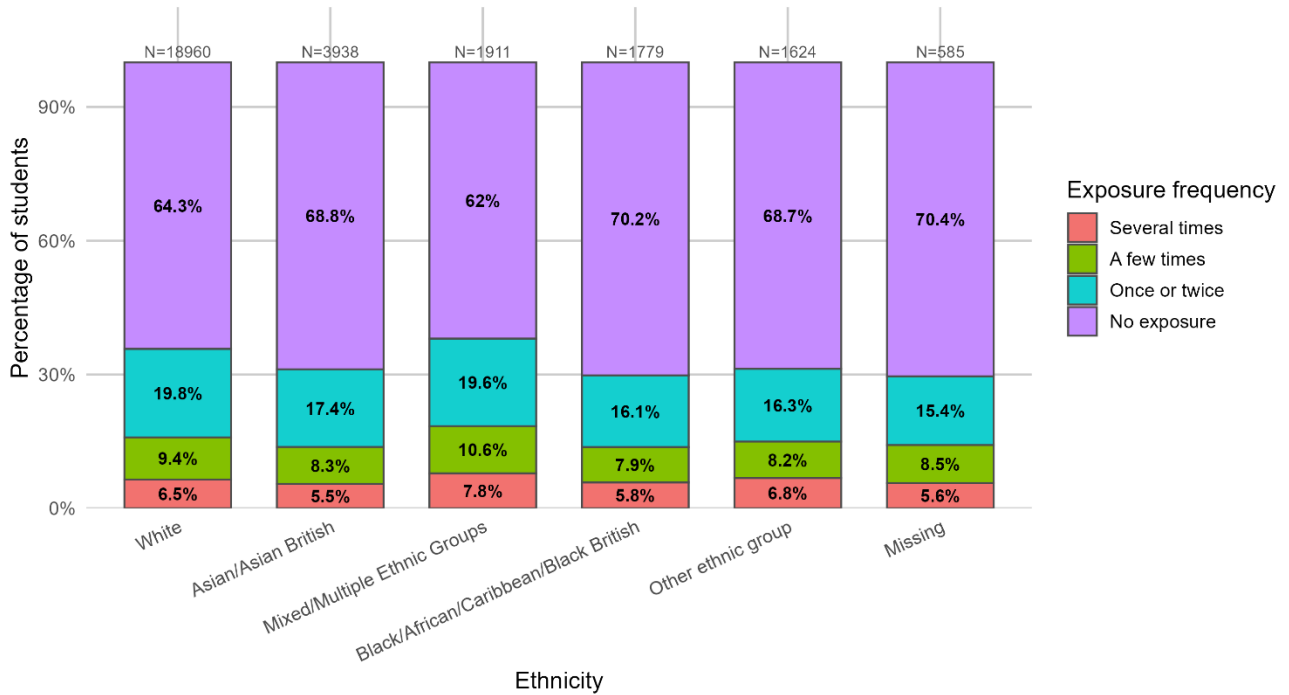


Figure S4. Frequency of exposure to self-harm content by food insecurity
Exposure frequency across levels of self-reported food insecurity.

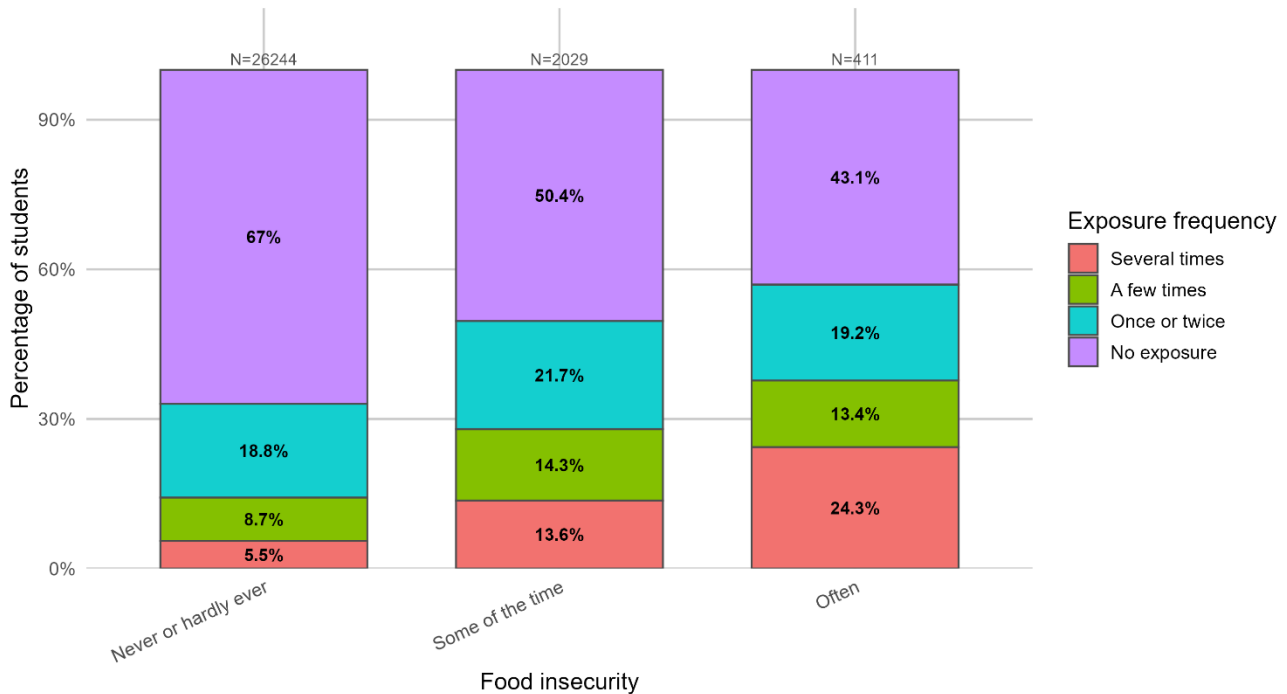


Figure S5. Frequency of exposure to self-harm content by bullying frequency
Stratification of exposure frequency by self-reported bullying.

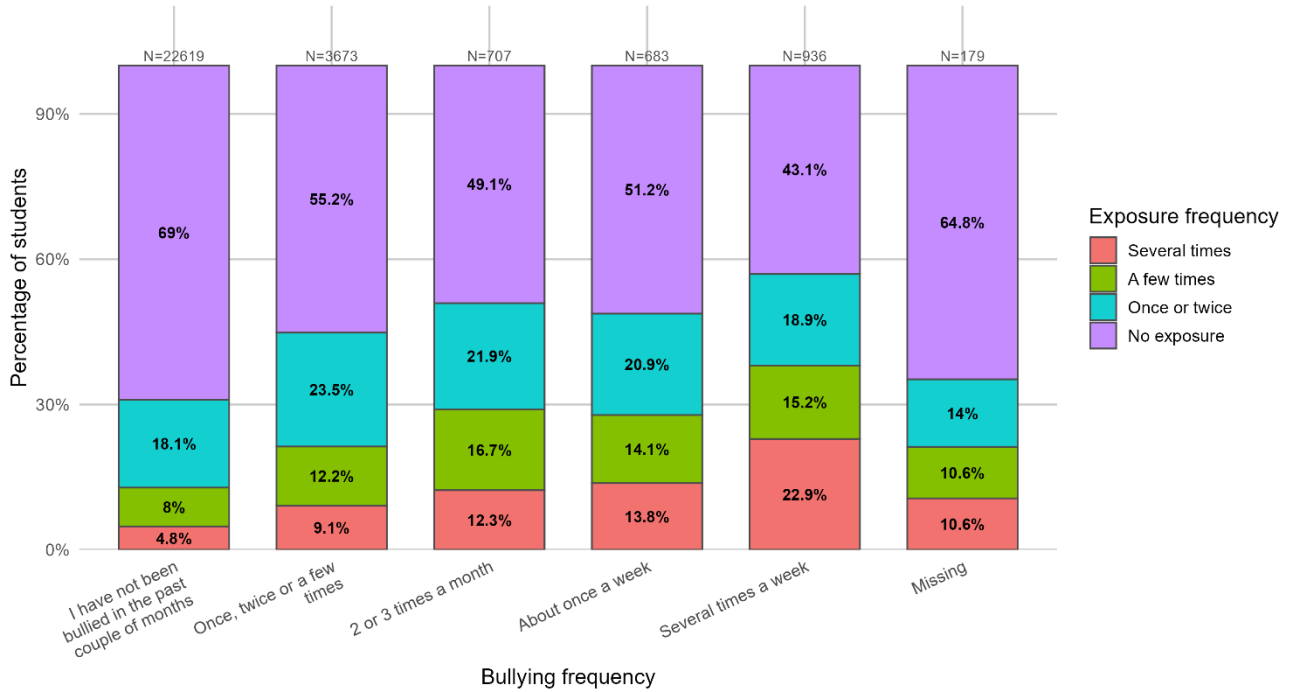


Figure S6. Frequency of exposure to self-harm content by loneliness
Exposure frequency across levels of loneliness.

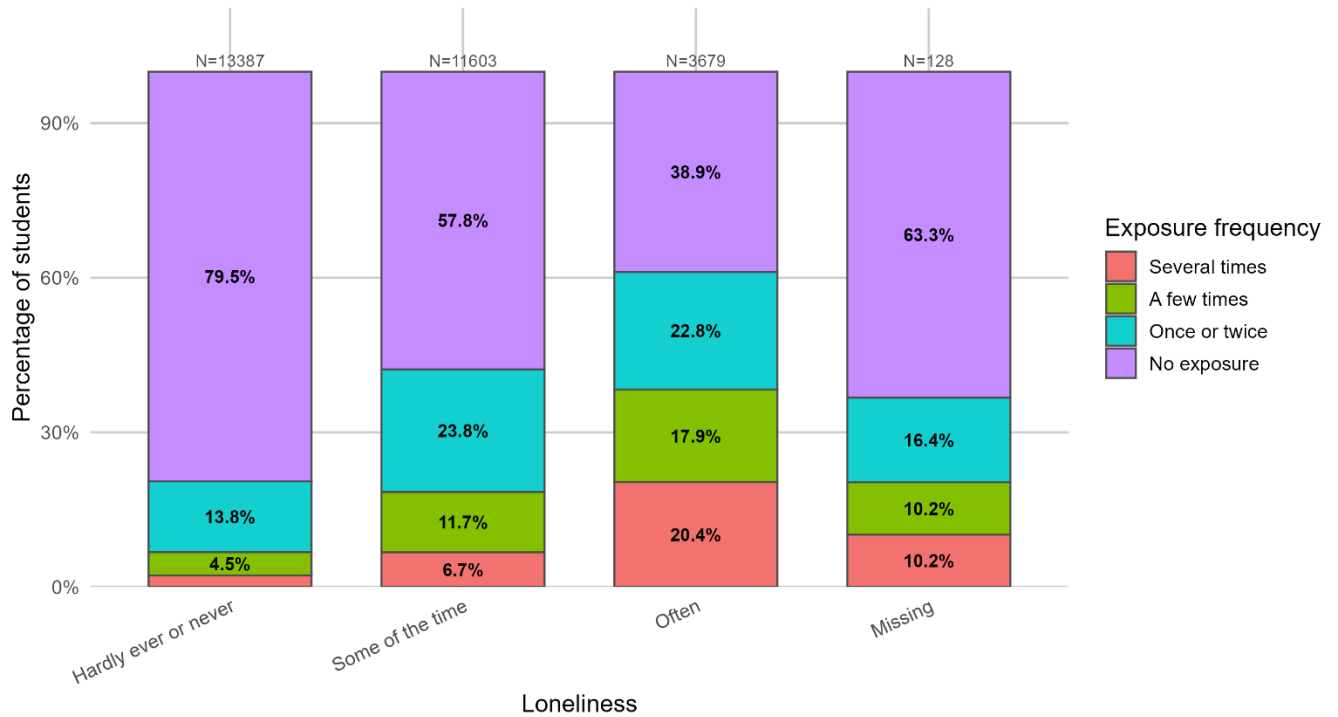


Figure S7. Frequency of exposure to self-harm content by online aggression
Distribution of exposure frequency among those reporting different levels of online aggression.

