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A young man with short brown hair and glasses is sitting on a light-colored rug, leaning over a table. He is wearing a brown corduroy jacket over a grey t-shirt. He is holding a red pen and writing in a notebook. The background is a bright, sunlit room with a window and a radiator. The overall mood is calm and focused.

## Mental wellbeing of youth: lessons from the Covid-19 crisis

A new survey of research literature

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# Preface

You are holding a report concerning the mental health of children and young people, the result of a unique cooperation between a substantial group of Dutch academics, stakeholders, organisations, children and young people. We welcome this opportunity to tell you how it came into being.

We noticed multiple and varied research taking place into the effects of the Covid-19 pandemic on children's and young people's mental health and wellbeing. Researchers and research groups presented and explained their findings separately, creating a fragmented and unclear image. At the same time the media published alarming messages regarding the pandemic's supposed effects. Their messages sometimes contradicted each other. This caused obscurity and confusion.

'There is room for improvement here', we thought. We sent an email to fellow researchers with a request to meet online to bring together and fine-tune our research. Our invitation was received with great enthusiasm. The snowball effect worked to bring together a relevant group of academic researchers and other professionals at short notice. At a later stage a group of involved children and young people joined to share their experiences during the Covid-19 period.

The shared aim of all those involved: everyone wanted to guarantee good research into the effects of the Covid-19 pandemic on the mental health of children and young people. Based on this research we wanted to lay down clear directions for policy makers and care professionals. The report you are now reading is the result. We hope it will contribute to improving and optimising policy and care for the mental health of our children and young people.

We would like to thank everyone who contributed to this report. Special thanks to the Netherlands Youth Institute which took care of the design and production of this report. In addition many thanks to the children and young people who shared their experiences and ideas on the Covid-19 period with us in such an open and constructive manner.

We emphatically hope that this initiative will have a wider reach than just the Covid-19 pandemic. The momentum clearly shows that we wish to cooperate. That we will unite forces to put the mental health of children and young people in the Netherlands on the agenda. And to keep it there. A healthy future needs to include mentally healthy youth.

**Meike Bartels**  
**Arne Popma**  
**Tinca Polderman**

# Cooperation between dozens of academics and young people



# 1. Cause, purpose and methods

## 1.1 Cause and key question

Over the past three years several scientific institutes and research organisations have studied the consequences for children and young people of the Covid-19 crisis and related measures. Since the end of 2021 an expanding group of researchers in the Netherlands cooperated in this field. They collected all studies into mental wellbeing of Dutch youth before, during and after the Covid-19 crisis. The group also collaborated with young people. Together they assessed all study results in order to gain more insight into their findings. Researchers and young people believe such insight is fundamental in order to make conscious policy decisions for present-day and future youth.

The Netherlands Youth Institute (Nji) is the point of assembly for all studies. The key question of this survey is:

***What happened to the mental wellbeing of children, adolescents and young adults in the Netherlands during and after the Covid-19 crisis and what is going on in their social environment during this period?***





## 1.2 Purpose

This report offers a survey of studies into the major consequences of the Covid-19 crisis and related measures on the mental wellbeing of children, adolescents and young adults in the Netherlands. It also intends to assess the findings from all available studies collectively with young people and researchers. In this report we observe various aspects of mental wellbeing, such as quality of life, depression, anxiety and psychosomatic complaints, including stress. We also look at what took place in young people's social environment during the Covid-19 crisis. For instance, in families, among peers, in leisure activities, at school and at work. In addition, we observe how the perspectives of young people developed during the Covid-19 crisis and how young people themselves perceive Covid-19 policies.

This knowledge is relevant for two reasons:

1. It is not unlikely that in the future restrictive measures will again be necessary to prevent a national crisis due to spreading of a (Covid-19) virus. Other pandemics or crises can emerge to cause restrictions in young people's environment. Consider for instance the gas crisis or the climate crisis. All these possible scripts will benefit from well-founded knowledge concerning the effect of restrictive measures on young people. This knowledge will help us to make better considerations regarding the soundness of measures to be applied.
2. The community based context in which children, adolescents and young adults grow up has been affected during the Covid-19 crisis. There was less peer contact. Fewer opportunities existed for organised leisure activities. Schools and colleges closed their doors and family members and housemates were obliged to stay home. What happens to young people when there are so many restrictive changes in their social environment? By focusing on the consequences on mental wellbeing, we will gain more insights in the importance of the community based context. Not just during a crisis. This knowledge will teach us more about the importance of a solid social context to continue to stimulate the mental development of children and young people in a positive way.

## 1.3 Method

For this research we collected as many studies as possible dealing with the effects of the Covid-19 crisis and the Covid-19 measures on the mental wellbeing of children, adolescents and young adults in the Netherlands. We apply the following age division: children 0-12 years; adolescents 12-18 years; young adults 18-27 years.

### **Inquiry**

In early 2022 Nji called out to researchers of various Dutch universities, colleges and knowledge institutes to send in research materials. The researchers involved further disseminated the call to their networks. So it was not a systematic call. The inquiry was repeated in September 2022. As a result, published and (at the time) unpublished articles, preprints, study protocols, abstracts, factsheets, reports and new versions of materials published earlier were gathered. In addition, we used an overview that Nji has kept since the start of the pandemic, with studies of the consequences of the Covid-19 period for children, young people and families. This delivered 71 published and unpublished sources. These sources were numbered starting with capital C (from Covid-19): C01 up to C071.

