Figure S1. Distribution of combinations of adolescent reports of symptom of anxiety (SCARED), depressive symptoms (PHQ-2), health-related quality of life (HRQoL) and at least 3 different psychosomatic symptoms a week (HBSC) per COP-S 2021 (Survey 1) of COP-S 2022 (Survey 2) and gender.
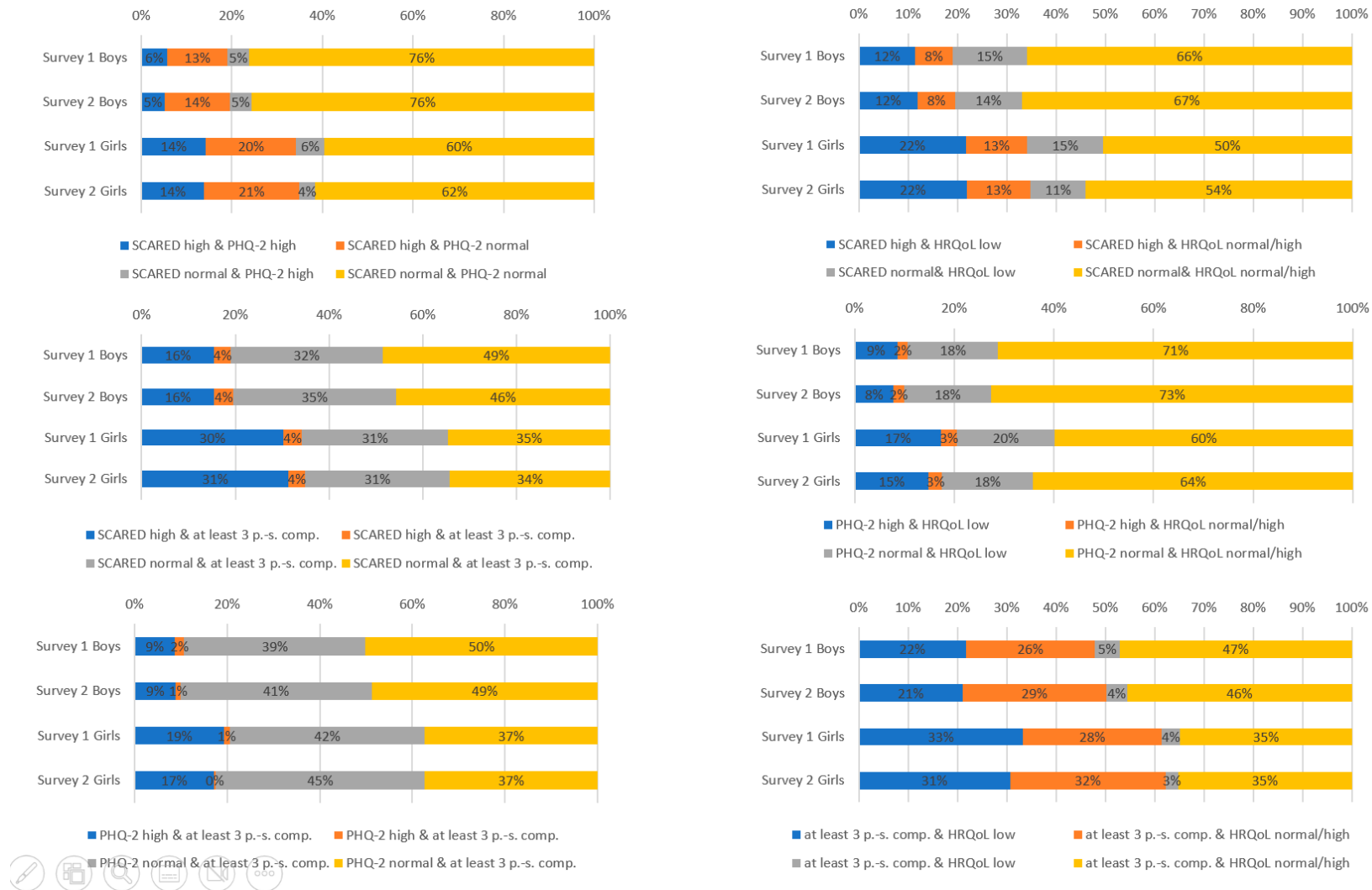
Table S1. Prediction of anxiety, depressive symptoms, and low HRQoL in adolescent boys and girls in 2021 and 2022, identified by forward regression analysis using psychosomatic complaints as significant predictor