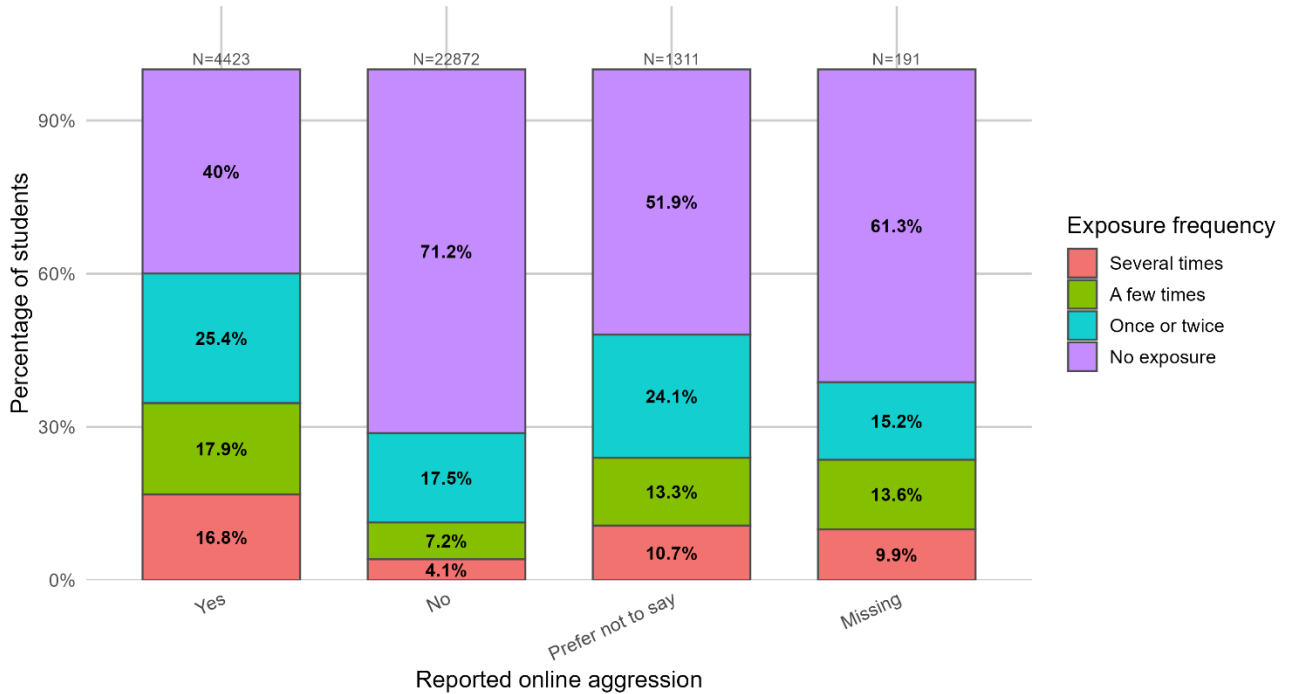


Figure S8. Frequency of exposure to self-harm content by coercive digital pressure
Exposure frequency stratified by coercive digital pressure experiences.

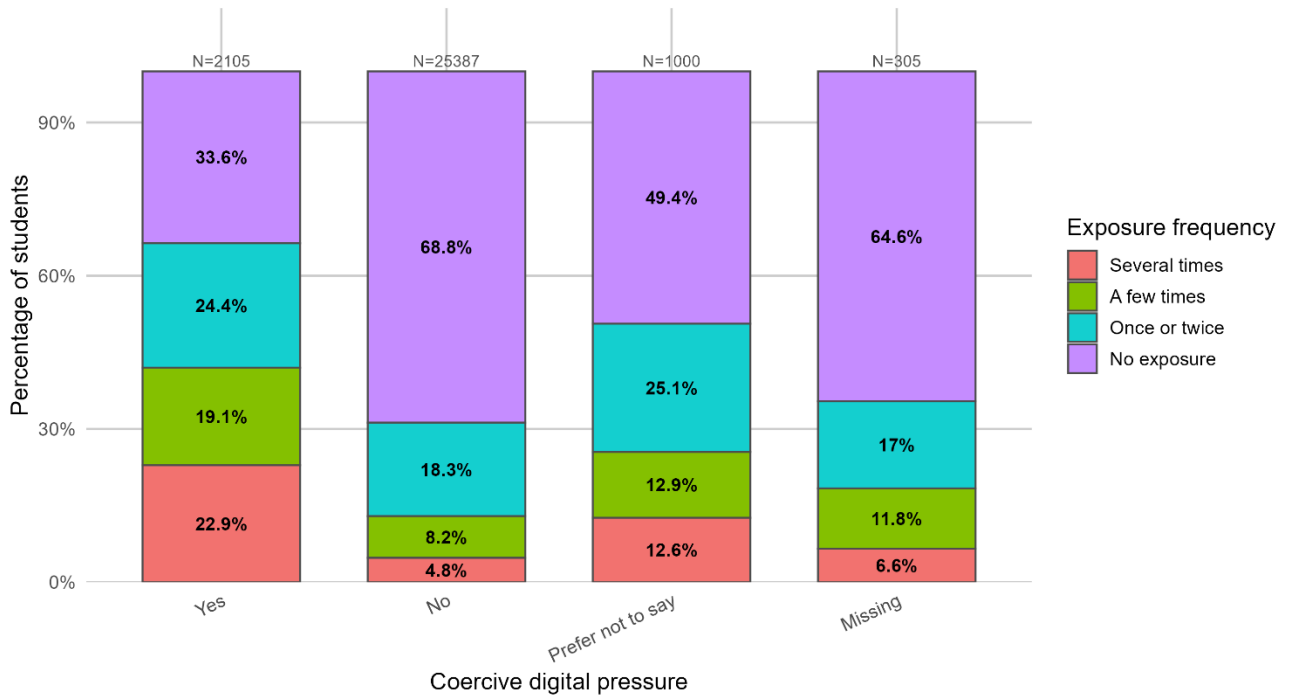


Figure S9. Frequency of exposure to self-harm content by anxiety severity
Exposure frequency shown across RCADS-25 anxiety severity groups.

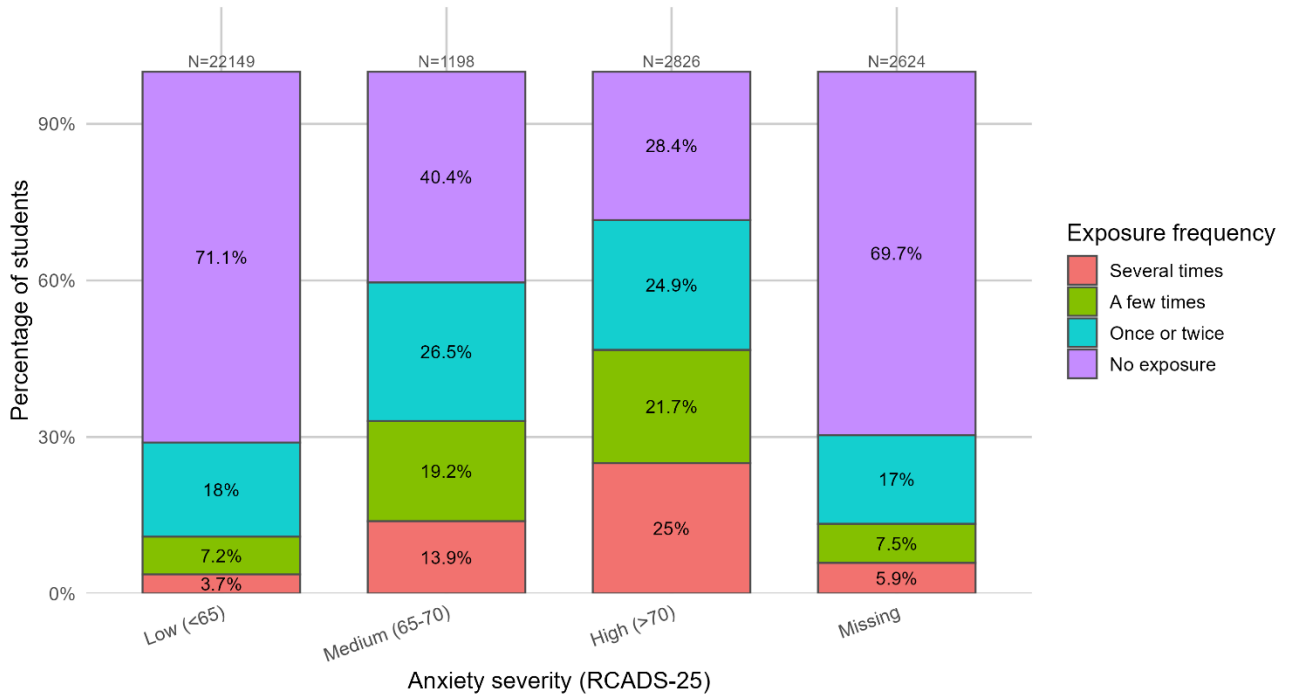


Figure S10. Frequency of exposure to self-harm content by depression severity
Exposure frequency shown across RCADS-25 depression severity groups.

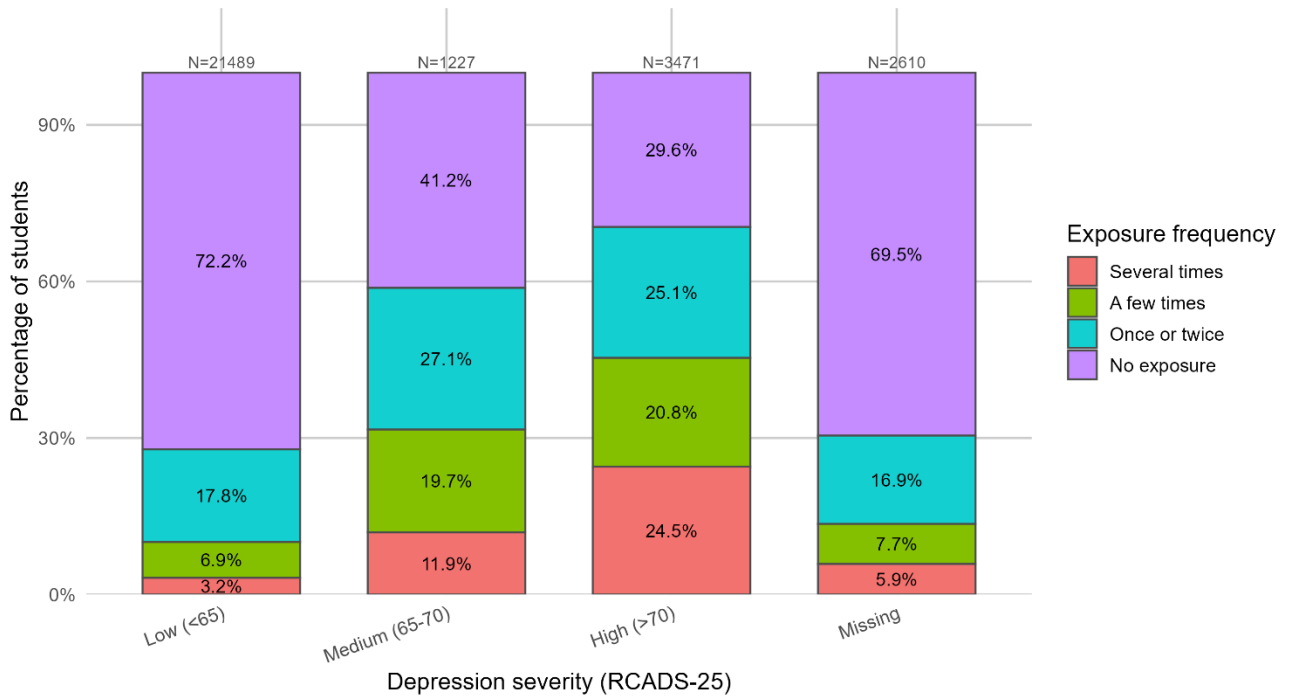


Figure S11. Exposure pathway by gender
Distribution of pathway membership across gender categories.

