

Supplemental Online Content

Iob E, Frank P, Steptoe A, Fancourt D. Levels of severity of depressive symptoms among at-risk groups in the UK during the COVID-19 pandemic. *JAMA Netw Open*. 2020;3(10):e2026064. doi:10.1001/jamanetworkopen.2020.26064

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This supplemental material has been provided by the authors to give readers additional information about their work.

eAppendix. Supplemental Methods

Latent Growth Mixture (LGM) Modelling

LGM models are characterised by the combination of latent growth curve modelling and latent class analysis. Such method allows to group individuals into trajectories according to their pattern of change over time. We estimated one LGM model with a specific intercept and slope growth factor for each trajectory. The within-group variation for each trajectory is represented by the intercept and slope growth factors which are modelled as continuous latent variables. The time metric was defined as *weeks into the study* (week 1- week 7). The optimal number of trajectories was identified using a stepwise approach. First, we fitted one LGM model with a single trajectory. Second, we included an additional trajectory at each following step until the optimal number of trajectories was reached. The optimal number of trajectories was determined using the following criteria: lower Akaike information criterion (AIC), lower sample-size adjusted Bayesian Information Criterion (ssaBIC), every class containing more than 5% of participants, entropy value (i.e. quality of the classification model) closest to 1 and $> .80$ (entropy values < 0.80 may indicate that the classes are not well separated, leading to convergence issues).¹ If the model with $N + 1$ classes had one fit index that was worse than in the model with N classes, then the model with N classes was selected. In addition, we also evaluated the interpretability of the latent classes and whether they were theoretically meaningful for our research questions. The three-class solution was selected as the best fitting model since it had the best combination of lower AIC/ssaBIC and higher entropy, contained more than 5% of participants in each class, and had good interpretability (see sTable 2).

eTable 1. Comparison of Items in the Original and Revised Perceived Social Support Questionnaire

Original	Adapted for COVID-19
	In the past week, I feel...
I experience a lot of understanding and security from others	I have experienced a lot of understanding and support from others
I know a very close person whose help I can always count on	I have a very close person whose help I can always count on
If necessary, I can easily borrow something I might need from neighbours or friends	If necessary, I can easily borrow something I need from neighbours or friends
I know several people with whom I like to do things	I have people with whom I can spend time and do things together
When I am sick, I can without hesitation ask friends and family to take care of important matters for me	If I get sick, I have friends and family who will take care of me
If I am down, I know to whom I can go without hesitation	If I am feeling down, I have people I can talk to without hesitation

eTable 2. LGM Model Fit Indices

	2 classes	3 classes	4 classes	5 classes
<i>AIC</i>	1015405.783	1009196.561	1005160.275	1002587.930
<i>ssaBIC</i>	1015542.660	1009379.064	1005388.404	1002861.685
<i>N classes >5%</i>	Yes	Yes	Yes	No
<i>Entropy</i>	0.813	0.811	0.768	0.771