## Period

The studies collected in this report gathered data in the period from March 2020 (the first Covid-19 measures) and April 2022 (just after the latest Covid-19 measures ended).

## Selection

From the 71 sources, 44 studies were selected. We disregarded: study protocols, abstracts and fact-sheets (16), studies focusing on foreign research populations (2), studies not related to the Covid-19 crisis and therefore not within our scope (6) and literature reports (3).

These 44 studies were first assessed with regard to their methodological qualities (see below). Due to this, four more studies were excluded from the selection.

Eventually 40 studies were selected and their research findings were included in this report. The references include these 40 selected studies under the heading 'Selected studies on mental wellbeing in and after the Covid-19 crisis'.

## Assessment of methodological quality

The methodological quality of the studies was assessed using a checklist. The assessment criteria are based on common criteria for the assessment of methodological quality of studies in a systematic literature review [Hayden et al, 2006; 001]<sup>1</sup>.

All studies were assessed by one of the authors of this report and checked by a second author. Differences were debated until consensus was reached.

Each criterion was attributed one of three possible scores: a score of 1 if the criterion was met, a score of 0.5 if it was partially met, and a score of 0 if it was not met. A study could score a maximum of 14 points. Some criteria are not relevant for qualitative studies. Therefore a percentage of the maximum achievable number of points was calculated for each study. The results of the assessment of methodological quality per study may be found in Annex 1 (in Dutch). There is no general consensus on a cut-off value indicating sufficient quality of a study. We applied a cut-off value of 55% of the maximum score. As mentioned earlier, four studies scored below the 55% cut-off value. The findings from these studies have not been included in this research.

## Description of general and methodological characteristics of the studies

All selected studies have first been described in terms of general characteristics (for instance target group and central question), followed by methodological characteristics (for instance outcome measures and analytical method applied). This was done following predefined items, derived from the recommendations by Hayden et al [001]<sup>2</sup>. The description of each study was made by one of the authors of the report and checked by another author. The description of the general characteristics of the studies selected can be found in the table in Annex 2 (in Dutch). The description of the methodological characteristics of the studies selected can be found in the table in Annex 3 (in Dutch).

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1 Hayden, J.A., Côté, P., & Bombardier, C. (2006). Evaluation of the quality of prognosis studies in systematic reviews. *Annals of Internal Medicine* 144(6), 427-437. To be found in references of this report under 'Other sources'.

2 See note 1.



## Findings per theme and per phase of the Covid-19 crisis

The findings from the 40 studies selected have been clustered by theme, sometimes including a number of subthemes:

- Mental wellbeing: quality of life, internalising problems (general, anxiety, loneliness, mood, psychosomatic complaints) and externalising problems (such as rebellion, hyperactivity, provocation or behavioural problems);
- Social environment: family, peers, school, leisure and lifestyle;
- Future perspective;
- Perception and observance of Covid-19 measures.

Subsequently the findings within the themes per phase of the Covid-19 crisis or pandemic were mapped and linked to each other. Which effects appeared in which period? A timeline as described by central government<sup>3</sup> and RIVM<sup>4</sup> was used to define the phases of the pandemic.

### Overview of the phases of the Covid-19 crisis or pandemic

Phase	Period
Before the pandemic	Before March 2020
First lockdown, schools closed	March 2020 – mid May 2020
First opening phase, schools open	Mid May 2020 – August 2020
Second lockdown, schools partly open and partly closed, next to partly curfew and partly no curfew	August 2020 – April 2021
Second opening phase, schools open	May 2021 – October 2021
Third lockdown, schools partly open and partly closed	November 2021 – January 2022
Third opening phase	From February 2022

### Working conference with researchers and young people

During a working conference on 31 May 2022, researchers and young people jointly started to assess the findings from all the studies. Approximately 60 researchers from Dutch universities and knowledge institutes and 14 young people participated. The young people came from the Mental Health Panel of the National Youth Council (NJR), the children's advisory group of Foundation Alexander and the youth panel of the Netherlands Youth Institute (Nji). At several tables the results of the studies, that had been analysed until then, were discussed. After these discussions participants jointly reflected on the most important outcomes of the studies analysed so far and formulated lessons for the future. These lessons form part of this survey and are meant for all (youth) policy makers and all people interested in (youth) policy.

3 [www.rijksoverheid.nl/onderwerpen/coronavirus-tijdlijn](http://www.rijksoverheid.nl/onderwerpen/coronavirus-tijdlijn), in references under number 002

4 [www.rivm.nl/gedragsonderzoek/tijdlijn-maatregelen-covid](http://www.rivm.nl/gedragsonderzoek/tijdlijn-maatregelen-covid), in references under number 003

### **Monitors and polls**

The findings from the 40 studies selected were supplemented with findings from monitors and polls. The monitors and polls provide insights into the level of mental complaints present at various moments in time (prevalence), usually based on large numbers of respondents. This is a valuable addition to the findings from the selected studies which primarily measure increasing or decreasing mental wellbeing over time. The monitors and polls were collected during the inquiry described earlier and via media messages concerning the results of these monitors and polls.

In the references these sources are collected under the heading 'Monitors and polls on mental wellbeing during and after the Covid-19 crisis'. The sources were numbered following a capital M.

### **Other sources**

Further to the studies selected (C) and the monitors and polls (M) this survey makes use of other relevant sources. In the references these sources are gathered under the heading 'Other sources'. They were numbered following a capital O.