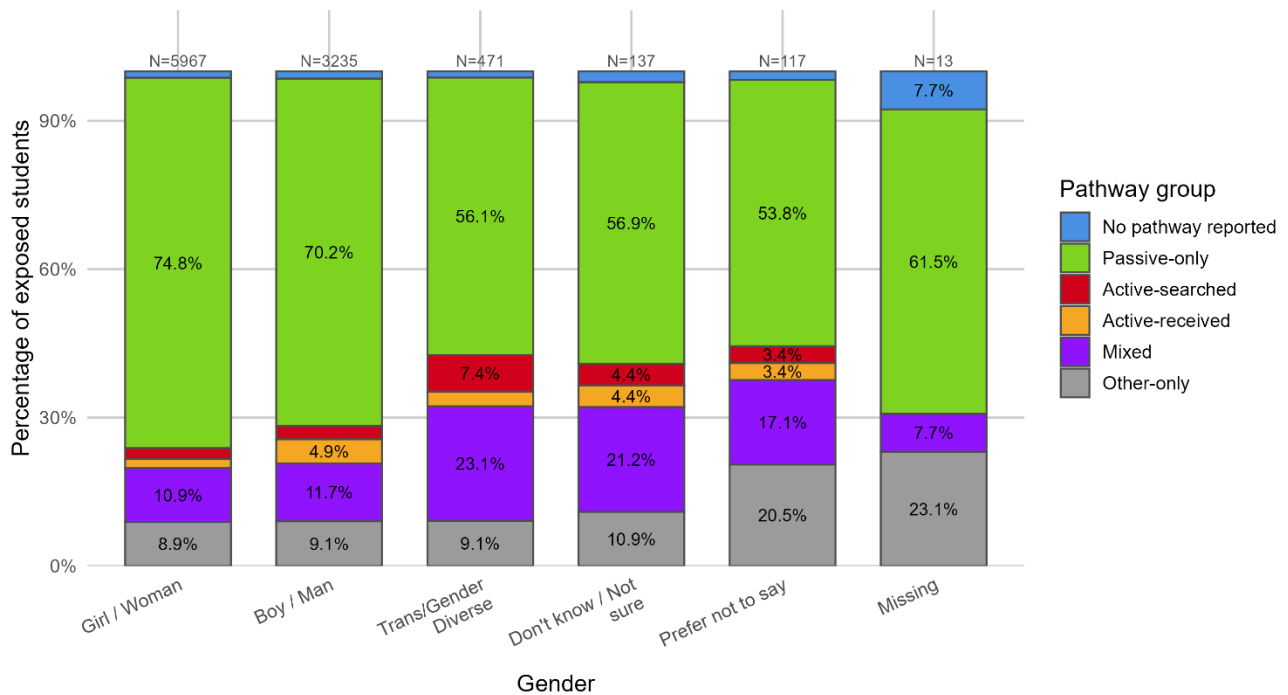


Figure S12. Exposure pathway by school year
Pathway membership stratified by school year groups.

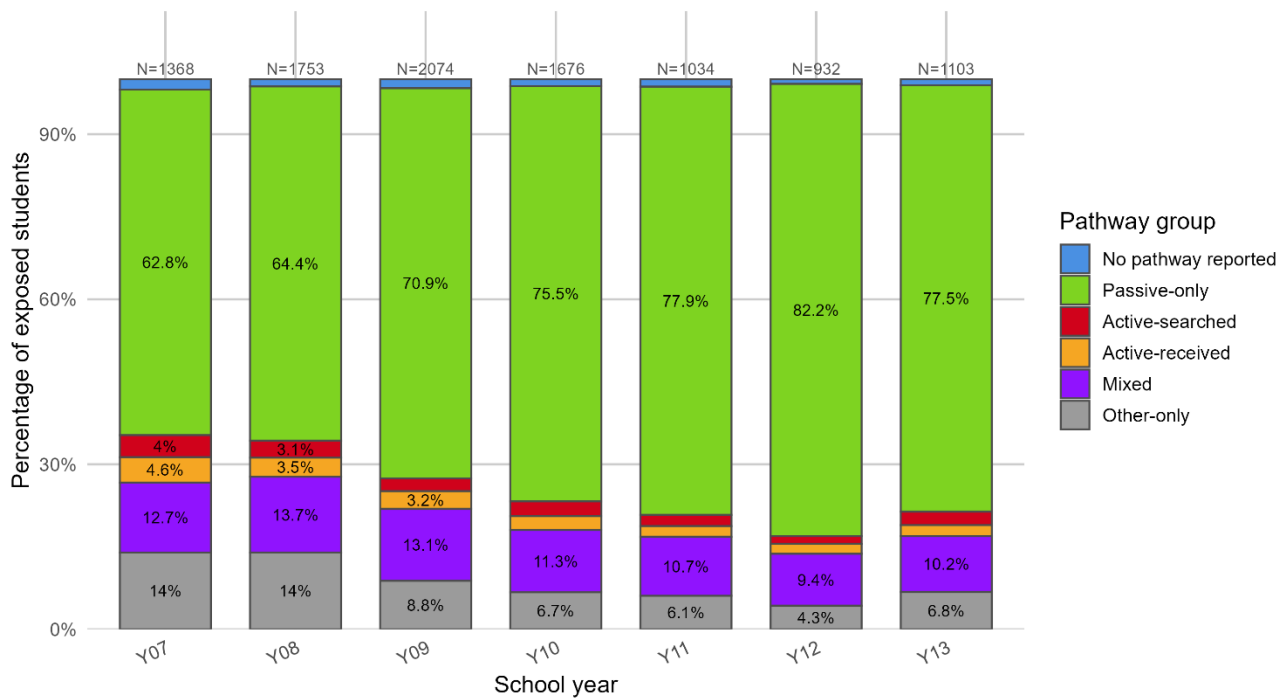


Figure S13. Exposure pathway by ethnicity
Distribution of pathway membership across ethnic groups.

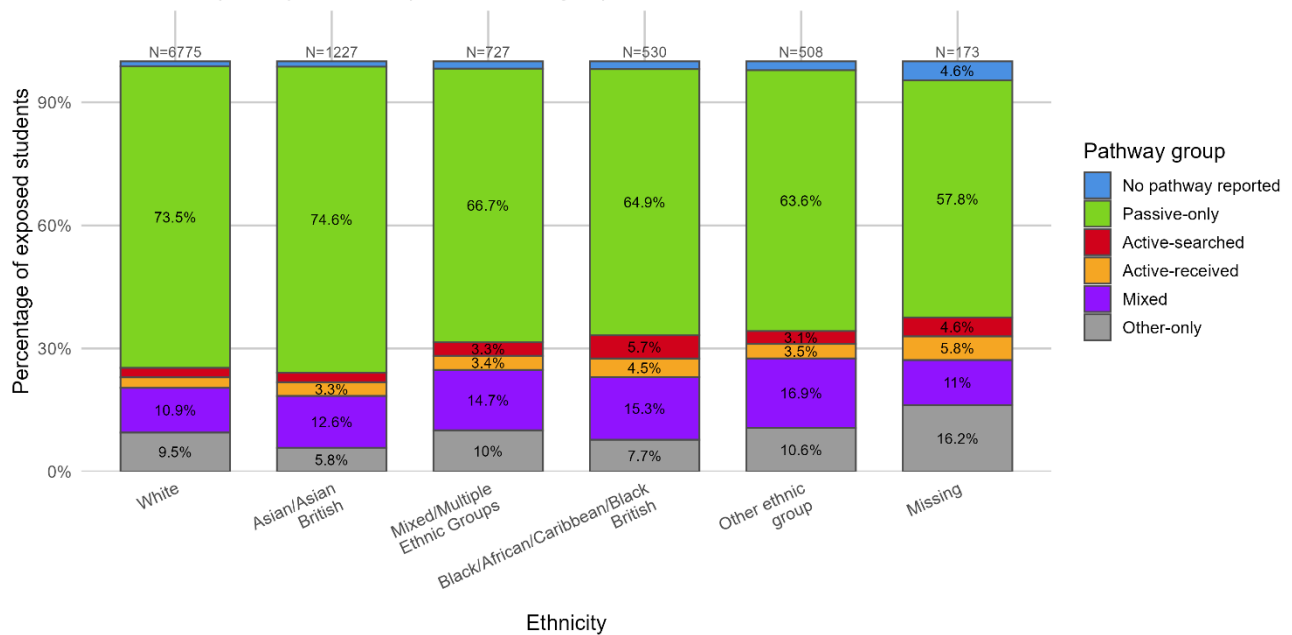


Figure S14. Exposure pathway by hunger
Distribution of pathway membership across levels of food insecurity.

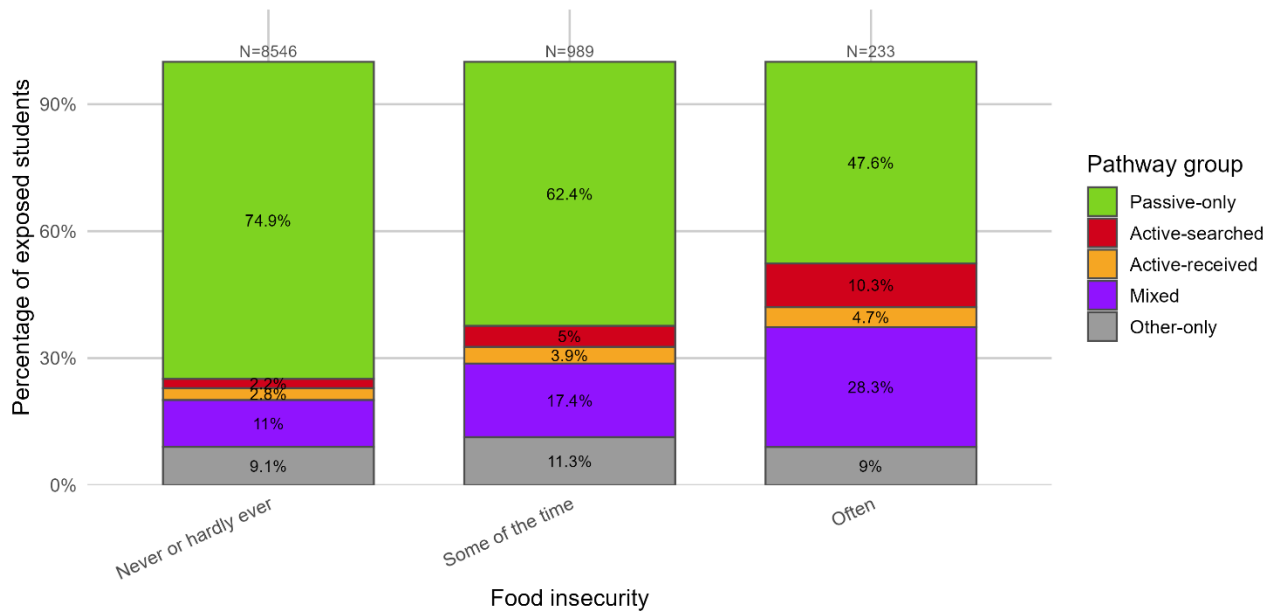


Figure S15. Exposure pathway by bullying frequency
Pathway membership across levels of bullying.