eTable 3. Weighted Characteristics of the Study Participants at Each Wave

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7
	Overall (N=51,417)	Overall (N=41,425)	Overall (N=34,314)	Overall (N=27,774)	Overall (N=18,009)	Overall (N=12,944)	Overall (N=406)
Sex							
Female	26276 (51.1%)	21123 (51.0%)	17463 (50.9%)	14078 (50.7%)	9278 (51.5%)	6445 (49.8%)	233 (57.4%)
Male	25140 (48.9%)	20302 (49.0%)	16851 (49.1%)	13696 (49.3%)	8731 (48.5%)	6499 (50.2%)	173 (42.6%)
Age							
18-29	9228 (17.9%)	5918 (14.3%)	3970 (11.6%)	3024 (10.9%)	1983 (11.0%)	1186 (9.2%)	92 (22.6%)
30-44	11972 (23.3%)	9287 (22.4%)	7405 (21.6%)	5664 (20.4%)	3654 (20.3%)	2439 (18.8%)	130 (32.0%)
45-59	13723 (26.7%)	11565 (27.9%)	9861 (28.7%)	7921 (28.5%)	5085 (28.2%)	3636 (28.1%)	111 (27.2%)
60+	16494 (32.1%)	14656 (35.4%)	13078 (38.1%)	11164 (40.2%)	7287 (40.5%)	5683 (43.9%)	74 (18.1%)
Ethnicity							
BAME ^a	6145 (12.0%)	4176 (10.1%)	3169 (9.2%)	2490 (9.0%)	1665 (9.2%)	1080 (8.3%)	60 (14.9%)
White	45272 (88.0%)	37249 (89.9%)	31145 (90.8%)	25283 (91.0%)	16344 (90.8%)	11864 (91.7%)	346 (85.1%)
Employment status							
Employed	30888 (60.1%)	24386 (58.9%)	19811 (57.7%)	15614 (56.2%)	10085 (56.0%)	6925 (53.5%)	284 (69.9%)
Inactive	19414 (37.8%)	16329 (39.4%)	13940 (40.6%)	11700 (42.1%)	7640 (42.4%)	5826 (45.0%)	114 (28.0%)
Unemployed	1115 (2.2%)	710 (1.7%)	564 (1.6%)	460 (1.7%)	284 (1.6%)	193 (1.5%)	8 (2.1%)
Education							
Postgraduate	17362 (33.8%)	13733 (33.2%)	11153 (32.5%)	8958 (32.3%)	5768 (32.0%)	4174 (32.2%)	75 (18.5%)
Undergraduate	16638 (32.4%)	12958 (31.3%)	10679 (31.1%)	8620 (31.0%)	5504 (30.6%)	4151 (32.1%)	59 (14.4%)
A-Level or Vocational	6964 (13.5%)	5984 (14.4%)	5090 (14.8%)	4169 (15.0%)	2846 (15.8%)	1896 (14.6%)	159 (39.2%)
GCSE or Lower	10453 (20.3%)	8750 (21.1%)	7392 (21.5%)	6027 (21.7%)	3890 (21.6%)	2723 (21.0%)	113 (27.9%)
Income							
N-Miss	5308	4204	3513	2878	1891	1371	36

<£16k	9704 (21.0%)	7510 (20.2%)	6035 (19.6%)	4857 (19.5%)	3152 (19.6%)	2380 (20.6%)	28 (7.6%)
£16k - £30k	12846 (27.9%)	10270 (27.6%)	8604 (27.9%)	7005 (28.1%)	4517 (28.0%)	3372 (29.1%)	76 (20.5%)
£30k - £60k	14434 (31.3%)	11915 (32.0%)	9956 (32.3%)	8022 (32.2%)	5131 (31.8%)	3622 (31.3%)	125 (33.8%)
£60k - £90k	5488 (11.9%)	4547 (12.2%)	3777 (12.3%)	3030 (12.2%)	1996 (12.4%)	1328 (11.5%)	74 (19.9%)
>£90k	3638 (7.9%)	2979 (8.0%)	2428 (7.9%)	1981 (8.0%)	1322 (8.2%)	871 (7.5%)	68 (18.3%)
Overcrowding							
Not Overcrowded	47221 (91.8%)	38979 (94.1%)	32574 (94.9%)	26489 (95.4%)	17201 (95.5%)	12471 (96.3%)	382 (93.9%)
Overcrowded	4196 (8.2%)	2446 (5.9%)	1740 (5.1%)	1285 (4.6%)	808 (4.5%)	473 (3.7%)	25 (6.1%)
Tenure							
N-Miss	179	139	118	103	67	50	1
Own Mortgage	15991 (31.2%)	13000 (31.5%)	10617 (31.0%)	8452 (30.5%)	5375 (30.0%)	3671 (28.5%)	159 (39.1%)
Own Outright	16016 (31.3%)	14011 (33.9%)	12500 (36.6%)	10546 (38.1%)	6886 (38.4%)	5311 (41.2%)	101 (25.0%)
Rent	19231 (37.5%)	14275 (34.6%)	11078 (32.4%)	8672 (31.3%)	5681 (31.7%)	3912 (30.3%)	145 (35.8%)
Socioeconomic disadvantage index - quartiles							
4 (=highest)	8353 (16.2%)	6994 (16.9%)	5867 (17.1%)	4691 (16.9%)	3079 (17.1%)	2020 (15.6%)	128 (31.6%)
3	9525 (18.5%)	7689 (18.6%)	6237 (18.2%)	4934 (17.8%)	3204 (17.8%)	2193 (16.9%)	119 (29.4%)
2	16395 (31.9%)	13028 (31.4%)	10685 (31.1%)	8646 (31.1%)	5546 (30.8%)	3986 (30.8%)	87 (21.4%)
1 (=lowest)	17143 (33.3%)	13714 (33.1%)	11525 (33.6%)	9502 (34.2%)	6181 (34.3%)	4746 (36.7%)	71 (17.6%)
Essential worker							
Yes	11342 (22.1%)	8737 (21.1%)	6985 (20.4%)	5407 (19.5%)	3431 (19.1%)	2375 (18.3%)	75 (18.3%)
Chronic physical illness							
Yes	19655 (38.2%)	16565 (40.0%)	14094 (41.1%)	11518 (41.5%)	7444 (41.3%)	5586 (43.2%)	122 (29.9%)
Mental health disorder							
Yes	10219 (19.9%)	7873 (19.0%)	6160 (18.0%)	4858 (17.5%)	3084 (17.1%)	2158 (16.7%)	83 (20.5%)