Outcome	COPS-S	Gender	Predictor	OR	95% CI	p–value
Anxiety	2021	Boys	Higher number of psychosomatic complaints	1.582	[1.444;1.731]	< 0.001
		Girls	Higher number of psychosomatic complaints	1.565	[1.452;1.692]	< 0.001
			Higher sum score of pandemic related burden	1.130	[1.041;1.243]	0.004
	2022	Boys	Higher number of psychosomatic complaints	1.465	[1.341;1.595]	< 0.001
			Lower family climate due to the pandemic	1.695	[1.085;2.647]	0.02
			Higher parental workload due to the pandemic	1.876	[1.285;2.741]	0.001
		Girls	Higher number of psychosomatic complaints	1.633	[1.511;1.768]	< 0.001
			Low family climate	1.823	[1.275;2.806]	< 0.001
			Higher sum score of pandemic related burden	1.177	[1.063;1.289]	0.001
Depressive symptoms	2021	Boys	Higher number of psychosomatic complaints	1.522	[1.347;1.706]	< 0.001
			Higher age	1.165	[1.014;1.347]	< 0.001
			Low family climate	2.810	[1.657;4.666]	< 0.001
		Girls	Higher number of psychosomatic complaints	1.731	[1.552;1.933]	< 0.001
			Higher sum score of pandemic related burden	1.232	[1.097;1.381]	< 0.001
			Low family climate	2.475	[1.580;3.760]	< 0.001
			Higher age	1.097	[1.003;1.207]	0.044
	2022	Boys	Higher number of psychosomatic complaints	1.597	[1.421;1.786]	< 0.001
			Higher age	1.178	[1.062;1.315]	0.002
		Girls	More psychosomatic complaints	2.099	[1.851;2.380]	< 0.001
			Low family climate	2.287	[1.495;3.649]	< 0.001
Low HRQoL	2021	Boys	Higher number of psychosomatic complaints	1.569	[1.425;1.722]	< 0.001
			Low family climate	3.113	[2.038;4.728]	< 0.001
			Higher sum score of pandemic related burdens	1.360	[1.217;1.516]	< 0.001
			Higher age	1.198	[1.098;1.302]	< 0.001
		Girls	Higher number of psychosomatic complaints	1.741	[1.578;1.912]	< 0.001

			OR	CI	p
		Higher sum score of pandemic related burden	1.547	[1.391;1.757]	< 0.001
		Low family climate	4.209	[2.636;6.151]	< 0.001
		Lower sociodemographic conditions	3.369	[1.349;8.409]	0.009
		Higher age	1.120	[1.031;1.220]	< 0.001
		Higher number of psychosomatic complaints	1.600	[1.466;1.761]	< 0.001
		Lower family climate due to the pandemic	2.788	[1.774;4.427]	< 0.001
	Boys	Higher sum score of pandemic related burden	1.303	[1.162;1.463]	< 0.001
		Higher age	1.150	[1.063;1.254]	0.001
2022		Higher parental workload due to the pandemic	1.680	[1.120;2.439]	0.011
		Higher number of psychosomatic complaints	1.782	[1.622;1.947]	< 0.001
	Girls	Low family climate	2.592	[1.666;1.947]	< 0.001
		Higher age	1.170	[1.079;1.278]	< 0.001
		Higher sum score of pandemic related burden	1.477	[1.322;1.657]	< 0.001

HRQoL, Health-related quality of life; CI, confidence interval; OR, odds ratio

Table S2. Prediction of low HRQoL, depressive symptoms, and psychosomatic complaints in adolescent boys and girls in 2021 and 2022, identified by forward regression analysis using anxiety sum score as significant predictor