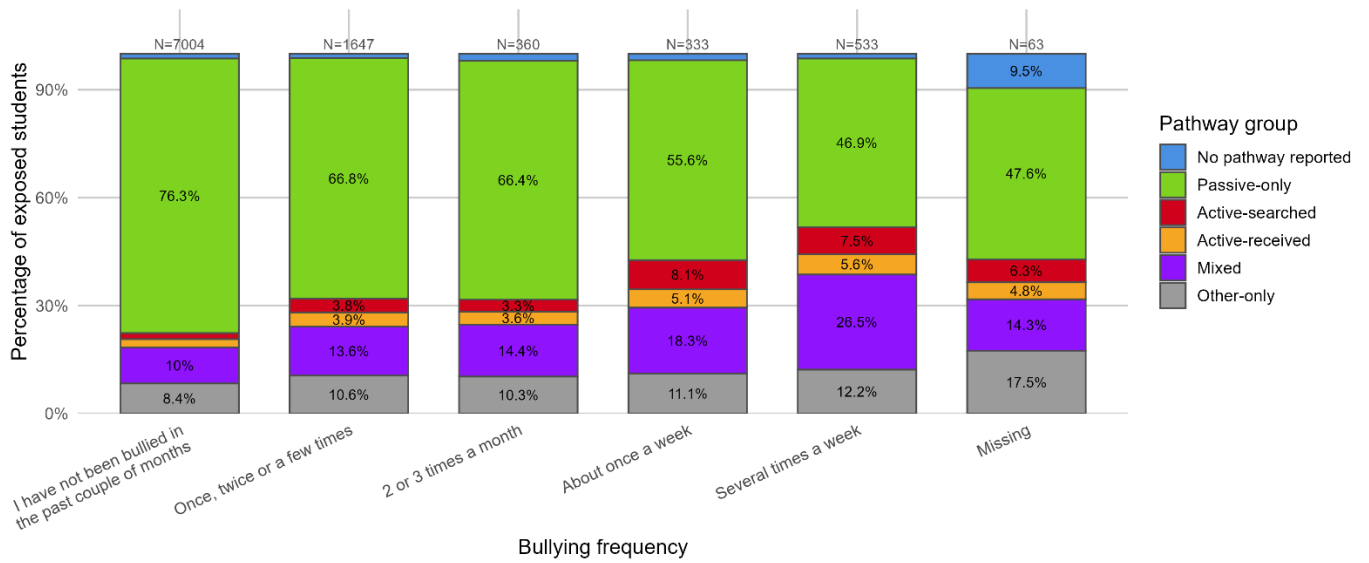


Figure S16. Exposure pathway by loneliness
Pathway membership stratified by loneliness levels.

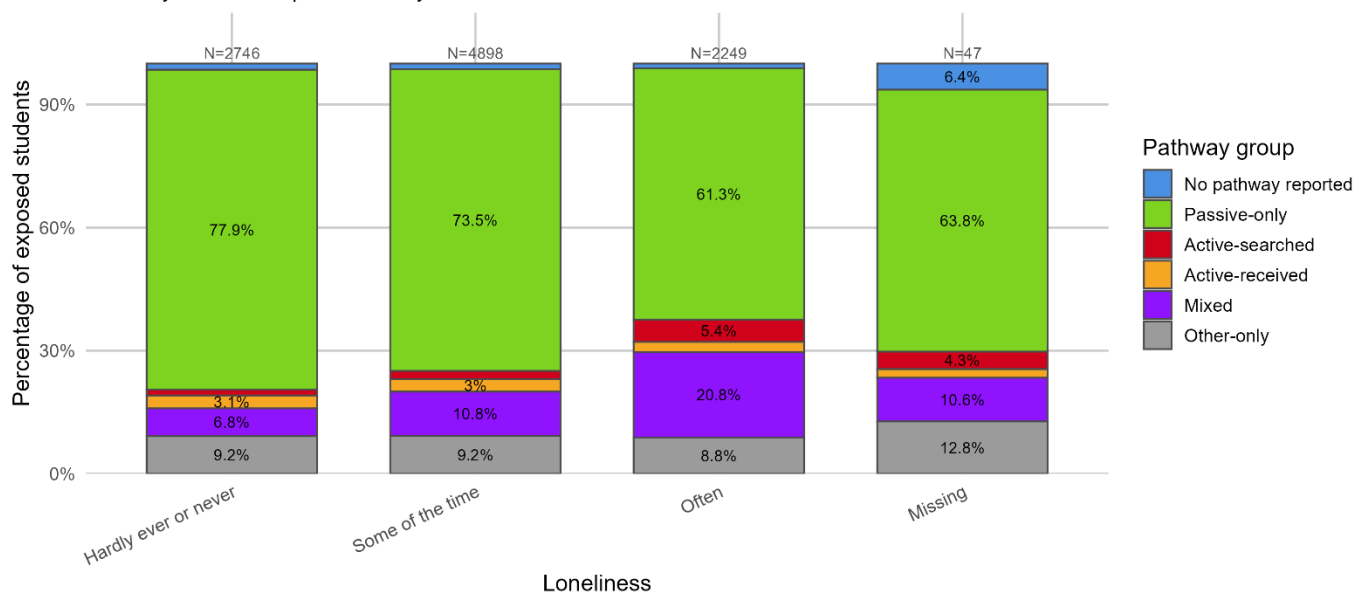


Figure S17. Exposure pathway by online aggression
Pathway membership by online aggression experiences.

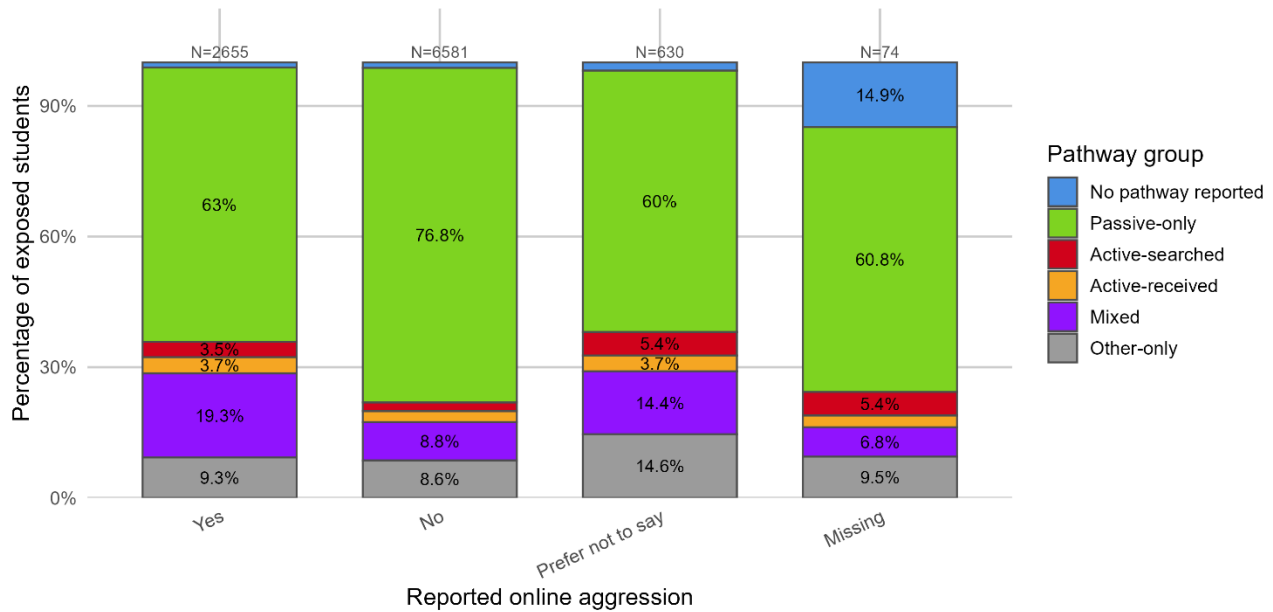


Figure S18. Exposure pathway by coercive digital pressure
Pathway membership stratified by coercive digital pressure experiences.

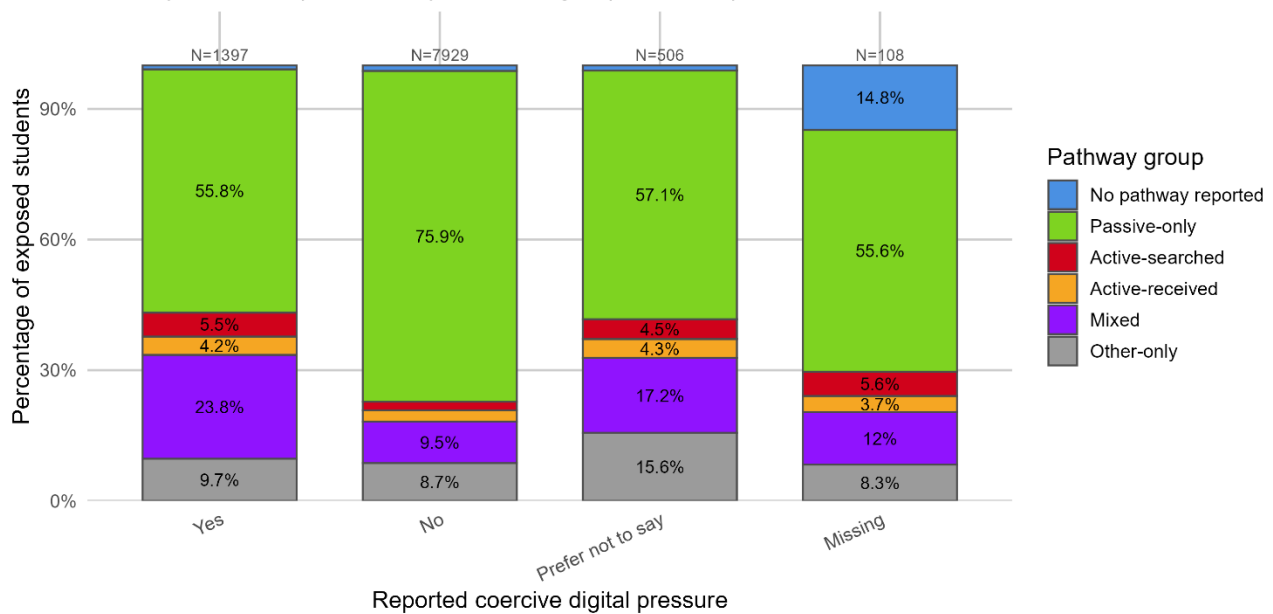


Figure S19. Exposure pathway by anxiety T-score
Pathway membership across quartiles of RCADS anxiety T-scores.