Low social support							
Yes	13235 (25.7%)	10496 (25.3%)	8618 (25.1%)	6920 (24.9%)	4356 (24.2%)	3230 (25.0%)	103 (25.5%)
Psychological/physical abuse							
Yes	5798 (11.3%)	4579 (11.1%)	3802 (11.1%)	3058 (11.0%)	2008 (11.1%)	1386 (10.7%)	57 (14.0%)
COVID-19 symptoms							
Yes	7618 (14.8%)	6237 (15.1%)	5048 (14.7%)	3984 (14.3%)	2543 (14.1%)	1794 (13.9%)	78 (19.1%)
Depressive symptoms (categories)							
N-Miss	0	30	19	36	26	40	3
minimal/mild	35715 (69.5%)	30078 (72.7%)	26084 (76.1%)	21330 (76.9%)	14173 (78.8%)	10019 (77.6%)	284 (70.6%)
moderate	12451 (24.2%)	9452 (22.8%)	6845 (20.0%)	5301 (19.1%)	3152 (17.5%)	2350 (18.2%)	86 (21.4%)
severe	3251 (6.3%)	1864 (4.5%)	1366 (4.0%)	1107 (4.0%)	657 (3.7%)	535 (4.1%)	32 (8.0%)

^a BAME ethnic/racial background includes Asian/Asian British, Black/Black British, White and Black/Black British, Mixed race, Chinese/Chinese British, Middle Eastern/Middle Eastern British, other ethnic group. BAME = Black, Asian and minority ethnic groups.

eTable 4. Unweighted Characteristics of the Study Participants at Each Wave

	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7
	Overall (N=53,170)	Overall (N=45,028)	Overall (N=37,820)	Overall (N=30,273)	Overall (N=19,548)	Overall (N=13,668)	Overall (N=627)
Sex							
Female	39652 (74.6%)	33478 (74.3%)	28122 (74.4%)	22568 (74.5%)	14774 (75.6%)	10202 (74.6%)	505 (80.5%)
Male	13518 (25.4%)	11550 (25.7%)	9698 (25.6%)	7705 (25.5%)	4774 (24.4%)	3466 (25.4%)	122 (19.5%)
Age							
18-29	5126 (9.6%)	3757 (8.3%)	2718 (7.2%)	2095 (6.9%)	1392 (7.1%)	836 (6.1%)	64 (10.2%)
30-44	14927 (28.1%)	12287 (27.3%)	10045 (26.6%)	7763 (25.6%)	5075 (26.0%)	3319 (24.3%)	222 (35.4%)
45-59	17497 (32.9%)	14999 (33.3%)	12848 (34.0%)	10330 (34.1%)	6674 (34.1%)	4653 (34.0%)	222 (35.4%)
60+	15620 (29.4%)	13985 (31.1%)	12209 (32.3%)	10085 (33.3%)	6407 (32.8%)	4860 (35.6%)	119 (19.0%)
Ethnicity							
BAME ^a	2690 (5.1%)	2036 (4.5%)	1604 (4.2%)	1263 (4.2%)	845 (4.3%)	538 (3.9%)	35 (5.6%)
White	50480 (94.9%)	42992 (95.5%)	36216 (95.8%)	29010 (95.8%)	18703 (95.7%)	13130 (96.1%)	592 (94.4%)
Employment status							
Employed	35207 (66.2%)	29458 (65.4%)	24561 (64.9%)	19471 (64.3%)	12682 (64.9%)	8541 (62.5%)	479 (76.4%)
Inactive	17226 (32.4%)	15007 (33.3%)	12795 (33.8%)	10439 (34.5%)	6634 (33.9%)	4970 (36.4%)	144 (23.0%)
Unemployed	737 (1.4%)	563 (1.3%)	464 (1.2%)	363 (1.2%)	232 (1.2%)	157 (1.1%)	4 (0.6%)
Education							
Postgraduate	9641 (18.1%)	7992 (17.7%)	6568 (17.4%)	5215 (17.2%)	3303 (16.9%)	2377 (17.4%)	37 (5.9%)
Undergraduate	7706 (14.5%)	6186 (13.7%)	5086 (13.4%)	4014 (13.3%)	2506 (12.8%)	1859 (13.6%)	23 (3.7%)
A-Level or Vocational	14336 (27.0%)	12447 (27.6%)	10647 (28.2%)	8654 (28.6%)	5856 (30.0%)	3931 (28.8%)	327 (52.2%)
GCSE or Lower	21487 (40.4%)	18403 (40.9%)	15519 (41.0%)	12390 (40.9%)	7883 (40.3%)	5501 (40.2%)	240 (38.3%)
Income							
N-Miss	4812	4071	3457	2792	1816	1305	36
<£16k	7279 (15.1%)	5943 (14.5%)	4895 (14.2%)	3897 (14.2%)	2433 (13.7%)	1808 (14.6%)	38 (6.4%)