### **Advisory board**

An advisory board of academics (see colophon) supported the writing of this survey. They assisted with the collection of studies, helped to consider the methodology, were involved in the organisation of the working conference and provided feedback on the draft texts of the report and the annexes.



## 1.4 Some comments in advance

As mentioned, the research literature has not been searched systematically. So there is a risk that we missed relevant studies.

It was not easy to interpret research findings, for a number of reasons. First, from a scientific point of view, we need to be careful in pointing at the Covid-19 crisis as the cause of changes in the mental wellbeing of children, adolescents and young adults. Based on their research framework, researchers usually were not able to draw solid conclusions regarding cause and effect. Secondly, the findings from various studies sometimes contradicted each other. Thirdly, it was sometimes hard to judge whether the research population was a faithful reflection of the population in society. Also, because huge regional differences occurred in Covid-19 prevalence, especially at the outset of the pandemic. In the fourth place, researchers usually look at average values in a group, causing the loss of specific information. For instance: if the level of depressed feeling decreased slightly on average, this could be caused by a slight decrease in a lot of children or young people, or by an extreme decrease in a small group.

Eventually, we searched for the broad outlines in the research findings per theme. We looked primarily whether several studies pointed in the same direction and were confirmed by monitors and polls. We provide a general outline of the image that all studies present on what happened with the mental wellbeing and the social environment of children, adolescents and young adults in the Netherlands during and after the Covid-19 crisis.

## 1.5 Earlier research reports

From the beginning of the Covid-19 crisis, in the Netherlands quite a lot of research took place into the consequences of the pandemic on the mental wellbeing of youth. In this report we build on earlier research reports.

### **Covid-19 crisis and children and young people in the Netherlands: an inventory of the impact of the Covid-19 crisis on children and young people in the Netherlands – UNICEF [004]**

At the outset of the Covid-19 crisis Unicef gathered insights from previous crises and pandemics in order to map eighty risks the Covid-19 pandemic carried for children and young people. These risks were divided in seven themes, among which mental wellbeing. Based on their findings, at the time Unicef advised that mental health of children and young people should become an explicit element in the national Covid-19 approach. Unicef also insisted limitations in games, sports and leisure activities to be as small as possible.

### **Expected consequences of Covid-19 for mental health – The Netherlands Institute for Social Research (Sociaal en Cultureel Planbureau SCP) [005]**

In a pilot literature study in July 2020, a social debate was raised on the balance between physical health effects and economic effects on the one hand and mental health effects on the other hand. Before then, the consequences of the Covid-19 measures on mental health had not been high on the agenda. SCP named three factors subject to pressure during a crisis with a relation to mental health: loneliness, job insecurity/loss and lifestyle.

During the first phase of the pandemic, SCP observed some positive effects of Covid-19 measures. For instance more relaxation, less stress and fewer stimuli. But the majority of effects was negative: more worries, more anxiety, more stress and more depressive feelings. SCP noted that the decrease in mental health was already noticeable before the Covid-19 pandemic in almost all populations, elderly people excepted. It concluded that a number of follow-up studies were needed.

### **Effects of Covid-19 on youth, family and youth field. A literature research – Netherlands Youth Institute (Nederlands Jeugdinstituut Nji) [006]**

In May 2021, Nji published a first literature search regarding the consequences of the Covid-19 crisis on youth, family and youth field. It looked at the following themes: mental wellbeing; physical health; family and parenting; social contacts and leisure; work and income; inequality of opportunities; perspectives on the future; and functioning of professionals in the youth field. All in all 128 Dutch studies, polls, inquiries and existing registrations between March 2020 and March 2021 were analysed. This report showed a negative impact of the crisis on children, young people and families, although most children and young people were still doing well, and insufficient involvement of young people in Covid-19 policies.

### **Consequences of the Covid-19 pandemic for health and wellbeing of youth: A systematic literature survey – RIVM & Nivel [007]**

In early 2022 RIVM (National Institute for Public Health and the Environment) and Nivel (Netherlands Institute for Health Services Research) published a literature search on the impact of the Covid-19 crisis on youth in six fields: physical health, need of care, mental health, social effects, other effects, and risk and protective factors. This research looked primarily at scientific literature, both international and national, published between December 2019 and May 2021. Studies mainly showed a negative impact on the physical and mental health of youth. Especially young people with existing mental or physical complaints experienced a negative impact of the pandemic.

### **HBSC 2021: Health and wellbeing of youth in the Netherlands – Utrecht University, Trimbos Institute for mental health & SCP [M25]**

The four-yearly HBSC-Netherlands report presents a study into the health and wellbeing of pupils. This study measures specific behaviours, but also looks at factors that might influence this behaviour. The most recent report published figures from the 2021 measurement (during the Covid-19 crisis) compared to earlier measurements between 2001 and 2017. The figures show a development towards more problems in wellbeing and mental health over the last 20 years. This problematic trend is much stronger with girls than with boys. It seems that the trend is reinforced during Covid-19. Another explanation presented is the increasing pressure experienced by school work.

## **1.6 Readers' guide**

Chapter 2 contains the findings on mental wellbeing of children, adolescents and young adults in the Netherlands during and after the Covid-19 crisis. Chapter 3 concerns the findings with regard to developments in the social environment during this period. The final chapter presents the lessons learnt from all studies, formulated mainly by young people during the working conference.