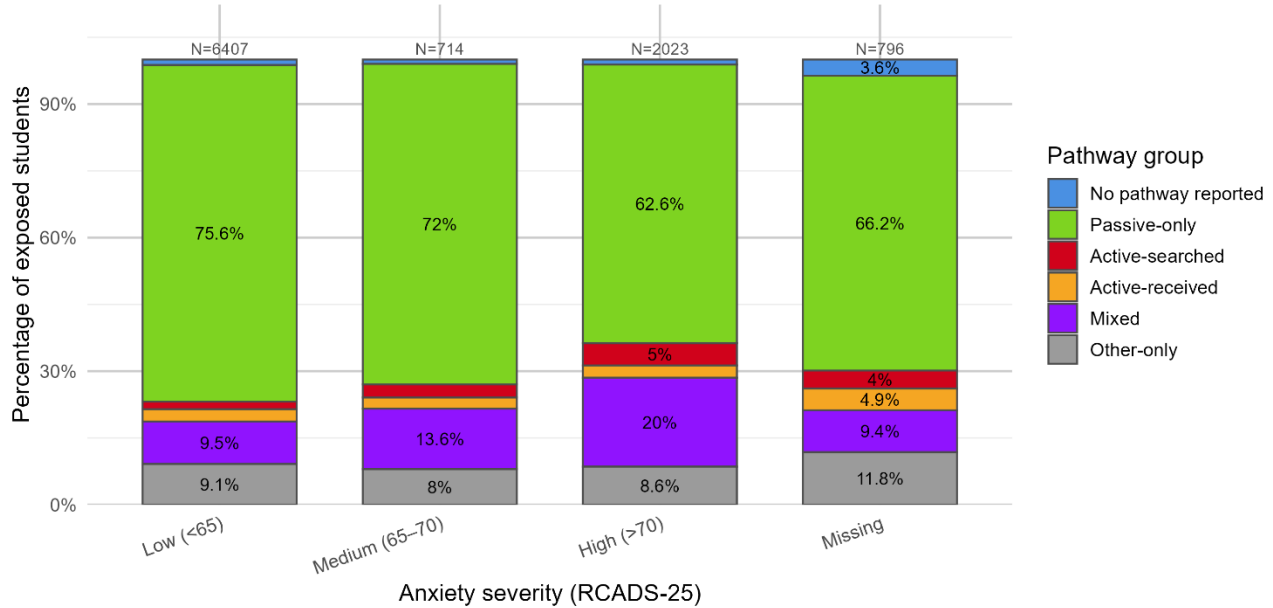


Figure S20. Exposure pathway by depression T-score
Pathway membership across quartiles of RCADS depression T-scores.

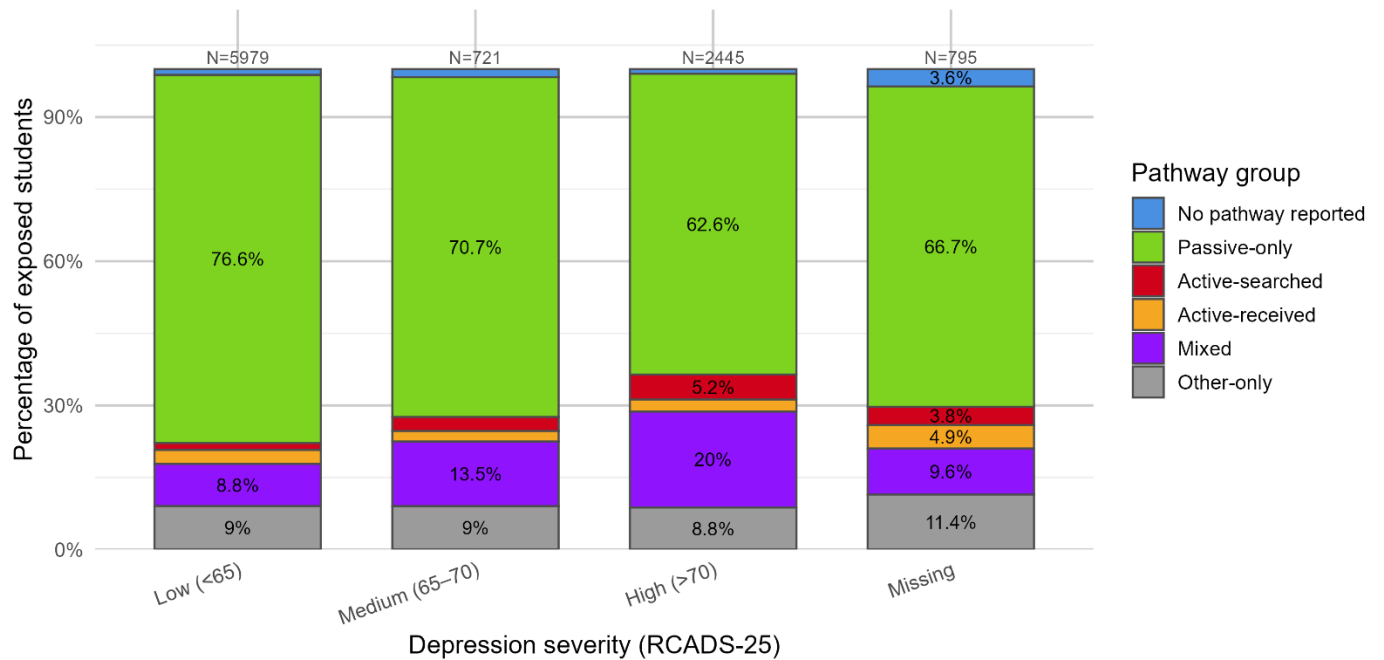


Figure S21. Frequency of exposure to self-harm content by exposure pathway
Proportion of participants selecting each exposure frequency across pathway groups.

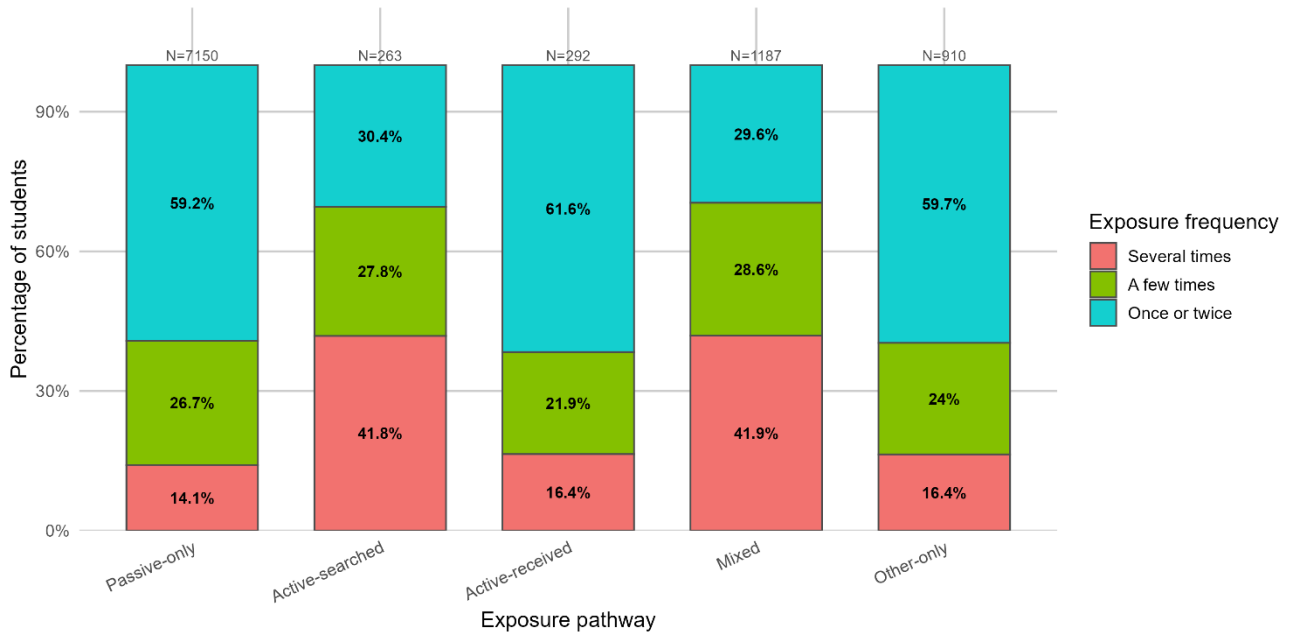


Table S2. Frequency of exposure to self-harm by exposure pathway

Exposure Pathway	Frequency of exposure		
	Once or twice (n = 5,464)	A few times (n = 2,638)	Several times (n = 1,838)
Passive-only (n = 7,150)	4,234 (59.2)	1,908 (26.7)	1,008 (14.1)
Active-search-only (n = 263)	80 (30.4)	73 (27.8)	110 (41.8)
Active-receive-only (n = 292)	180 (61.6)	64 (21.9)	48 (16.4)
Mixed (n = 1,187)	351 (29.6)	339 (28.6)	497 (41.9)
Other-only (n = 910)	543 (59.7)	218 (24)	149 (16.4)

Table S3. Combinations of exposure routes within the mixed pathway group ($n = 1,187$)

Exposure route combination	
Passive-only + Other-only	360 (30.3)
Passive-only- + Active-receive-only	275 (23.2)
Passive-only + Active-search-only	255 (21.5)
Passive-only + Active-search-only + Active-receive-only	65 (5.5)
Passive-only + Active-receive-only + Other-only	48 (4)
Passive-only + Active-search-only + Active-receive-only + Other-only	47 (4)
Passive-only + Active-search-only + Other-only	40 (3.4)
Active-receive-only + Other-only	34 (2.9)
Active-search-only + Other-only	32 (2.7)
Active-search-only + Active-receive-only	25 (2.1)
Active-search-only + Active-receive-only + Other-only	6 (0.5)
Total	1187

Table S4. Main results for the analysis using multiply imputed data (n = 32,102)

Predictor	Passive-only		Active-searched		Active-received		Mixed		Other-only	
	aOR [95% CI]	P	aOR [95% CI]	P	aOR [95% CI]	P	aOR [95% CI]	P	aOR [95% CI]	P
Gender										
Boy/Man	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Girl/Woman	1.81 [1.70, 1.93]	<0.001	1.20 [0.90, 1.59]	0.213	0.66 [0.51, 0.85]	0.001	1.37 [1.19, 1.57]	<0.001	1.67 [1.43, 1.94]	<0.001
Trans/Gender Diverse	1.80 [1.48, 2.18]	<0.001	2.57 [1.61, 4.08]	<0.001	1.08 [0.60, 1.95]	0.788	2.30 [1.73, 3.05]	<0.001	2.04 [1.43, 2.91]	<0.001
Don't know/Not sure	1.93 [1.40, 2.66]	<0.001	2.08 [0.87, 5.01]	0.101	1.81 [0.77, 4.25]	0.172	2.55 [1.58, 4.11]	<0.001	2.58 [1.47, 4.53]	0.001
Prefer not to say	1.08 [0.80, 1.47]	0.608	0.88 [0.31, 2.53]	0.819	0.77 [0.28, 2.13]	0.616	1.33 [0.79, 2.24]	0.278	2.59 [1.63, 4.11]	<0.001
Year group										
Year 7	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Year 8	1.43 [1.29, 1.59]	<0.001	1.09 [0.74, 1.61]	0.654	1.06 [0.74, 1.51]	0.756	1.50 [1.21, 1.86]	<0.001	1.42 [1.16, 1.73]	0.001
Year 9	1.82 [1.64, 2.02]	<0.001	0.93 [0.63, 1.39]	0.739	1.14 [0.81, 1.62]	0.453	1.56 [1.27, 1.92]	<0.001	1.04 [0.84, 1.29]	0.705
Year 10	1.86 [1.67, 2.07]	<0.001	1.06 [0.70, 1.60]	0.787	0.87 [0.58, 1.29]	0.482	1.28 [1.02, 1.60]	0.035	0.77 [0.61, 0.99]	0.042
Year 11	1.85 [1.64, 2.08]	<0.001	0.79 [0.47, 1.33]	0.369	0.67 [0.40, 1.12]	0.125	1.18 [0.91, 1.54]	0.214	0.68 [0.50, 0.91]	0.010
Year 12	1.84 [1.63, 2.08]	<0.001	0.58 [0.31, 1.09]	0.090	0.68 [0.39, 1.18]	0.171	1.04 [0.78, 1.37]	0.809	0.47 [0.33, 0.67]	<0.001
Year 13	1.47 [1.31, 1.66]	<0.001	0.73 [0.44, 1.19]	0.200	0.64 [0.39, 1.06]	0.086	0.83 [0.64, 1.08]	0.159	0.61 [0.46, 0.81]	0.001
Ethnicity										
White	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Asian/Asian British	0.94 [0.86, 1.03]	0.189	1.04 [0.69, 1.56]	0.848	1.27 [0.90, 1.79]	0.177	1.19 [0.98, 1.44]	0.074	0.57 [0.44, 0.73]	<0.001
Black/African/ Caribbean/ Black British	0.78 [0.68, 0.89]	<0.001	2.05 [1.35, 3.11]	0.001	1.39 [0.90, 2.14]	0.143	1.22 [0.94, 1.57]	0.136	0.70 [0.50, 0.96]	0.029