£16k - £30k	11570 (23.9%)	9752 (23.8%)	8139 (23.7%)	6493 (23.6%)	4176 (23.6%)	3007 (24.3%)	100 (16.9%)
£30k - £60k	16718 (34.6%)	14290 (34.9%)	12024 (35.0%)	9615 (35.0%)	6185 (34.9%)	4273 (34.6%)	216 (36.5%)
£60k - £90k	7530 (15.6%)	6463 (15.8%)	5466 (15.9%)	4352 (15.8%)	2855 (16.1%)	1917 (15.5%)	128 (21.7%)
>£90k	5261 (10.9%)	4509 (11.0%)	3839 (11.2%)	3124 (11.4%)	2083 (11.7%)	1358 (11.0%)	109 (18.4%)
Overcrowding							
Not Overcrowded	50457 (94.9%)	43121 (95.8%)	36375 (96.2%)	29175 (96.4%)	18842 (96.4%)	13260 (97.0%)	612 (97.6%)
Overcrowded	2713 (5.1%)	1907 (4.2%)	1445 (3.8%)	1098 (3.6%)	706 (3.6%)	408 (3.0%)	15 (2.4%)
Tenure							
N-Miss	184	143	123	106	68	48	2
Own Mortgage	19826 (37.4%)	16782 (37.4%)	14056 (37.3%)	11131 (36.9%)	7213 (37.0%)	4867 (35.7%)	277 (44.3%)
Own Outright	18017 (34.0%)	15963 (35.6%)	13918 (36.9%)	11403 (37.8%)	7291 (37.4%)	5412 (39.7%)	188 (30.1%)
Rent	15143 (28.6%)	12140 (27.0%)	9723 (25.8%)	7633 (25.3%)	4976 (25.5%)	3341 (24.5%)	160 (25.6%)
Socioeconomic disadvantage index - quartiles							
4 (=highest)	15151 (28.5%)	12962 (28.8%)	10978 (29.0%)	8705 (28.8%)	5756 (29.4%)	3789 (27.7%)	272 (43.4%)
3	11283 (21.2%)	9529 (21.2%)	7989 (21.1%)	6432 (21.2%)	4189 (21.4%)	2838 (20.8%)	160 (25.5%)
2	13701 (25.8%)	11566 (25.7%)	9607 (25.4%)	7713 (25.5%)	4929 (25.2%)	3509 (25.7%)	119 (19.0%)
1 (=lowest)	13035 (24.5%)	10971 (24.4%)	9246 (24.4%)	7423 (24.5%)	4674 (23.9%)	3532 (25.8%)	76 (12.1%)
Essential worker							
Yes	12817 (24.1%)	10502 (23.3%)	8602 (22.7%)	6660 (22.0%)	4305 (22.0%)	2875 (21.0%)	160 (25.5%)
Chronic physical illness							
Yes	19358 (36.4%)	16715 (37.1%)	14175 (37.5%)	11420 (37.7%)	7310 (37.4%)	5304 (38.8%)	183 (29.2%)
Mental health disorder							

