

BRIEF REPORT

Adolescents with somatic symptom disorder experienced less anxiety and depression than healthy peers during the first COVID-19 lockdown

Adolescents with mental health disorders are a high-risk population, and problems during COVID-19 lockdowns have included increasing, widespread anxiety, fear, anger and uncertainty.^{1,2}

Somatic symptom disorder (SSD) is characterised by disproportionate thoughts, feelings and behaviours about physical symptoms associated with the distress and disruption of everyday functioning. SSD accounts for 15%–25% of adolescent mental health cases in primary care paediatric settings,³ and 8.6% of non-traumatic adolescent pain in emergency departments.⁴

This cross-sectional observational study evaluated how the Italian COVID-19 lockdown, from 9 March to 4 May 2020, affected Italian adolescents aged 13–18 with and without SSD. It was conducted in May 2020 by the Institute for Maternal and Child Health of Trieste, Italy and approved by the Ethics Committee (IRB, RC 10/20). The SSD group were adolescents who had been diagnosed with SSD by a child neuro-psychiatric specialist at the Institute in the last year in accordance with the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. The controls were healthy adolescents, matched for age and sex, who did not have SSD but had accessed the Institute for an acute injury or an acute organic disease during the same period. We excluded those who could not understand Italian language and those who had a cognitive impairment, chronic disease, neuropsychiatric disorder or any history of unexplained chronic pain. Both groups completed an anonymous semi-structured SurveyMonkey questionnaire. This comprised general demographic questions and two validated questionnaires: the Multidimensional Anxiety Scale for Children Self Report (MASC-2-SR) and the Children's Depression Inventory Short Form (CDI-2-SF). Although most SSD patients had been receiving some psychological treatment before lockdown, they had not received any during lockdown. The patients answered the questionnaires remotely by computer or smartphone between 27 April and 3 May and sent back their signed consent forms. They answered the questions with regard to the previous eight weeks in lockdown. The primary study outcome was the difference in anxiety and depression scores between the two groups.

The statistics were analysed with *SPSS Statistics, version 23 (IBM Corp)*, and significance was $p = 0.05$. Categorical data were presented as numbers and percentages and continuous data as medians

and interquartile ranges. Differences in the MASC-2-SR and CDI-2-SF scores between the two groups were evaluated with the non-parametric Mann-Whitney *U* test (Table 1).

We invited 160 adolescents to complete the survey and 58 (51.7% female) with SSD and 57 controls (45.6% female) agreed. Their mean ages were 15.3 and 15.8 years, respectively.

Adolescents with SSD had slightly significant lower anxiety raw scores than the controls (50.8 and 58.6, $p = 0.05$), and lower mean anxiety T-scores, which were not statistically significant (0.9 vs. 1.3, $p = 0.45$). However, some MASC-2-SR subdomains, including the physical symptoms, social anxiety and tension and restlessness scores, were significantly lower in the SSD group ($p < 0.05$). Adolescents with SSD also experienced significantly lower levels of depression than the controls, as shown by their respective mean CDI-2-SF raw scores of 49 and 55.6 ($p < 0.05$) and mean CDI 2-SF T-scores of 4.7 and 7.2 ($p < 0.05$).

This study shows that the SSD group experienced less depressive and anxiety tendencies than the healthy controls during the eight-week COVID-19 lockdown period. According to the physical symptoms domain of the MASC2-SR T-score, the SSD group also reported significantly less physical symptoms than the control group. These results are remarkable, because all other mental health disorders have been reported to worsen during lockdown.²

Patients affected by SSD usually experience substantial impairment in their everyday life and social withdrawal and home isolation are two common diagnostic behaviours.⁴ To some extent, lockdown provided a unique and experimental setting for adolescents with SSD, because it reduced social pressure in a way that would be difficult to reproduce.

This study seems to confirm the role that exogenous stress inducers play in the origins and persistence of SSD in vulnerable adolescents. These include adults' expectations, school performance, competition with peers and extracurricular activities, such as competitive sport. Resilience is required for patients with SSD to adapt to such stressors. However, these adjustment strategies may lead to illness, physical symptoms and reduced well-being. Another possible explanation of the lower anxiety and depression among the SSD group may be the lack of medical care during lockdown. This may have reduced the chance of improper diagnostic testing and over

	SSD group	Control group	p Value
Number of patients	58 (50.4%)	57 (49.6%)	
Mean age ± SD (range)	15.3 years ± 1.61 (range 13–16)	15.8 years ± 1.59 (range 13–18)	
Males/females	48.3%/51.7%	54.4%/45.6%	
Mean MASC2-SR scores with SDs and 95% CIs			
Raw score	50.8 ± 22.3(45–56.7)	58.6 ± 20.8 (53.1–64.1)	p = 0.05
T-score	0.9 ± 1.4 (CI 0.5–1.2)	1.3 ± 1.5 (0.9–1.7)	p = 0.45
Mean MASC 2-SR sub-domain scores with 95% CIs			
Physical symptoms	0.6 (0.3–0.9)	1.3 (0.8–1.7)	p < 0.05
Social anxiety	0.8 (0.5–1.1)	1.2 (0.9–1.6)	p < 0.05
Tension and restlessness	0.6 (0.3–0.8)	1.3 (0.8–1.7)	p < 0.05
Mean CDI 2-SF scores with SDs and 95% CIs			
Mean raw score	49 ± 9 (46.6–51.3)	55.6 ± 13.1 (52.1–59.1)	p < 0.05
Mean T-score	4.7 ± 3.6 (3.8–5.7)	7.2 ± 5.1 (5.8–8.5)	p < 0.05

Abbreviations: 95% CI, 95% confidence interval; SD, standard deviations.

medicalisation, which are diagnostic hallmarks of SSD.⁵ Also, shifting their thoughts from their somatic symptoms to the viral threat, which is minimal in young people, could have reduced worries about their disorder.

Caution must be exercised when interpreting these results. The sample size was limited, and the answers were collected at a precise timepoint and could have been affected by selection and recall bias. In addition, the CDI-2-SF has good sensitivity, but suboptimal specificity. Longer lockdowns periods may also have produced different results.


In conclusion, although lockdown could be very stressful for healthy adolescents, it could also be a relief for SSD patients, as adults' expectations and social pressure are reduced.

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CONFLICT OF INTEREST

None.

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TABLE 1 Demographic data and MASC-2-SR and CDI 2-SF

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