Throughout the text references to sources are put between square brackets [...]. All sources have a number with a capital in front. Studies on mental wellbeing during and after the Covid-19 crisis have a capital C followed by a number. Monitors and polls have a capital M followed by a number. Other sources have a capital O followed by a number. This division can also be found in the list of references.

This is translation of the original research report, which is written in Dutch. The annexes are not translated.

## 2. Mental wellbeing

Mental wellbeing is a broad concept that can be measured in several ways. First, we look at mental wellbeing from the positive side. How happy are young people or how satisfied are they with their lives? This is assembled under the heading 'Quality of life'. We proceed by looking more closely at problem-oriented themes. How many young people are not doing well now? First, we look at internalising problems, then at externalising problems.

### 2.1 Quality of life

#### Scientific literature

Van der Laan et al [C06] found a decrease in life satisfaction among adolescents in the first phase of the pandemic. They questioned adolescents (12-16 years) in weeks five to eight of the first lockdown in 2020. The results were compared with data from one year earlier. The score for life satisfaction went down from 7.62 in 2019 to 7.15 in 2020. Van den Broek et al [C24] confirms this finding. This study found that average assessed life happiness decreased from 7.48 to 7.23 during the first Covid-19 lockdown (March-June 2020) compared to the spring of 2019.

Stevens et al [C47] also found a slight decrease of life satisfaction during the first lockdown in 2020 compared to 2019, among students in vocational training in Utrecht. In the spring of 2020 the life satisfaction score was 7.01. Six months earlier it was 7.12. This linear decrease continued to 6.76 during the winter of 2020 (November-January), when the second lockdown took place.

#### Polls and monitors

CBS figures [M03] support a slight negative development of experienced quality of life among young adults. Every year 18 to 25 year olds are asked to score their experienced happiness and life satisfaction. The happiness-score decreased from 7.5 in 2019 to 7.4 in 2020 and 7.3 in 2021. The percentage of young adults who called themselves happy or satisfied in particular decreased from 87.5% in 2019 to 80.9% in 2021. In the older age group (25+) the figures did not change much.

RIVM [M04] also found a negative development in the scores that adolescents and young adults gave their lives during the Covid-19 crisis. During the lockdowns the score among 16 to 24 year olds was lower than during periods of relaxation. Around the New year of 2021 this score (on a 1-10 scale) averaged around 5.8.



A poll by Nji [M24] among students also showed that mental wellbeing in Covid-19 times had decreased on average. In the period between March 2020, the start of the Covid-19 crisis, and mid December 2021, during the evening curfew, students assessed their mental wellbeing averagely at 5.9 on a scale of 1 to 10. This figure was 1.5 points below the score in the winter of 2019, when questioned retrospectively.

The GGD Health monitor [M01] showed that the feelings of happiness among secondary school pupils had decreased. The percentage of second and fourth form pupils who felt mainly happy, decreased from 84% to 77%. This decrease was fairly comparable between boys and girls and between education levels.

The HBSC figures of 2021 [M25] also showed a decrease in the assessment of life satisfaction of children and adolescents during the Covid-19 crisis compared to the last measurement before. Primary school pupils showed a decrease of life satisfaction from 8.3 in 2017 to 8.0 in 2021. In secondary education there was a decrease from 7.6 in 2017 to 7.1 in 2021. This trend showed more clearly with girls than with boys.

*We may conclude that the quality of life experienced by adolescents and young adults during the Covid-19 crisis decreased slightly on average. Research findings show a negative course of life satisfaction and life happiness. This negative development seemed stronger during the second lockdown than during the first. Although this decrease could be caused (partly) by the Covid-19 crisis, other factors such as increased pressure to achieve and stress cannot be excluded.*

## **2.2 Internalising problems**

The indication internalising problems refers to a child's emotions directed inwardly, such as anxiety, loneliness, depressive thoughts, mood and psychosomatic complaints like sleeping problems and stress [008].

In this paragraph we first discuss the studies that looked into internalising problems in general. Subsequently, we will outline the specific domains of internalising complaints: anxiety, loneliness, mood and psychosomatic complaints.

### 2.2.1 In general

#### Scientific literature

During the first lockdown various studies show variable images regarding changes in internalising problems. According to Van der Laan et al [C06] adolescents between 12 and 16 years old reported no increases of internalising problems during the first lockdown period. Similarly, children between 10 and 13 years old reported no increase of internalising problems according to Achterberg et al [C34]. In a study by Bernasco et al [C09] group eight pupils even reported a decrease in internalising problems. Their parents did not report such a decrease. On the other hand, various other studies found that a larger group of children and young people faced internalising problems in this period than before the pandemic. Children with existing psychological problems in particular experienced deterioration [C02, C03, C52]. In a study by Zijlmans et al [C02], children with chronic somatic illnesses reported fewer internalising problems during the first lockdown compared to children from the population at large, and also compared to children with existing psychological complaints before the pandemic.

The second lockdown period from December 2020 to April 2021 again shows a variable picture. Moreover, in this phase of the pandemic many studies performed measurements over the whole period of the first and second lockdown.