Yes	10174 (19.1%)	8320 (18.5%)	6759 (17.9%)	5256 (17.4%)	3317 (17.0%)	2289 (16.7%)	122 (19.5%)
Low social support							
Yes	11593 (21.8%)	9740 (21.6%)	8174 (21.6%)	6520 (21.5%)	4112 (21.0%)	2984 (21.8%)	143 (22.8%)
Psychological/physical abuse							
Yes	5422 (10.2%)	4689 (10.4%)	4052 (10.7%)	3281 (10.8%)	2134 (10.9%)	1424 (10.4%)	69 (11.0%)
COVID-19 symptoms							
Yes	8295 (15.6%)	7084 (15.7%)	5917 (15.6%)	4710 (15.6%)	3023 (15.5%)	2062 (15.1%)	122 (19.5%)
Depressive symptoms (categories)							
N-Miss	0	31	32	43	26	43	3
minimal/mild	38588 (72.6%)	33642 (74.8%)	29179 (77.2%)	23505 (77.8%)	15503 (79.4%)	10681 (78.4%)	455 (72.9%)
moderate	12109 (22.8%)	9770 (21.7%)	7407 (19.6%)	5761 (19.1%)	3441 (17.6%)	2486 (18.2%)	139 (22.3%)
severe	2473 (4.7%)	1585 (3.5%)	1202 (3.2%)	964 (3.2%)	578 (3.0%)	458 (3.4%)	30 (4.8%)

^a BAME ethnic/racial background includes Asian/Asian British, Black/Black British, White and Black/Black British, Mixed race, Chinese/Chinese British, Middle Eastern/Middle Eastern British, other ethnic group. BAME = Black, Asian and minority ethnic groups.

eTable 5. Observed Depressive Symptom Scores at Each Wave by Latent Trajectory Group Membership

	Low Depression Trajectory		Moderate Depression Trajectory		High Depression Trajectory	
	Mean	SD	Mean	SD	Mean	SD
Wave 1	2.534	2.257	8.730	3.503	17.865	4.368
Wave 2	2.531	2.121	8.650	3.182	17.285	4.207
Wave 3	2.265	2.044	8.340	3.160	17.080	4.320
Wave 4	2.139	1.995	8.291	3.281	17.264	4.409
Wave 5	2.001	2.012	8.052	3.343	17.216	4.447
Wave 6	2.172	2.218	8.456	3.608	17.472	4.564
Wave 7	2.788	2.605	8.983	3.895	17.254	4.547

Note. The Low Depressive symptom trajectory (Class 1) includes participants with minimal depressive symptoms at all waves [30,850 individuals (60%)]. The Moderate depressive symptom trajectory (Class 2) represents participants with moderate depressive symptoms throughout the study [14,911 individuals (29%)]; The Severe depressive symptom trajectory (Class 3) represents participants with persistently severe levels of depressive symptoms [5,656 individuals (11%)].

eTable 6. Associations of Sociodemographic, Psychosocial, and Health-Related Risk Factors With Group-Based Trajectories of Depressive Symptoms