Outcome	COP-S	Gender	Predictor	OR	95% CI	p–value
Low HRQoL	2021	Boys	Anxiety sum score	1.309	(1.239;1.382)	< 0.001
			Low family climate te	3.832	(2.492;5.895)	< 0.001
			Pandemic burden	1.352	(1.227;1.362)	< 0.001
			Age	1.237	(1.134;1.349)	< 0.001
		Girls	Anxiety sum score	1.212	(1.163;1.262)	< 0.001
			Pandemic burden	1.451	(1.303;1.616)	< 0.001
			Low family climate	5.111	(3.429;7.617)	< 0.001
			Socioeconomic Conditions	3.888	(1.623;9.313)	0.002
			Age	1.183	(1.093;1.280)	< 0.001
	2022	Boys	Anxiety sum score	1.309	(1.242;1.382)	< 0.001
			Low family climate	3.140	(2.002;5.024)	< 0.001
			Pandemic burden	1.312	(1.164;1.471)	< 0.001
			Age	1.170	(1.078;1.270)	0.001
			Parental Workload	1.635	(1.091;2.365)	0.016
		Girls	Anxiety sum score	1.244	(1.196;1.295)	< 0.001
			Low family climate	2.990	(1.977;4.522)	< 0.001
			Age	1.240	(1.143;1.341)	< 0.001
			Pandemic burden	1.385	(1.253;1.548)	< 0.001
Depressive symptoms	2021	Boys	Anxiety sum score	1.272	(1.196;1.352)	< 0.001
			Low family climate	2.947	(1.738;4.997)	< 0.001
			Age	1.174	(1.054;1.308)	0.004
		Girls	Anxiety sum score	1.241	(1.186;1.300)	< 0.001
			Pandemic burden	1.169	(1.043;1.310)	0.007
			Low family climate	3.426	(2.247;5.225)	< 0.001
			Age	1.171	(1.070;1.281)	< 0.001
	2022	Boys	Anxiety sum score	1.231	(1.164;1.302)	< 0.001
			Age	1.172	(1.057;1.300)	0.003
		Girls	Anxiety sum score	1.307	(1.246;1.370)	< 0.001
			Low family climate	2.582	(1.673;4.522)	< 0.001
			Age	1.143	(1.038;1.258)	< 0.001

At least three psychosomatic complaints	2021	Boys	Anxiety sum score	1.343	(1.275;1.415)	< 0.001
			Low family climate	3.474	(2.313;5.218)	< 0.001
			Age	1.098	(1.023;1.179)	< 0.01
		Girls	Anxiety sum score	1.279	(1.240;1.319)	< 0.001
			Low family climate	2.134	(1.418;3.211)	< 0.001
			Age	1.117	(1.039;1.201)	0.003
	2022	Boys	Anxiety sum score	1.297	(1.236;1.360)	< 0.001
			Low family climate	2.775	(1.746;4.413)	< 0.001
		Girls	Anxiety sum score	1.308	(1.251;1.368)	< 0.001
			Low family climate	2.486	(1.541;4.011)	< 0.001
			Age	1.129	(1.051;1.212)	0.001

HRQoL, Health-related quality of life; CI, confidence interval; OR, odds ratio

Table S3. Prediction of low HRQoL, symptoms of anxiety, and psychosomatic complaints in adolescent boys and girls in 2021 and 2022, identified by forward regression analysis using depressive symptoms score as significant predictor

Symptom	Year	Gender	Predictor	OR	95% CI	p-value
Low HRQoL	2021	Boys	Depressive symptoms sum score	2.623	(2.160;3.187)	< 0.001
			Low family climate	2.837	(1.829;4.402)	< 0.001
			Pandemic burden	1.307	(1.169;1.461)	< 0.001
			Parental workload	1.541	(1.025;2.314)	< 0.001
			Age	1.144	(1.048;1.248)	< 0.01
		Girls	Depressive symptoms sum score	2.730	(2.282;3.266)	< 0.001
			Low family climate	3.241	(2.129;4.934)	< 0.001
			Pandemic burden	1.431	(1.276;1.605)	< 0.001
			Age	1.118	(1.025;1.219)	0.012
	2022	Boys	Depressive symptoms sum score	3.190	(2.645;3.847)	< 0.001
			Low family climate	2.336	(1.491;3.660)	< 0.001
			Pandemic burden	1.241	(1.101;1.399)	< 0.001
			Parental workload	1.980	(1.315;2.981)	0.001
		Girls	Depressive symptoms sum score	3.190	(2.645;3.847)	< 0.001
			Low family climate	2.336	(1.491;3.660)	< 0.001
			Pandemic burden	1.451	(1.290;1.632)	< 0.001
			Age	1.134	(1.040;1.237)	0.005
Symptoms of Anxiety	2021	Boys	Depressive symptoms sum score	2.090	(1.798;2.428)	< 0.001
		Girls	Depressive symptoms sum score	2.084	(1.838;2.363)	< 0.001
	2022	Boys	Depressive symptoms sum score	1.995	(1.707;2.331)	< 0.001
			Low family climate	1.735	(1.098;2.741)	< 0.001
			Parental workload	2.022	(1.375;2.973)	< 0.001
			Age	0.900	(0.827;0.979)	0.014