A study by Stevens et al [C47] showed a slight increase in internalising problems among adolescents, but this rise was sharper between the period before the Covid-19 crisis and the first lockdown than between the first and second lockdown. Parents' reports in the study by Fisher et al [C03] suggested



that children and adolescents suffered more internalising problems both during the first and second lockdown compared to the period before the pandemic. This study also shows that the number of reported internalising problems decreased between the first and second lockdown. Within the group of children and adolescents with pre-existing mental problems however, the internalising problems had grown during the second lockdown. Parents of this group of children however did not observe this increase [C03]. Hoefnagels et al [C53] observed similar levels of internalising problems during the second lockdown and before the pandemic among children and adolescents with chronic illnesses. They found no difference in comparison to healthy peers.

Zijlmans et al [C52] looked at the course of mental wellbeing, including internalising problems, during the full period of the pandemic. At five points in time they studied the mental wellbeing of a representative sample of children and adolescents, from the population at large and from a group with pre-existing mental problems (clinical population). Their parents were also questioned. Parents reported more internalising problems of their children during the pandemic compared to before the Covid-19 crisis. Children from the population at large reported more internalising problems during the whole pandemic and at the end of the Covid-19 crisis in April 2022, than before the crisis. The internalising problems were worst during the second lockdown and seemed to stabilise afterwards, but remained higher than before the pandemic. It was the same with children and adolescents who already had mental complaints before the Covid-19 crisis. Their internalising problems were worse at the end of the Covid-19 crisis than at the beginning of the crisis.

Van der Velden et al [C60] studied the internalising problems among adolescents (16 to 20 years old) during the second lockdown, in November and December 2020, and compared these with the problems of adolescents in 2016 and 2012. They saw that the prevalence of mild complaints related to anxiety and depression had increased from 24% in 2012 to 32% at the end of 2020. However, the researchers claim that this slight increase during the Covid-19 crisis was no larger than the increase in previous years. Also, adolescents more often use mental health care services (GGZ) in 2020 than in 2016, but a similar increase occurred already between 2012 and 2016. All in all, researchers draw the conclusion that the increase in mental problems had already started before and that the Covid-19 crisis had only a very slight negative impact on the mental health of 16 to 20 year olds.

### **Polls and monitors**

Only a few of the existing youth monitors and polls focused specifically on internalising problems. Several monitors do check the self-assessed mental health of adolescents and young adults. CBS [M10] found that during the Covid-19 crisis a larger group of adolescents and young adults aged 12 to 25 indicated that they felt mentally unhealthy compared to before the crisis. In 2019 this concerned 8.3% of 12 to 18 year olds, and 12.7% of 18 to 25 year olds. This did not change significantly in 2020, but in 2021 the percentages increased to respectively 12.6 and 22.4. Feelings of disquiet, dejection and low spirits in particular had increased.

The monitors rarely look at internalising problems of children and adolescents under 16 during the Covid-19 crisis. We found most information concerning this group in Kindertelefoon (Children's Helpline) reports. They state that the number of conversations per day with children and adolescents about emotional problems, such as low spirits, was higher in 2021 than in 2019. In 2021 an average over 70 conversations per day took place, in 2019 less than 50. During the Covid-19 crisis, emotional problems often were the theme of the conversations [M07, M08].

Researchers from the University of Amsterdam [M16] questioned parents about the emotional problems of their children (6-17 years old). They compared the period during which the schools were closed in the spring of 2020 with the time when the schools reopened. Parents did not feel that this changed their children's level of emotional problems.

The recurrent polls by RIVM [M04] showed that during the lockdowns young adults assessed their mental health more negatively than during periods without lockdown. In July 2020, when measures had been partly relaxed, more than 80% of young adults indicated that they felt mentally healthy. In February 2021, during a strict lockdown and curfew, less than half of the respondents indicated the same. The final measurement in March 2022 showed over 70%. At this time society had fully reopened.

The HBSC figures of 2021 [M25] show an increase in emotional problems during the Covid-19 crisis compared to the latest measurement before. Primary school pupils show an increase of emotional problems from 10.9% in 2017 to 23.4% in 2021. This trend is much stronger with girls than with boys.

*The picture regarding internalising problems during the Covid-19 pandemic is variable. The general trend seems to indicate an increase of the level of internalising problems among children and adolescents during the pandemic compared to the period before the pandemic. This was definitely the case with children and adolescents with pre-existing mental problems. During the final phase of the pandemic internalising problems seemed to stabilise. Studies including both young people and parents showed a discrepancy between young people's own thoughts concerning internalising problems and the way in which parents perceived the internalising problems of their child. It cannot be said with certainty whether the Covid-19 crisis is the cause of the increase in internalising problems. Researchers point out that this trend was already evident before the pandemic.*

## 2.2.2 Anxiety

### Scientific literature

Pinkse-Schepers et al [C51] observed that the level of social anxiety, a specific kind of anxiety, did not change among adolescents between 13 and 16 years old during the first weeks of the pandemic.

Regarding anxiety complaints in general, children and adolescents reported more anxiety complaints during the first lockdown in the spring of 2020 than before the pandemic [C01; C03]. A study by Bouter et al [C63] shows that anxiety problems decreased among adolescents at risk of clinical problems.

In a study by Luijten et al [C01] children and adolescents showed fewer anxiety complaints during the second lockdown than during the first one, but nevertheless more than before the pandemic. Mild complaints in particular decreased. Serious complaints remained the same and the group with serious anxiety complaints had increased between the first and the second lockdown. Also, the group with pre-existing mental complaints did report an increase in anxiety complaints between the first and second lockdown [C03].