Mixed/Multiple Ethnic Groups	1.00 [0.89, 1.13]	0.997	1.57 [1.00, 2.46]	0.048	1.43 [0.93, 2.19]	0.102	1.47 [1.17, 1.84]	0.001	1.12 [0.87, 1.44]	0.392
Other ethnic group	0.78 [0.68, 0.90]	<0.001	0.98 [0.57, 1.69]	0.956	1.13 [0.69, 1.86]	0.616	1.23 [0.95, 1.59]	0.116	0.95 [0.71, 1.27]	0.720
Food insecurity										
Never or hardly ever	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Some of the time	0.94 [0.84, 1.06]	0.327	1.28 [0.91, 1.81]	0.152	1.18 [0.82, 1.70]	0.362	1.04 [0.85, 1.26]	0.715	1.13 [0.91, 1.41]	0.277
Often	0.95 [0.73, 1.25]	0.731	1.82 [1.05, 3.15]	0.033	1.54 [0.79, 2.98]	0.204	1.33 [0.92, 1.92]	0.134	1.10 [0.68, 1.79]	0.699
Bullying										
None in past couple of months	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Once, twice or a few times	0.97 [0.88, 1.06]	0.490	1.51 [1.08, 2.11]	0.015	1.52 [1.11, 2.07]	0.008	0.91 [0.76, 1.08]	0.267	1.07 [0.89, 1.29]	0.477
2 or 3 times a month	0.95 [0.79, 1.15]	0.607	0.98 [0.52, 1.84]	0.942	1.29 [0.71, 2.34]	0.398	0.77 [0.55, 1.08]	0.129	0.95 [0.66, 1.37]	0.771
About once a week	0.78 [0.64, 0.96]	0.016	2.45 [1.54, 3.92]	<0.001	1.73 [1.02, 2.92]	0.042	0.96 [0.70, 1.31]	0.798	0.97 [0.67, 1.40]	0.886
Several times a week	0.72 [0.60, 0.87]	<0.001	1.48 [0.94, 2.33]	0.089	1.75 [1.11, 2.77]	0.016	0.96 [0.74, 1.25]	0.781	1.10 [0.81, 1.50]	0.540
Loneliness										
Hardly ever or never	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Some of the time	1.34 [1.25, 1.44]	<0.001	1.33 [0.90, 1.96]	0.150	1.42 [1.06, 1.91]	0.019	1.76 [1.47, 2.11]	<0.001	1.32 [1.11, 1.56]	0.002
Often	1.29 [1.15, 1.44]	<0.001	2.10 [1.36, 3.25]	0.001	1.12 [0.73, 1.72]	0.595	2.50 [2.01, 3.12]	<0.001	1.26 [0.99, 1.62]	0.063
Aggression online										
No	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Yes	1.92 [1.77, 2.09]	<0.001	2.05 [1.51, 2.80]	<0.001	2.67 [2.01, 3.54]	<0.001	3.20 [2.75, 3.72]	<0.001	2.20 [1.85, 2.62]	<0.001
Prefer not to say	1.25 [1.08, 1.45]	0.004	2.07 [1.34, 3.21]	0.001	1.47 [0.90, 2.41]	0.125	1.51 [1.16, 1.97]	0.003	1.84 [1.41, 2.40]	<0.001

Coercion online

No	Ref.		Ref.		Ref.		Ref.		Ref.	
Yes	1.45 [1.28, 1.63]	<0.001	2.39 [1.70, 3.35]	<0.001	2.21 [1.58, 3.09]	<0.001	2.53 [2.12, 3.03]	<0.001	1.74 [1.39, 2.17]	<0.001
Prefer not to say	0.95 [0.80, 1.13]	0.586	1.32 [0.80, 2.17]	0.275	1.62 [0.98, 2.69]	0.060	1.42 [1.08, 1.87]	0.013	1.62 [1.22, 2.15]	0.001
Anxiety (scaled RCADS subscale)	1.39 [1.32, 1.46]	<0.001	1.39 [1.15, 1.68]	0.001	1.62 [1.33, 1.96]	<0.001	1.52 [1.38, 1.67]	<0.001	1.44 [1.29, 1.61]	<0.001
Depression (scaled RCADS subscale)	1.53 [1.45, 1.61]	<0.001	2.30 [1.88, 2.81]	<0.001	1.28 [1.04, 1.57]	0.021	1.84 [1.66, 2.03]	<0.001	1.52 [1.35, 1.71]	<0.001

McFadden's pseudo-R² (using the first imputed dataset as an exemplar) = 0.144.

Notes. Findings are fully mutually adjusted. aORs are relative to 'no exposure'. These results are represented graphically in Figure 1.

Table S5. Predicted probabilities for the analysis using multiply imputed data (n = 32,102)

Predictor	Predicted probability [95% CI]					
	No exposure	Passive-only	Active-searched	Active-received	Mixed	Other-only
Gender						
Boy/Man	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Girl/Woman	0.77 [0.75, 0.78]	0.18 [0.17, 0.20]	0.00 [0.00, 0.00]	0.00 [0.00, 0.01]	0.01 [0.01, 0.02]	0.03 [0.03, 0.04]
Trans/Gender Diverse	0.75 [0.72, 0.79]	0.17 [0.15, 0.20]	0.01 [0.00, 0.01]	0.01 [0.00, 0.01]	0.02 [0.01, 0.03]	0.04 [0.03, 0.06]
Don't know/Not sure	0.73 [0.68, 0.79]	0.18 [0.14, 0.23]	0.01 [0.00, 0.01]	0.01 [0.00, 0.02]	0.02 [0.01, 0.03]	0.05 [0.02, 0.07]
Prefer not to say	0.82 [0.78, 0.86]	0.11 [0.08, 0.14]	0.00 [-0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.05 [0.03, 0.07]
Year group						
Year 7	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Year 8	0.79 [0.78, 0.81]	0.15 [0.14, 0.16]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.02 [0.01, 0.02]	0.03 [0.02, 0.04]
Year 9	0.77 [0.75, 0.78]	0.19 [0.18, 0.20]	0.00 [0.00, 0.00]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]	0.02 [0.02, 0.02]
Year 10	0.77 [0.75, 0.78]	0.19 [0.18, 0.21]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.02 [0.01, 0.02]
Year 11	0.78 [0.76, 0.80]	0.19 [0.17, 0.20]	0.00 [0.00, 0.00]	0.00 [0.00, 0.01]	0.01 [0.01, 0.01]	0.01 [0.01, 0.02]
Year 12	0.78 [0.76, 0.80]	0.19 [0.18, 0.21]	0.00 [0.00, 0.00]	0.00 [0.00, 0.01]	0.01 [0.01, 0.01]	0.01 [0.01, 0.01]
Year 13	0.81 [0.80, 0.83]	0.16 [0.15, 0.17]	0.00 [0.00, 0.00]	0.00 [0.00, 0.01]	0.01 [0.01, 0.01]	0.01 [0.01, 0.02]
Ethnicity						
White	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Asian/Asian British	0.85 [0.84, 0.87]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.01, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.02]
Black/African/Caribbean/ Black British	0.86 [0.84, 0.88]	0.09 [0.08, 0.11]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.02]	0.02 [0.01, 0.02]

Mixed/ Multiple Ethnic Groups	0.83 [0.82, 0.85]	0.11 [0.10, 0.13]	0.00 [0.00, 0.01]	0.01 [0.00, 0.01]	0.02 [0.01, 0.02]	0.02 [0.02, 0.03]
Other ethnic group	0.86 [0.85, 0.88]	0.09 [0.08, 0.10]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.02 [0.02, 0.03]
Food insecurity						
Never or hardly ever	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Some of the time	0.85 [0.83, 0.87]	0.10 [0.09, 0.12]	0.00 [0.00, 0.01]	0.01 [0.01, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Often	0.84 [0.80, 0.87]	0.11 [0.08, 0.13]	0.01 [0.00, 0.01]	0.01 [0.00, 0.02]	0.01 [0.01, 0.02]	0.02 [0.01, 0.04]
Bullying						
None in past couple of months	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Once, twice or a few times	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
2 or 3 times a month	0.85 [0.82, 0.87]	0.11 [0.09, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.01, 0.03]
About once a week	0.86 [0.84, 0.88]	0.09 [0.07, 0.11]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.01]	0.02 [0.01, 0.03]
Several times a week	0.86 [0.84, 0.88]	0.08 [0.07, 0.10]	0.00 [0.00, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.01]	0.03 [0.02, 0.03]
Loneliness						
Hardly ever or never	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Some of the time	0.80 [0.78, 0.81]	0.14 [0.13, 0.16]	0.00 [0.00, 0.00]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]	0.03 [0.02, 0.03]
Often	0.80 [0.78, 0.82]	0.14 [0.12, 0.15]	0.01 [0.00, 0.01]	0.01 [0.00, 0.01]	0.02 [0.02, 0.03]	0.03 [0.02, 0.03]
Aggression online						
No	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Yes	0.73 [0.71, 0.75]	0.18 [0.17, 0.20]	0.00 [0.00, 0.01]	0.02 [0.01, 0.02]	0.03 [0.02, 0.03]	0.04 [0.03, 0.05]
Prefer not to say	0.79 [0.77, 0.82]	0.14 [0.12, 0.16]	0.00 [0.00, 0.01]	0.01 [0.00, 0.02]	0.02 [0.01, 0.02]	0.04 [0.03, 0.05]

Coercion online

No	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Yes	0.77 [0.75, 0.79]	0.15 [0.13, 0.17]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.03 [0.02, 0.03]	0.04 [0.03, 0.05]
Prefer not to say	0.83 [0.80, 0.85]	0.11 [0.09, 0.12]	0.00 [0.00, 0.01]	0.01 [0.00, 0.02]	0.01 [0.01, 0.02]	0.04 [0.02, 0.05]

Anxiety (scaled RCADS subscale)

Mean – 1 SD	0.88 [0.88, 0.89]	0.09 [0.08, 0.09]	0.00 [0.00, 0.00]	0.00 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]
Mean	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Mean + 1 SD	0.79 [0.78, 0.81]	0.15 [0.13, 0.16]	0.00 [0.00, 0.00]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]	0.03 [0.02, 0.04]

Depression (scaled RCADS subscale)

Mean – 1 SD	0.89 [0.88, 0.90]	0.08 [0.07, 0.09]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.00, 0.01]	0.02 [0.01, 0.02]
Mean	0.84 [0.83, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Mean + 1 SD	0.78 [0.76, 0.80]	0.16 [0.14, 0.17]	0.01 [0.00, 0.01]	0.01 [0.00, 0.01]	0.02 [0.01, 0.02]	0.03 [0.02, 0.04]

Notes. Predicted probabilities are calculated based on one exemplar multiply imputed dataset. To calculate the predicted probabilities, all variables other than the focal variable were held at their mean value (numeric) or reference level (categorical variables). Negative values are an artefact of the method used to calculate CIs. Higher RCADS subscale scores indicate elevated depression/anxiety symptoms.