				OR	CI	p
		Girls	Depressive symptoms sum score	2.246	(1.952;2.585)	< 0.001
			Low family climate	1.845	(1.238;2.750)	0.003
			Pandemic burden	1.143	(1.037;1.260)	0.003
At least three psychosomatic symptoms	2021	Boys	Depressive symptoms sum score	2.452	(2.051;2.931)	< 0.001
			Low family climate	2.788	(1.867;4.165)	< 0.001
		Girls	Depressive symptoms sum score	3.408	(2.812;4.129)	< 0.001
	2022	Boys	Depressive symptoms sum score	2.906	(2.410;3.504)	< 0.001
			Low family climate	2.569	(1.596;4.135)	< 0.001
		Girls	Depressive symptoms sum score	4.289	(3.443;5.342)	< 0.001
			Low family climate	1.943	(1.173;3.221)	0.01

HRQoL, Health-related quality of life; CI, confidence interval; OR, odds ratio

Table S4. Predictors of elevated symptoms of anxiety, elevated depressive symptoms and low HRQoL self -reported by adolescents in the second and the third year of the pandemic, self-reported anxiety included as independent predictor

Outcome	Gender	COP-S	Intercept [#]	Age [#]	Sociodemographic condition [#,†]	Parent's burden [#,‡]	Child's burden [#,§]	Low family climate [#]	Anxiety sum score [#]	Model fit (Nagelkerke's R^2)
Low HRQoL	Boys	2021	0.000***	1.237***			1.352***	3.832**	1.309**	0.439
		2022	0.001***	1.170***		1.635	1.312***	3.140***	1.309***	0.392
	Girls	2021	0.000***	1.183***	3.888*		1.451***	5.111***	1.212***	0.469
		2022	0.000***	1.240***			1.385***	2.990***	1.244***	0.455
Depressive symptoms	Boys	2021	0.004***	1.181**				2.995**	1.274***	0.289
		2022	0.007***	1.170***					1.233***	0.159
	Girls	2021	0.001***	1.167***			1.176**	3.500**	1.237***	0.376
		2022	0.005**	1.140**				2.561***	1.308***	0.396
At least three psycho-somatic complaints	Boys	2021	0.081***	1.098**				3.474***	1.343**	0.361
		2022	0.305***					2.775***	1.297***	0.288
	Girls	2021	0.086***	1.117**				2.134***	1.297***	0.358
		2022	0.103***	1.129***				2.486**	1.308***	0.366

[#] The table indicates logistic regression odds ratios for all significant independent variables, controlling for the other predictors. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.005$.

[†] Single parenthood OR low parental education OR parental mental health problems (dichotomous).

[‡] Extended parents' burden due to pandemic (dichotomous).

[§] Child's pandemic-related burden due school, less contact with friends, extended use of digital media.

Table S5. Predictors of low HRQoL, elevated depressive symptoms, and weekly psychosomatic complaints elevated symptoms of anxiety, and self -reported by adolescents in the second and the third year of the pandemic, self-reported depressive symtoms included as independent predictor

Outcome	Gender	COP-S	Intercept [#]	Age [#]	Sociodemographic condition [#,†]	Parent's burden [#,‡]	Child's burden [#,§]	Low family climate [#]	Depressive symptoms sum score [#]	Model fit (Nagelkerke's R^2)
Low HRQoL	Boys	2021	0.001***	1.145**		1.543**	1.308***	2.838***	2.630***	0.465
		2022	0.005***			1.980**	1.252***	2.855***	3.190***	0.454
	Girls	2021	0.001***	1.117*			1.412***	3.450***	2.721***	0.564
		2022	0.000***	1.139**			1.437***	2.386***	3.170***	0.556
Elevated symptoms of anxiety	Boys	2021	0.089***						2.084***	0.218
		2022	0.163***	0.896*	2.017***			1.735*	1.996***	0.234
	Girls	2021	0.172***						2.069***	0.277
		2022	0.032***				1.145**	1.780**	2.247***	0.363
At least three psycho-somatic complaints	Boys	2021	0.357***					2.757***	2.704***	0.313
		2022	0.173***					2.569***	2.898***	0.338
	Girls	2021	0.413***						3.446***	0.401
		2022	0.382***					1.883***	4.201***	0.44

[#] The table indicates logistic regression odds ratios for all significant independent variables, controlling for the other predictors. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.005$.

[†] Single parenthood OR low parental education OR parental mental health problems (dichotomous).

[‡] Extended parents' burden due to pandemic (dichotomous).

[§] Child's pandemic-related burden due school, less contact with friends, extended use of digital media.