Zijlmans et al [C52] studied the course of anxiety complaints during the whole pandemic. Children and adolescents clearly reported more anxiety complaints during the first lockdown than before the pandemic. As the pandemic continued, researchers saw a slowly decreasing trend. But in the final measurement, in April 2022 after the final relaxations had been implemented, anxiety complaints remained higher than before the pandemic. The group of children and young people with pre-existing mental complaints showed an increase of anxiety complaints during the pandemic and a worsening at the end of the pandemic compared to the period of the first lockdown.

### Polls and monitors

Prevalence figures of Nivel [M06] show that young people's (5-24) visits to general practitioners because of anxiety, stress and nerves first decreased but subsequently rose quickly during the second lockdown. In 2021 and the first months of 2022 the weekly number of visits to general practitioners was higher than in 2020, also in the months before the Covid-19 crisis.

*Feelings of anxiety among children and young people first seemed to increase and subsequently to decrease during the course of the pandemic. Despite this decreasing trend the anxiety complaints still seemed to be worse than before the pandemic. Children and adolescents with existing mental complaints before the Covid-19 crisis seem to show an increase of their anxiety complaints during the whole pandemic.*

### 2.2.3 Loneliness

#### Scientific literature

A study by Van den Broek et al [C24] showed that adolescents suffered more feelings of loneliness during the first lockdown than before the pandemic. This study took place among third and fourth grade students in secondary education.

#### Polls and monitors

The Children's Helpline (Kindertelefoon) [M07, M08] noticed in conversations with children and adolescents during the Covid-19 crisis that more conversations dealt with loneliness than previously. In the spring of 2020 the average number of conversations about loneliness was 6.5 per day, compared to 4 conversations per day in the spring of 2019. During the second Covid-19 lockdown the number of conversations about loneliness increased with another 31% compared to the first lockdown.

CBS [M11] found an increase of emotional loneliness (lacking close ties) among 15 to 25 year olds between 2019 and 2021. In 2021 13.5% of them felt strongly alone, whereas this percentage was 8.2 in 2019. Among all age groups in total strong emotional loneliness had increased from 7.9% to 10.7%. CBS concluded that young people suffered more from emotional loneliness than adults and elderly people. Contrary to emotional loneliness the percentage of young people suffering strong social loneliness (lacking social contacts) remained more or less the same in 2021 compared to 2019 [M11].

RIVM [M04] conducted several inquiries during the Covid-19 crisis among adolescents and young adults (16-24 year olds) concerning loneliness. This presented the development of feelings of loneliness among 16 to 24 year olds during the pandemic. Loneliness among adolescents and young adults was especially high during the second lockdown (January 2021) and after the relaxation of measures in March 2022.

The HBSC-study [M25] first measured loneliness in 2021. It showed that 8% of primary school pupils and 12% of secondary school students suffered from loneliness. Girls reported more feelings of loneliness than boys.

*Various polls and monitors indicated that loneliness among children, adolescents and young adults increased, particularly during the second and third lockdown.*



## 2.2.4 Mood

### Scientific literature

A substantial number of studies took place into mood problems during a large part of the pandemic. This means that measurements are available from the start of the pandemic until the opening phase after the lockdown and curfew in the spring of 2021. The number of studies with measurements after the last relaxations in 2022 is still limited.

Already during the first lockdown children and young people reported more mood problems (such as depressive thoughts) than before the pandemic [C01, C03, C51, C52 C63]. But there are also indications that adolescents feel stronger and more energetic during the first period of the pandemic than before the pandemic [C32, C33]. A possible explanation referred to in research is that the reopening of schools contributed to improving the mood of secondary school pupils after the first lockdown of March/April 2020 [C57]. A study by Green et al [C33] suggested that especially older adolescents and young adults experienced more mood problems than younger adolescents. Bouter et al [C63] found that depressive feelings increased in the period between the first and second lockdown among adolescents with a higher risk of mental problems. According to some studies, children and young people reported no changes in mood, or even a decrease in mood problems [C59, C63].



During the second lockdown – during which a curfew was imposed – these mutual differences in mood seemed to continue. Parents’ reports [C42] showed that young children between 1 and 6 years old suffered depressive feelings slightly more often than would have been expected based on the normal diversification in mood within the age group. Adolescents also felt slightly less well during the second lockdown than during the first [C33]. Fisher et al [C03] found that depressive feelings stabilised between the first and second lockdown with children from the population at large, but the complaints reported were still higher than before the pandemic. Children and adolescents from the clinical population did report an increase of depressive complaints between the first and second lockdown. The group with serious depressive thoughts also increased within the clinical population. The group with mild symptoms remained unchanged. Green et al [C33] identified a group of adolescents during this period who felt more strength and energy. However, energy levels did fluctuate more.

Measurements during the reopening after the second lockdown in the spring of 2021 showed that adolescents reported an ever increasing rise in feelings of stress and depression during the course of the pandemic. Feelings of strength and energy decreased during this period [C36]. As discussed earlier, Zijlmans et al [C52] studied the course of mental wellbeing, including low spirits, during the whole pandemic. The last measurement in April 2022, when the final relaxations were implemented, show a decrease in levels of low spirits in the population of children at large, but not to the same level as before the pandemic. The group of children and adolescents with pre-existing mental complaints showed increasing low spirits during the course of the pandemic, which reached the highest point at the end.