Table S6. Main results for the complete cases analysis (n = 25,113)

Predictor	Passive-only		Active-searched		Active-received		Mixed		Other-only	
	aOR [95% CI]	P	aOR [95% CI]	P	aOR [95% CI]	P	aOR [95% CI]	P	aOR [95% CI]	P
Gender										
Boy/Man	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Girl/Woman	1.81 [1.69, 1.94]	<0.001	1.36 [0.99, 1.85]	0.056	0.70 [0.53, 0.92]	0.012	1.37 [1.18, 1.58]	<0.001	1.66 [1.41, 1.95]	<0.001
Trans/Gender Diverse	1.86 [1.51, 2.30]	<0.001	2.32 [1.33, 4.04]	0.003	1.04 [0.51, 2.13]	0.913	2.52 [1.85, 3.42]	<0.001	2.10 [1.41, 3.13]	<0.001
Don't know/Not sure	2.05 [1.45, 2.92]	<0.001	3.09 [1.25, 7.65]	0.015	2.57 [1.08, 6.13]	0.034	2.83 [1.69, 4.72]	<0.001	2.99 [1.63, 5.47]	<0.001
Prefer not to say	1.23 [0.88, 1.73]	0.230	1.13 [0.33, 3.79]	0.848	0.60 [0.14, 2.48]	0.478	1.30 [0.71, 2.38]	0.401	2.42 [1.38, 4.23]	0.002
Year group										
Year 7	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Year 8	1.45 [1.29, 1.63]	<0.001	1.14 [0.74, 1.76]	0.539	1.08 [0.72, 1.62]	0.707	1.57 [1.25, 1.97]	<0.001	1.43 [1.15, 1.78]	0.001
Year 9	1.81 [1.62, 2.02]	<0.001	0.86 [0.55, 1.35]	0.520	1.22 [0.83, 1.81]	0.311	1.57 [1.26, 1.97]	<0.001	1.00 [0.79, 1.25]	0.968
Year 10	1.83 [1.63, 2.06]	<0.001	1.05 [0.66, 1.67]	0.829	0.92 [0.59, 1.44]	0.723	1.25 [0.98, 1.60]	0.070	0.74 [0.57, 0.97]	0.029
Year 11	1.88 [1.65, 2.14]	<0.001	0.81 [0.45, 1.45]	0.484	0.67 [0.38, 1.20]	0.179	1.23 [0.93, 1.62]	0.150	0.70 [0.51, 0.96]	0.026
Year 12	1.84 [1.61, 2.10]	<0.001	0.58 [0.29, 1.14]	0.114	0.68 [0.37, 1.25]	0.211	1.04 [0.77, 1.40]	0.795	0.36 [0.23, 0.54]	<0.001
Year 13	1.44 [1.26, 1.63]	<0.001	0.73 [0.43, 1.24]	0.243	0.65 [0.38, 1.13]	0.129	0.75 [0.56, 1.00]	0.050	0.57 [0.42, 0.77]	<0.001
Ethnicity										
White	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Asian/Asian British	0.93 [0.84, 1.02]	0.117	1.01 [0.65, 1.57]	0.954	1.08 [0.73, 1.59]	0.690	1.16 [0.95, 1.42]	0.151	0.57 [0.44, 0.74]	<0.001
Black/ African/ Caribbean/ Black British	0.77 [0.67, 0.89]	0.001	1.86 [1.14, 3.06]	0.014	1.26 [0.75, 2.10]	0.378	1.31 [0.99, 1.73]	0.056	0.70 [0.49, 1.01]	0.056

Mixed/ Multiple Ethnic Groups	0.97 [0.86, 1.10]	0.651	1.61 [1.01, 2.58]	0.046	1.26 [0.78, 2.02]	0.346	1.44 [1.13, 1.83]	0.003	1.06 [0.81, 1.40]	0.661
Other ethnic group	0.82 [0.70, 0.95]	0.007	0.96 [0.52, 1.78]	0.893	0.92 [0.51, 1.67]	0.778	1.32 [1.01, 1.74]	0.044	0.90 [0.65, 1.24]	0.509
Food insecurity										
Never or hardly ever	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Some of the time	0.93 [0.82, 1.06]	0.292	1.32 [0.90, 1.92]	0.150	1.08 [0.71, 1.64]	0.710	1.07 [0.87, 1.31]	0.533	1.11 [0.87, 1.42]	0.383
Often	1.07 [0.79, 1.47]	0.653	2.57 [1.37, 4.81]	0.003	1.38 [0.58, 3.32]	0.469	1.64 [1.08, 2.50]	0.020	1.12 [0.62, 2.03]	0.707
Bullying										
None in past couple of months	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Once, twice or a few times	0.95 [0.86, 1.04]	0.277	1.59 [1.12, 2.26]	0.009	1.46 [1.03, 2.05]	0.031	0.90 [0.74, 1.08]	0.238	1.08 [0.88, 1.32]	0.452
2 or 3 times a month	0.97 [0.79, 1.19]	0.775	0.93 [0.45, 1.93]	0.851	1.51 [0.81, 2.83]	0.196	0.76 [0.53, 1.09]	0.135	0.96 [0.64, 1.43]	0.838
About once a week	0.72 [0.58, 0.90]	0.003	2.33 [1.39, 3.88]	0.001	1.72 [0.95, 3.09]	0.071	0.97 [0.70, 1.35]	0.868	0.86 [0.57, 1.29]	0.462
Several times a week	0.78 [0.64, 0.95]	0.015	1.31 [0.77, 2.23]	0.314	1.74 [1.03, 2.95]	0.039	1.00 [0.76, 1.33]	0.985	1.08 [0.76, 1.53]	0.665
Loneliness										
Hardly ever or never	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Some of the time	1.34 [1.24, 1.44]	<0.001	1.33 [0.86, 2.05]	0.194	1.29 [0.94, 1.78]	0.119	1.87 [1.54, 2.28]	<0.001	1.28 [1.06, 1.55]	0.009
Often	1.30 [1.15, 1.46]	<0.001	2.02 [1.24, 3.27]	0.005	0.98 [0.62, 1.57]	0.939	2.66 [2.10, 3.37]	<0.001	1.24 [0.95, 1.62]	0.108
Aggression online										
No	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Yes	1.92 [1.76, 2.10]	<0.001	1.92 [1.37, 2.69]	<0.001	2.52 [1.85, 3.44]	<0.001	3.25 [2.78, 3.81]	<0.001	2.08 [1.72, 2.52]	<0.001
Prefer not to say	1.22 [1.03, 1.44]	0.020	2.14 [1.32, 3.47]	0.002	1.48 [0.84, 2.59]	0.175	1.46 [1.09, 1.96]	0.011	1.84 [1.38, 2.47]	<0.001

Coercion online

No	<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>		<i>Ref.</i>	
Yes	1.48 [1.30, 1.69]	<0.001	2.34 [1.62, 3.37]	<0.001	2.13 [1.46, 3.11]	<0.001	2.46 [2.03, 2.98]	<0.001	1.81 [1.43, 2.30]	<0.001
Prefer not to say	0.97 [0.80, 1.17]	0.744	1.06 [0.59, 1.93]	0.836	1.55 [0.87, 2.77]	0.136	1.55 [1.16, 2.08]	0.003	1.70 [1.24, 2.33]	0.001
Anxiety (scaled RCADS subscale)	1.39 [1.32, 1.47]	<0.001	1.42 [1.16, 1.73]	0.001	1.62 [1.32, 1.97]	<0.001	1.52 [1.38, 1.68]	<0.001	1.46 [1.30, 1.64]	<0.001
Depression (scaled RCADS subscale)	1.54 [1.46, 1.63]	<0.001	2.31 [1.86, 2.86]	<0.001	1.34 [1.08, 1.66]	0.008	1.84 [1.65, 2.04]	<0.001	1.55 [1.37, 1.75]	<0.001

McFadden's pseudo-R² = 0.246.

Note. Findings are fully mutually adjusted. aORs are relative to 'no exposure'. These results are represented graphically in Figure S22.

Table S7. Predicted probabilities for the complete cases analysis (n = 25,113)

Predictor	Predicted probability [95% CI]					
	No exposure	Passive-only	Active-searched	Active-received	Mixed	Other-only
Gender						
Boy/Man	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Girl/Woman	0.76 [0.74, 0.77]	0.19 [0.17, 0.20]	0.00 [0.00, 0.01]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.03 [0.03, 0.04]
Trans/Gender Diverse	0.73 [0.69, 0.78]	0.19 [0.15, 0.22]	0.01 [0.00, 0.01]	0.01 [0.00, 0.01]	0.02 [0.01, 0.03]	0.04 [0.02, 0.06]
Don't know/Not sure	0.70 [0.63, 0.77]	0.20 [0.14, 0.25]	0.01 [0.00, 0.01]	0.02 [0.00, 0.03]	0.02 [0.01, 0.04]	0.06 [0.02, 0.09]
Prefer not to say	0.79 [0.74, 0.85]	0.13 [0.09, 0.17]	0.00 [-0.00, 0.01]	0.00 [-0.00, 0.01]	0.01 [0.00, 0.02]	0.05 [0.02, 0.08]
Year group						
Year 7	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Year 8	0.79 [0.77, 0.80]	0.16 [0.14, 0.17]	0.00 [0.00, 0.00]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]	0.03 [0.02, 0.04]
Year 9	0.76 [0.75, 0.78]	0.19 [0.18, 0.20]	0.00 [0.00, 0.00]	0.01 [0.01, 0.01]	0.01 [0.01, 0.02]	0.02 [0.02, 0.03]
Year 10	0.77 [0.75, 0.79]	0.19 [0.18, 0.21]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]
Year 11	0.77 [0.75, 0.79]	0.20 [0.18, 0.22]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.01 [0.01, 0.02]
Year 12	0.78 [0.76, 0.80]	0.20 [0.18, 0.22]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.01 [0.00, 0.01]
Year 13	0.81 [0.80, 0.83]	0.16 [0.14, 0.18]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.01 [0.01, 0.02]
Ethnicity						
White	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Asian/Asian British	0.85 [0.84, 0.87]	0.11 [0.10, 0.12]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.02]
Black/African/Caribbean/ Black British	0.86 [0.84, 0.88]	0.09 [0.08, 0.11]	0.01 [0.00, 0.01]	0.01 [0.00, 0.02]	0.01 [0.01, 0.02]	0.02 [0.01, 0.02]

Mixed/ Multiple Ethnic Groups	0.84 [0.81, 0.86]	0.11 [0.10, 0.13]	0.00 [0.00, 0.01]	0.01 [0.00, 0.02]	0.01 [0.01, 0.02]	0.02 [0.02, 0.03]
Other ethnic group	0.86 [0.84, 0.88]	0.10 [0.08, 0.11]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.02]	0.02 [0.01, 0.03]
Food insecurity						
Never or hardly ever	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Some of the time	0.84 [0.82, 0.86]	0.11 [0.09, 0.12]	0.00 [0.00, 0.01]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.03 [0.02, 0.03]
Often	0.82 [0.77, 0.87]	0.12 [0.09, 0.15]	0.01 [0.00, 0.01]	0.01 [0.00, 0.02]	0.02 [0.01, 0.02]	0.02 [0.01, 0.04]
Bullying						
None in past couple of months	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Once, twice or a few times	0.84 [0.82, 0.86]	0.11 [0.10, 0.12]	0.00 [0.00, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
2 or 3 times a month	0.84 [0.81, 0.87]	0.11 [0.09, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.02]	0.01 [0.00, 0.01]	0.02 [0.01, 0.03]
About once a week	0.86 [0.84, 0.89]	0.09 [0.07, 0.10]	0.01 [0.00, 0.01]	0.01 [0.00, 0.02]	0.01 [0.01, 0.01]	0.02 [0.01, 0.03]
Several times a week	0.85 [0.83, 0.88]	0.09 [0.07, 0.11]	0.00 [0.00, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Loneliness						
Hardly ever or never	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Some of the time	0.79 [0.78, 0.81]	0.15 [0.13, 0.16]	0.00 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]	0.03 [0.02, 0.03]
Often	0.79 [0.77, 0.81]	0.14 [0.12, 0.16]	0.01 [0.00, 0.01]	0.01 [0.00, 0.01]	0.03 [0.02, 0.03]	0.03 [0.02, 0.03]
Aggression online						
No	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Yes	0.72 [0.69, 0.74]	0.19 [0.17, 0.21]	0.00 [0.00, 0.01]	0.02 [0.01, 0.03]	0.03 [0.02, 0.04]	0.04 [0.03, 0.05]
Prefer not to say	0.80 [0.77, 0.82]	0.13 [0.11, 0.15]	0.01 [0.00, 0.01]	0.01 [0.00, 0.02]	0.01 [0.01, 0.02]	0.04 [0.03, 0.05]
Coercion online						