	Moderate Depression Trajectory								High Depression Trajectory							
	OR	SE	p-value	95% CI - lower bound	95% CI - upper bound	Log OR	Log OR 95% CI - lower bound	Log OR 95% CI - upper bound	OR	SE	p-value	95% CI - lower bound	95% CI - upper bound	Log OR	Log OR 95% CI - lower bound	Log OR 95% CI - upper bound
<i>Model 1 (individual effects)</i>																
Covariates																
Sex:Female	1.74	0.044	0.000	1.66	1.83	0.24	0.16	0.33	1.64	0.061	0.000	1.52	1.76	0.216	0.096	0.096
Age:30-44	0.57	0.071	0.000	0.43	0.71	-0.24	-0.38	-0.11	0.40	0.079	0.000	0.25	0.56	-0.397	-0.552	-0.552
Age:45-59	0.38	0.072	0.000	0.24	0.52	-0.42	-0.56	-0.28	0.29	0.078	0.000	0.14	0.44	-0.539	-0.692	-0.692
Age:60+	0.17	0.080	0.000	0.02	0.33	-0.76	-0.92	-0.61	0.09	0.098	0.000	-0.10	0.28	-1.055	-1.247	-1.247
ref: 18-29																
COVID-19 symptoms	1.90	0.055	0.000	1.79	2.01	0.28	0.17	0.39	2.30	0.072	0.000	2.16	2.45	0.363	0.222	0.222
Socioeconomic vulnerabilities																
Low SEP	1.97	0.054	0.000	1.87	2.08	0.30	0.19	0.40	5.22	0.072	0.000	5.08	5.36	0.718	0.577	0.577
Ethnicity: BAME ^a	1.21	0.093	0.038	1.03	1.40	0.19	0.01	0.38	1.07	0.109	0.562	0.85	1.28	0.027	-0.186	0.915
Essential worker	0.97	0.050	0.545	0.87	1.07	-0.01	-0.11	0.08	0.66	0.070	0.000	0.53	0.80	-0.179	-0.316	-0.316
Health-related vulnerabilities																
Physical illness	1.89	0.046	0.000	1.79	1.98	0.28	0.19	0.37	3.41	0.064	0.000	3.29	3.54	0.533	0.407	0.407
Mental illness	4.24	0.000	0.000	4.24	4.24	0.63	0.63	0.63	12.99	0.058	0.000	12.87	13.10	1.114	1.000	1.000
Psychosocial vulnerabilities																
Abuse	5.34	0.100	0.000	5.15	5.54	0.73	0.53	0.92	13.16	0.108	0.000	12.95	13.37	1.119	0.907	0.907
Low social support	4.71	0.056	0.000	4.60	4.82	0.67	0.56	0.78	12.72	0.073	0.000	12.57	12.86	1.104	0.961	0.961
Model 2 (mutually adjusted effects)																
Covariates																
Sex:Female	2.11	0.051	0.000	2.01	2.21	0.33	0.23	0.43	2.05	0.080	0.000	1.90	2.21	0.313	0.156	0.156
Age:30-44	0.43	0.081	0.000	0.28	0.59	-0.36	-0.52	-0.20	0.23	0.108	0.000	0.02	0.44	-0.643	-0.854	-0.854
Age:45-59	0.22	0.082	0.000	0.06	0.38	-0.66	-0.82	-0.50	0.10	0.112	0.000	-0.12	0.32	-1.013	-1.233	-1.233
Age:60+	0.09	0.097	0.000	-0.10	0.28	-1.06	-1.25	-0.87	0.02	0.143	0.000	-0.26	0.30	-1.689	-1.970	-1.970
(ref: 18-29)																
COVID-19 symptoms	1.92	0.064	0.000	1.80	2.05	0.28	0.16	0.41	2.25	0.090	0.000	2.08	2.43	0.353	0.177	0.177
Socioeconomic vulnerabilities																
Low SEP	1.37	0.061	0.000	1.25	1.49	0.14	0.02	0.26	2.58	0.084	0.000	2.41	2.74	0.411	0.247	0.247
Ethnicity: BAME ^a	1.17	0.111	0.161	0.95	1.39	0.07	-0.15	0.29	1.02	0.147	0.870	0.74	1.31	0.010	-0.278	1.428
Essential worker	1.06	0.056	0.315	0.95	1.17	0.02	-0.09	0.13	0.92	0.089	0.351	0.75	1.09	-0.036	-0.210	0.477
Health-related vulnerabilities																
Physical illness	1.74	0.050	0.000	1.65	1.84	0.24	0.14	0.34	2.41	0.076	0.000	2.26	2.56	0.383	0.234	0.234
Mental illness	7.64	0.073	0.000	7.49	7.78	0.88	0.74	1.03	30.39	0.090	0.000	30.21	30.56	1.483	1.306	1.306
Psychosocial vulnerabilities																

Abuse	6.00	0.095	0.000	5.82	6.19	0.78	0.59	0.96	13.71	0.110	0.000	13.49	13.92	1.137	0.921	0.921
Low social support	4.16	0.060	0.000	4.04	4.28	0.62	0.50	0.74	9.74	0.087	0.000	9.57	9.91	0.988	0.818	0.818