### **Polls and monitors**

During the second half of 2020, CBS [M18] assessed adolescents’ and young adults’ mood during the Covid-19 crisis. Many young adults in particular (37%) experienced more low spirits than before the Covid-19 crisis. 20% of adolescents indicated this. On the contrary approximately one in twenty adolescents and young adults experienced fewer low feelings.

The figures of Nivel [M06] concerning care prevalence also showed a negative development of the mood of adolescents and young adults during the Covid-19 crisis. Most striking is the growing number of general practitioner visits per week of young people with depressive feelings, particularly young women. During the Covid-19 crisis 15 to 24 year olds visited a general practitioner for depressive feelings significantly more than before the crisis, especially in the first months of 2021 and 2022. However, these doctor visit figures remained higher than before the Covid-19 crisis, also after the relaxation. The number of general practitioner visits of younger adolescents and children changed hardly at all during and after the Covid-19 crisis. Another trend in the Nivel figures is the weekly number of 15 to 24 year olds who were prescribed antidepressants. This figure remained more or less the same in 2019 and 2020, but increased gradually afterwards. In 2021 and the first half of 2022 a growing number of adolescents and young adults were prescribed antidepressants [M05].

Nivel [M06] also found that more adolescents and young adults with suicidal feelings visited a general practitioner. This number was especially high at the end of 2021. It is also striking that the number of general practitioners' consultations for suicidal feelings was still high and increasing in the summer of 2022, after the relaxations. In addition to young adults' diminished moods and increased suicidal feelings the number of suicides also increased. In January, February and December 2021, when the country was in lockdown, the number of suicides among 20 to 30 year olds was higher than average. This appears in information of Foundation 113 suicide prevention [M09].

*The general trend seems to indicate that mood problems with children and young people, including depressive thoughts, increased during the pandemic compared to the period before the pandemic. However it is relevant to understand that research findings present a variable picture. Research into the course of low spirits during the whole pandemic showed that low spirits had decreased at the end of the pandemic in the at large population of children and young people, but had not yet returned to the level before the pandemic. In the group of children and young people with pre-existing mental complaints low spirits were at their worst at the end of the pandemic. We also know that a relatively large group of young people visited a general practitioner with depressive or suicidal feelings.*

## 2.2.5 Psychosomatic complaints

### Scientific literature

The results in the field of psychosomatic complaints, such as sleeping problems or stress, during the pandemic, are contradictory. Luijten et al [C01] stated that more children and adolescents had sleeping problems during the first lockdown (11.5%) compared to before the pandemic (6.1%). In a study by Van der Laan et al [C06, C07] however, adolescents reported better psychosomatic health during the first year of the pandemic compared to before the pandemic. According to Van de Groep et al [C32], at the start of the first lockdown adolescents reported lower stress levels than before the lockdown. A study by Van den Broek et al [C24] showed that adolescents experienced the same stress levels at home as another group of young people before the pandemic.

During the second lockdown adolescents did not suffer more sleeplessness than in the same period in 2016 and 2012, as seen in a cohort study by Van der Velden et al [C60]. The psychosomatic health of children and adolescents with chronic illnesses did not change during the second lockdown compared to before the pandemic, but it did remain worse than that of their healthy peers [C53].

On the other hand, Zijlmans et al [C52] showed that children and adolescents suffered more sleeping problems during the whole pandemic than before. These problems had not yet improved after the last relaxations in March 2022.

### **Polls and monitors**

At the end of 2020 CBS [M18] found that nearly one third of 18 to 25 year olds indicated experiencing more stress since the Covid-19 crisis, whereas 13% experienced less stress. Of the 12 to 18 year olds, 20% suffered more stress and 11% less stress.

Nivel prevalence figures [M06] regarding young people's visits to general practitioners showed that fewer young people visited a general practitioner with serious stress or crisis complaints during the first lockdown in 2020. In the first months of 2021 the number of visits to general practitioners of 15 to 24 year olds was slightly higher than in early 2020. It seems however as if adolescents and young adults went to see a general practitioner less often with sleeping problems.

*Studies presented a varying picture of the development of psychosomatic complaints, but generally did not show a change for the worse during the first year of the Covid-19 crisis. Little is known about the last period of the pandemic. There is only slight evidence of an increase of sleeping problems of children and young people.*

## **2.3 Externalising problems**

The indication *externalising problems* refer to behaviour demonstrated by the child to express emotions. Such as lack of attention, aggression, rebellion, provocation, hyperactivity and behavioural problems. This behaviour may be considered disruptive by the child's environment [009].

### **Scientific literature**

In a study by Achterberg et al [C34] parents reported a slight decrease in externalising behaviour of their children (10 to 13 years old) during the first lockdown (March/April 2020) compared to earlier years. However, this decrease, that had already began in 2016, proved to be less robust during the pandemic than in the years before. Contrarily, Stevens et al [C47] reported a slight increase in behavioural problems and hyperactivity and attention deficit in adolescents during the first year of the pandemic.

Bouter et al [C63] studied the level of provocative behaviour among adolescents during the Covid-19 crisis. Adolescents were required to fill out a questionnaire at various times. Provocative behaviour did not change significantly between the first lockdown (April/May 2020) and the period before. Neither did the behaviour change significantly between the first and second lockdown (January 2021). However, there were differences between research groups. Adolescents from this study, who already suffered clinical complaints, experienced a decrease in provocative behaviour during the first lockdown. This decrease stagnated during the second lockdown. Adolescents without clinical complaints before the crisis reported a slightly higher level of behavioural problems during the first lockdown. This did not increase further during the second lockdown. The number of adolescents suffering clinical behavioural problems slightly grew during the first lockdown and then decreased during the second one.