No	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Yes	0.76 [0.73, 0.79]	0.16 [0.13, 0.18]	0.01 [0.00, 0.01]	0.02 [0.01, 0.02]	0.02 [0.02, 0.03]	0.04 [0.03, 0.05]
Prefer not to say	0.82 [0.79, 0.85]	0.11 [0.09, 0.13]	0.00 [0.00, 0.01]	0.01 [0.00, 0.02]	0.02 [0.01, 0.02]	0.04 [0.02, 0.05]
Anxiety (scaled RCADS subscale)						
Mean – 1 SD	0.88 [0.87, 0.89]	0.09 [0.08, 0.10]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]
Mean	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Mean + 1 SD	0.79 [0.77, 0.81]	0.15 [0.13, 0.17]	0.00 [0.00, 0.01]	0.01 [0.01, 0.02]	0.01 [0.01, 0.02]	0.03 [0.02, 0.04]
Depression (scaled RCADS subscale)						
Mean – 1 SD	0.89 [0.88, 0.90]	0.08 [0.07, 0.09]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.00, 0.01]	0.02 [0.01, 0.02]
Mean	0.84 [0.83, 0.85]	0.12 [0.10, 0.13]	0.00 [0.00, 0.00]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.02, 0.03]
Mean + 1 SD	0.77 [0.75, 0.79]	0.16 [0.15, 0.18]	0.01 [0.00, 0.01]	0.01 [0.01, 0.01]	0.02 [0.01, 0.02]	0.03 [0.02, 0.04]

Notes. To calculate the predicted probabilities, all variables other than the focal variable were held at their mean value (numeric) or reference level (categorical variables). Negative values are an artefact of the method used to calculate CIs. Higher RCADS subscale scores indicate elevated depression/anxiety symptoms.

Demographic and psychosocial profiles by online self-harm content exposure pathway (complete cases)

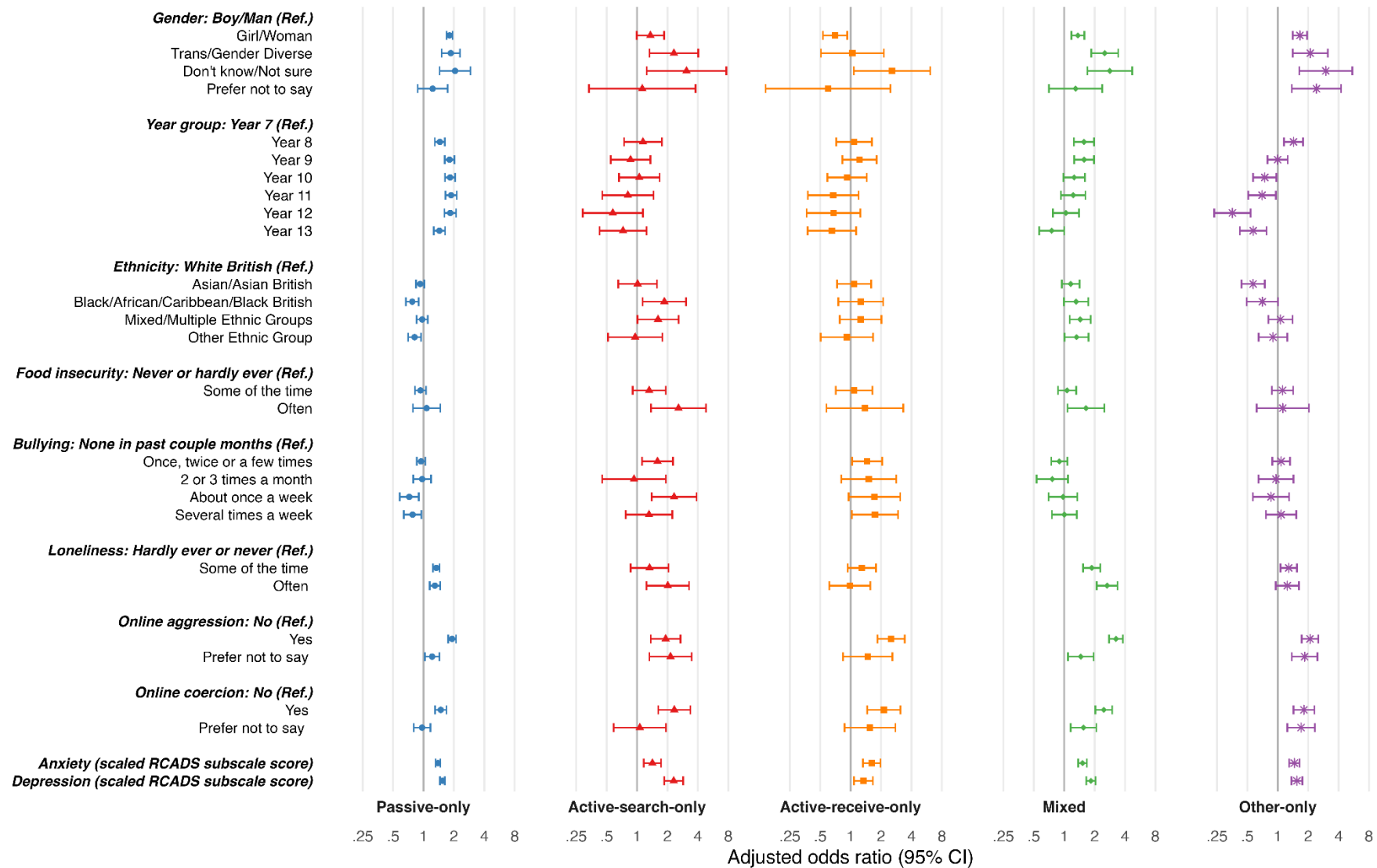


Figure S22. Demographic and psychosocial profiles by online self-harm content exposure pathway (complete case analysis).

Estimates are fully mutually adjusted odds ratios (aORs) from a multinomial logistic regression ($n = 25,113$), shown as points with 95% confidence intervals (horizontal bars). Each pathway is compared with no past-month exposure. Reference categories within predictors are marked '(Ref.)' and the vertical line marks $aOR = 1$; values above 1 indicate increased odds and below 1 decreased odds of that pathway. Exact p-values for all estimates are reported in Supplementary Table S6.

Supplementary Note 1 (Reasons for actively searching for self-harm content)

Background

Findings from our main analysis (OxWell 2025) indicated that 7.5% (733/9802) of OxWell students had actively searched for self-harm content within the past month. As described in the main text, a limitation of our analyses is that we do not know what kind of content was seen. It is not possible to distinguish, for example, exposure to supportive content from exposure to potentially distressing or harmful content. In the OxWell 2023 survey, however, we *did* collect information as to the reasons why students had searched for self-harm content, which can provide useful information about adolescents' exposures. In this Supplementary Note, we present findings from 2023 to help contextualise the 2025 findings regarding pathways of exposure.

Methods

We used data from OxWell 2023 to descriptively analyse reasons given for actively searching for self-harm content. The methodology and procedures of OxWell 2023 are broadly similar to those of OxWell 2025 (reported in the main text), with a key difference being that the 2023 survey was substantially longer, taking on average around 30 minutes to complete. Interested readers can find a full description of OxWell 2023 in other publications.¹ OxWell 2023 was approved by the University of Oxford Research Ethics Committee (reference: R62366/RE014).

In terms of analyses, we describe the sample demographic characteristics and report on participants' responses to the following items regarding exposure to self-harm content online (noting slight differences with the OxWell 2025 questions and response options):

- **In the last month, have you ever come across content about self-harm on online platforms?** *Response options: No, never – Yes, once or twice – Yes, a few times – Yes, weekly – Yes, daily*
- [For those who reported exposure to self-harm content] **How did you come across content about self-harm? (Tick all that apply)** *Response options: I searched for it – It came up on my feed/was part of what I was watching – I accidentally came across such content – Someone else shared it with me – Other*
- [For those who endorsed the 'I searched for it' response option in the previous question] **Why were you looking for self-harm related content?** *Response options: Find support for yourself – Find support for someone you know – To connect with others who have had similar experiences – To look up facts and figures about self-harm – Another reason*

For the question on reasons for searching for self-harm content, students could only choose one response option. It is important to note that this question was deliberately designed to not explicitly include any response options pertaining to potentially harmful or dangerous motives (e.g. searching for methods). This was to ensure ethical research practice and limit the potential for harm or distress for participants.

Results

32,965 secondary school and further education college students consented (≥ 16 years) or assented (< 16 years) to participate in OxWell 2023. We excluded 10,723 students who likely did not reach the questions on exposure to self-harm content, which came relatively late in the survey. We therefore consider a subsample of 22,242 students from 77 educational settings. Table S8 provides a sample description.

Table S8. OxWell 2023 sample demographics¹

Characteristic	N (%)
Gender	
Boy	9647 (43.4)
Gender diverse	317 (1.4)
Gender non-disclosing	689 (3.1)
Girl	11390 (51.2)
Unsure	11 (<0.1)
<i>Missing</i>	188 (0.8)
Ethnicity	
Asian/Asian British	3235 (14.5)
Black/Black British/African/Caribbean	986 (4.4)
Mixed/Multiple Ethnic Groups	1219 (5.5)
Other ethnic group	855 (3.8)
White	11891 (53.5)
<i>Missing</i>	4056 (18.2)
Year group	
7	4600 (20.7)
8	4479 (20.1)
9	4145 (18.6)
10	3038 (13.7)
11	2982 (13.4)
12	1841 (8.3)
13	1157 (5.2)
<i>Missing</i>	0 (0)

¹ For the subsample who reached the questions on exposure to self-harm content

In total, 39.2% (8,723/22,242) of students reported encountering self-harm content online in the last month – a slightly higher proportion than in 2025 (34.5%, 9,940/28,797). Of these, 8.5% (745/8,723) indicated that they had actively searched for self-harm content, which was broadly in line with the proportion in 2025 (7.5%, 733/9,802). Of these students, 94.1% (701/745) provided a response to the question regarding the reason for searching for self-harm content (Table S9). The most common response option was ‘Another reason’ (30.3%; 226/745), a finding that is difficult to interpret, particularly in light of the fact that the question by design did not include responses related to potentially harmful motives. The second- and third-most common responses pertained to finding support for oneself (26.8%; 200/745) or connecting with others with similar experiences (20.3%; 151/745).

Table S9. Primary reasons for searching for self-harm content

Why were you looking for self-harm related content?	N (%)
Find support for yourself	200 (26.8)
Find support for someone you know	34 (4.6)
To connect with others who have had similar experiences	151 (20.3)
To look up facts and figures about self-harm	90 (12.1)
Another reason	226 (30.3)
<i>No reason provided (missing)</i>	44 (5.9)

Supplementary References

1. White, S. R., Sonesson, E. & Fazel, M. Networks of care for the modern adolescent. *Psychol Med* <https://doi.org/10.1017/S003329172400237X> (2024) doi:10.1017/S003329172400237X.

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