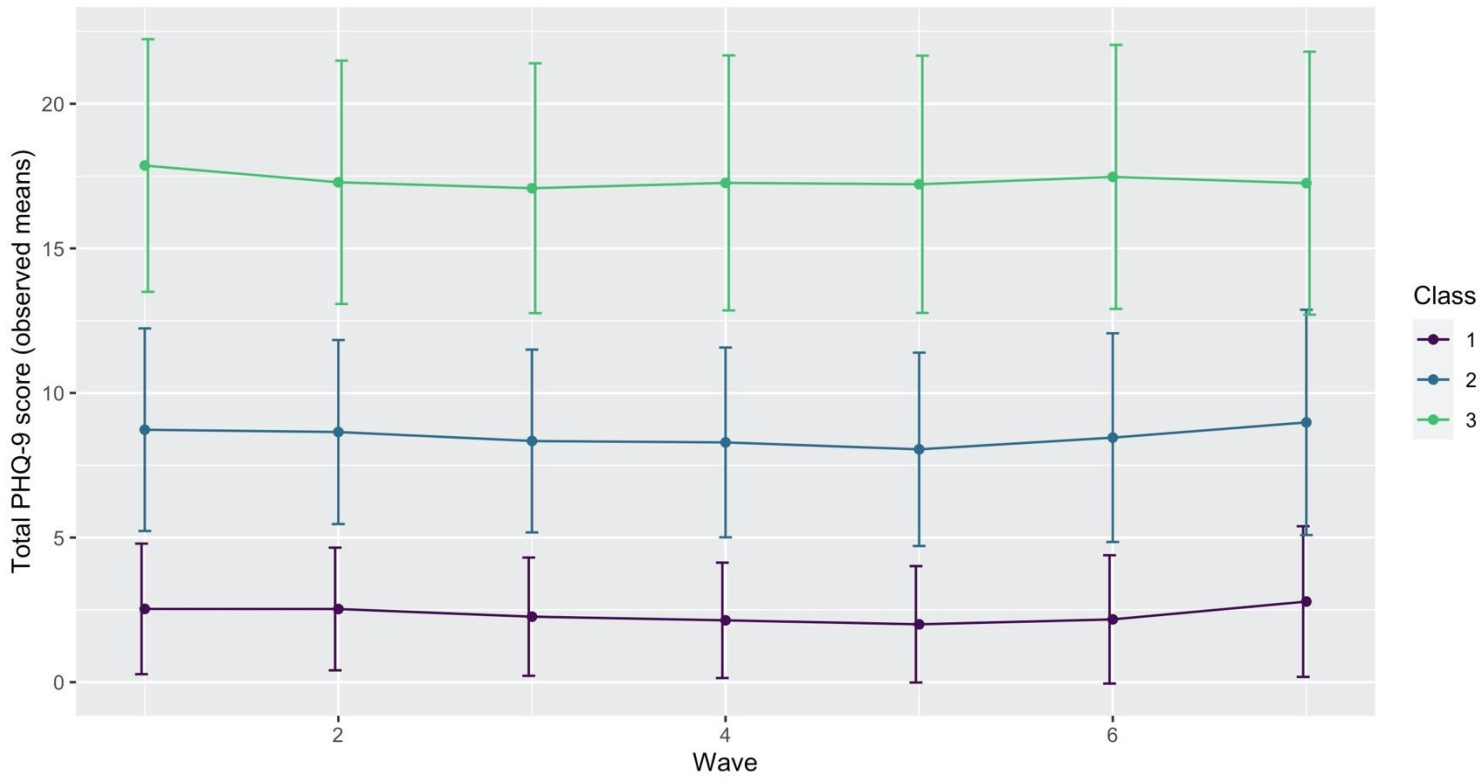
eTable 7. Associations of Sociodemographic, Psychosocial, and Health-Related Risk Factors With Group-Based Trajectories of Depressive Symptoms, Adjusted for Psychiatric Medications

