Supplemental Online Content

eMethods.

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

eMethods.

    1.   Restrictions and Remote Schooling in Austria

Since October 2020 high school took place mainly remotely. In this time, no team or indoor sport was allowed. In November 2020 and from December 2020 until January 2021 one was allowed to leave the house only in a few exceptions, such as meeting necessary basic needs of daily life, assistance for people in need or outdoor activities alone or with people from the same household. Starting on February 8, 2021 the strict lockdown was lifted, and high schools were allowed to reopen with classes in a shift system and extended protective measures such as weekly COVID-19 tests and wearing FFP2 face masks.

    2. Measures

2.1. Well-being (WHO-5)

The WHO-5 questionnaire[1] measures well-being with five self-rating items rated on a six-point Likert scale. The score can range from 0 (absence of well-being) to 25 (maximal well-being). To translate into a percentage scale from 0 to 100 raw scores were multiplied by four. The German version of the WHO-5 has good psychometric properties in adolescents[2]. Cronbach's alpha was $\alpha = 0.85$ in the current sample.

2.2. Depressive symptoms (PHQ-9)

The depression module of the Patient Health Questionnaire (PHQ-9) was used to measure depressive symptoms[3]. The German version of the PHQ-9 is validated for adolescents[4]. The PHQ-9 contains nine self-rating items on a four-point scale ranging from 0 ("not at all") to 3 ("nearly every day") with a sum score from 0 to 27. The recommended cut-off score of greater-equal 11 points for detecting major depression in adolescents[5] was used to define clinically relevant depression. Cronbach's alpha was $\alpha = 0.88$ in the current sample. Item 9 of the PHQ-9 has been shown to be a robust and age-independent predictor of suicide attempts and deaths[6] and was therefore analyzed as a measure of suicidal ideation. This item asks "Over the last two weeks, how often have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way?". Response to this question can be coded in a binary way to identify the presence of any recent suicidal ideas within the last two weeks (presence of suicidal thoughts = item endorsed if response ranged from 1 to 3; no suicidal thoughts = item not endorsed if response was 0).

2.3. Anxiety symptoms (GAD-7)

The German version of the Generalized Anxiety Disorder 7 scale (GAD-7) was used to measure anxiety symptoms[7]. It measures anxiety with 7 self-rating items on a four-point scale, from 0 to 3 (maximum score 21). Cut-off points ≥11 for moderate and ≥17 for severe anxiety symptom levels were suggested for adolescents[8]. The 11-point cut-off was used in the current study to define clinically relevant anxiety. Cronbach's alpha for anxiety was α = 0.88 in the current sample.

2.4. Sleep quality (ISI)

The German version of the Insomnia Severity Index (ISI) is a validated screening instrument for insomnia in adolescents[9]. It measures sleep quality and insomnia on 7 self-reported items on a four-point scale ranging from 0 to 4. The sum scores range from 0 to 28 with a recommended cut-off score for clinical insomnia (moderate severity) greater-equal 15 points[10]. Cronbach's alpha was α = 0.80 in the current sample.

2.5. Eating attitudes test (EAT-8)

Disordered eating was measured with a reliable, validated, 8 items self-rating instrument, EAT-8[11]. It offers a screening instrument to screen individuals at high risk of developing clinical eating disorders. The EAT-8 is a short version of the EAT-26[12] including 8 items in a dichotomized response format (1 = "I agree somewhat" and 0 = "I disagree somewhat"). Through the determination of a total score ranging from 0 to 8, the EAT-8 should classify into a low risk and a high-risk group. In this study, the more conservative cut-off points of 3 for female and 2 for male adolescents were used, as they were recommended for epidemiological purposes.[11] Cronbach's alpha was α = 0.84.

2.6. Life satisfaction

Life satisfaction was measured with the Cantril ladder, an instrument that has been shown to be valid and reliable to assess overall mental well-being among adolescents[13]. Adolescents were asked to rate their life satisfaction on a 11-point scale ranging from (0) "the worst possible life" to (10) "the best possible life".

2.7. Migration status and smartphone usage

Students were asked whether they or both parents were born abroad, to assess their migration status. Mobile phone use was queried identically as in the Health-Behaviour in School-aged Children-study (HBSC-study) conducted in Austria in 2018[14] in order to allow for comparison.

3. Completion rate

Following the American Association for Public Opinion Research (AAPOR) reporting guidelines for non-probability online samples,[15] we report that 81.1% of those who clicked on the survey link completed the entire survey, resulting in a 81.1% participation rate (ie, completion rate).[16]

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