	Moderate Depression Trajectory								High Depression Trajectory							
	OR	SE	p-value	95% CI - lower bound	95% CI - upper bound	Log OR	Log OR 95% CI - lower bound	Log OR 95% CI - upper bound	OR	SE	p-value	95% CI - lower bound	95% CI - upper bound	Log OR	Log OR 95% CI - lower bound	Log OR 95% CI - upper bound
Model 2 (mutually adjusted effects)																
Covariates																
Sex:Female	2.10	0.054	0.000	2.00	2.21	0.74	0.64	0.85	2.04	0.090	0.000	1.86	2.22	0.71	0.54	0.89
Age:30-44	0.50	0.091	0.000	0.32	0.68	-0.70	-0.88	-0.52	0.25	0.124	0.000	0.00	0.49	-1.40	-1.64	-1.15
Age:45-59	0.23	0.092	0.000	0.05	0.41	-1.46	-1.64	-1.28	0.09	0.127	0.000	-0.16	0.34	-2.39	-2.64	-2.14
Age:60+ (ref: 18-29)	0.09	0.108	0.000	-0.13	0.30	-2.45	-2.66	-2.24	0.02	0.160	0.000	-0.29	0.33	-3.98	-4.30	-3.67
COVID-19 symptoms																
Socioeconomic vulnerabilities																
Low SEP	1.37	0.061	0.000	1.25	1.49	0.14	0.02	0.26	2.58	0.084	0.000	2.41	2.74	0.41	0.25	0.25
Ethnicity: BAME ^a	1.18	0.125	0.188	0.93	1.42	0.16	-0.08	0.41	1.07	0.173	0.716	0.73	1.40	0.06	-0.28	0.40
Essential worker	1.03	0.060	0.670	0.91	1.14	0.03	-0.09	0.14	0.91	0.100	0.325	0.71	1.10	-0.10	-0.30	0.10
Health-related vulnerabilities																
Physical illness	1.67	0.054	0.000	1.56	1.77	0.51	0.40	0.62	2.13	0.083	0.000	1.97	2.29	0.76	0.59	0.92
Mental illness	3.95	0.091	0.000	3.77	4.13	1.37	1.19	1.55	13.50	0.115	0.000	13.28	13.73	2.60	2.38	2.83
Psychosocial vulnerabilities																
Abuse	5.28	0.091	0.000	5.10	5.46	1.66	1.49	1.84	11.47	0.113	0.000	11.25	11.69	2.44	2.22	2.66
Low social support	4.25	0.063	0.000	4.12	4.37	1.45	1.32	1.57	9.62	0.096	0.000	9.43	9.81	2.26	2.08	2.45
Psychiatric medications																
	3.08	0.089	0.000	2.91	3.25	1.13	0.95	1.30	4.01	0.113	0.000	3.79	4.24	1.39	1.17	1.61
<p>Note. The odds ratios represent the risk of belonging to the Moderate or Severe depressive symptom trajectory compared with the Low trajectory. All models were adjusted for sex, age, COVID-19 symptoms, and psychiatric medications and weighted using survey weights. ^a BAME ethnic/racial background includes Asian/Asian British, Black/Black British, White and Black/Black British, Mixed race, Chinese/Chinese British, Middle Eastern/Middle Eastern British, other ethnic group. BAME = Black, Asian and minority ethnic groups.</p>																

eTable 8. Observed Depressive Symptom Scores (PHQ-9) at Each Wave by Pre-existing Mental Illness

	Mental illness = No		Mental illness = Yes	
	Mean	Standard Deviation	Mean	Standard Deviation
Wave 1	5.601	5.022	12.124	6.732
Wave 2	5.424	4.769	11.416	6.414
Wave 3	5.056	4.679	11.018	6.441
Wave 4	4.910	4.716	10.959	6.564
Wave 5	4.654	4.681	10.553	6.559
Wave 6	4.795	4.801	10.847	6.612
Wave 7	5.706	5.064	11.008	6.508

eFigure. Observed PHQ-9 Mean Total Scores and SDs by Latent Trajectory Group Membership



The Low Depressive symptom trajectory (Class 1) includes participants with minimal depressive symptoms at all waves [30,850 individuals (60%)]. The Moderate depressive symptom trajectory (Class 2) represents participants with moderate depressive symptoms throughout the study [14,911 individuals (29%)]; The Severe depressive symptom trajectory (Class 3) represents participants with persistently severe levels of depressive symptoms [5,656 individuals (11%)].

eReference.

1. Herle M, Micali N, Abdulkadir M, et al. Identifying typical trajectories in longitudinal data: modelling strategies and interpretations. *European journal of epidemiology*. 2020:1-18.