De Maat et al [C69] found an increase in behavioural problems of children during the second lockdown compared to the measurement in 2019. Children from the population at large suffered a slight increase in behavioural problems, children with autism showed a stable mean. However, there were considerable differences between children, particularly in the autism group. Some children showed considerably fewer behavioural problems during the pandemic, others however much more.

Based on parents' reports Zijlmans et al [C52] found no differences in the levels of externalising behaviour of children and adolescents in several measurements before and during the pandemic. The researchers also looked at children and adolescents with mental problems already before the Covid-19 crisis. No information was available from before the pandemic, but during the pandemic no changes were found in this group's level of externalising behaviour.

### **Polls and monitors**

Periodical polls by Utrecht University [M17] showed no significant differences in behavioural problems among vocational students at three moments: autumn 2019, spring 2020 and autumn 2020. However, Hyperactivity did increase. In 2019 29% of students said they suffered from hyperactivity. In the spring of 2020 this rose to 36% and in autumn to 39%.

Periodical polls by the University of Amsterdam [M16] also showed that parents noticed little difference in their child's (6 to 17 years old) behavioural problems and hyperactivity between the home education period and the time when schools reopened.

HBSC figures of 2021 [M25] demonstrated that the level of behavioural problems did not change with boys during the Covid-19 crisis compared to before. Girls in primary education showed an increase of behavioural problems from 10.7% in 2017 to 16.4% in 2021. With girls in secondary education behavioural problems increased from 12.3% in 2017 to 18.7% in 2021.

*Externalising behaviour among youth does not seem to have increased substantially during the Covid-19 crisis. Most studies reported no major enduring changes among children and young people over the whole period of the pandemic. There was however much variety in the level of change per young person.*

## 2.4 Protective and risk factors

Several studies mapped the protective and risk factors of mental wellbeing during the Covid-19 crisis. We opt in favour of presenting protective and risk factors in combination, since they are often hard to separate. For instance: connecting with friends helps and is a protective factor, loss of connection is a risk factor. We present the factors in four categories: personal factors, friends, parents and family, and adversity due to Covid-19.

### Personal factors

- *The higher their age*, the more children suffered internalising problems during the lockdowns [C02, C20, C36]
- *Boys* had better psychosomatic health than girls, both during the first and second lockdown [C06].
- The average life satisfaction of *boys* deteriorated more than that of girls during the first lockdown, but life satisfaction of girls remained lower [C06].
- Among secondary school pupils, *girls* experienced more negative feelings than boys during the second lockdown. They also worried more and had a lower feeling of happiness [C23].
- The percentage of *girls* with emotional problems increased from 28% to 43% between 2018 and 2021. Boys also showed an increase, but less severe [M25].
- Children and adolescents with *mental problems* were worse off in all aspects of mental and social health during the first lockdown. The group with chronic physical illnesses were best off in this area and the group from the population at large was situated in between [C02].
- Children and adolescents with *chronic illnesses* showed lower life satisfaction compared to their healthy peers. This may have already been the case before the pandemic [C53].
- The presence of internalising problems among children and adolescents with *chronic illnesses* did not change during the pandemic compared to before the pandemic [C53].
- Children with *better executive functions* (skills assisting in planning, organising and executing tasks) showed a more positive development of life satisfaction during the pandemic [C36].
- Children and adolescents with higher levels of *self-regulation* experienced less negative impact on their life satisfaction and fewer internalising problems during the first lockdown [C20].
- Adolescents with *stronger executive functions* were more satisfied with their lives during the first and second lockdown and during the reopening period in the spring of 2021 [C33].
- In later phases of the pandemic adolescents with *better executive functions* scored higher on positive mood and lower on negative mood, when compared to adolescents with relatively poorer executive functions [C36].
- Children living in the *north of the Netherlands* were less depressed during the first lockdown [C02].

### Friends

- Adolescents who felt more *connection with their friends* suffered less from internalising problems during the lockdowns [C06, C09, M17].
- Children who felt less *connected with their friends* were more prone to mood swings and internalising problems during the first lockdown [C59].
- Adolescents and young adults (10 to 25 years old) were happier during the first lockdown, if they were able to *help others outside their family* [C38].



- Children in form eight who had experienced much *support from friends* before the pandemic, experienced fewer internalising problems during the pandemic [C09].
- Children who offered more *support to friends* reported a higher level of life happiness during the first lockdown [C38].
- *Longing for more contact with friends* correlated with more depressive thoughts and more social anxiety with *girls* during the first lockdown [C51].

### Parents and families

- Children in *single-parent families* or *families with three or more children* had more mental health complaints during the first lockdown [C01].
- Children in *single-parent families* suffered lower general health and more anxiety during the first lockdown [C02].
- Children from *large families (three or more children)* felt more anger during the first phase of the pandemic [C02].
- *Stress in the family and inequality in opportunities for home education, financial worries and emotional abuse* were linked to adolescents' mood during the lockdowns. The more adolescents were exposed to these, the more fluctuations they showed [C33].
- Children and adolescents who scored higher on *interaction with their mother* and *responsiveness of parents* experienced a less negative impact on life satisfaction and internalising problems during the first lockdown [C20].



- *Negative impact of Covid-19 measures on mental problems of parents* were connected with more anxiety complaints and more anger in young children (1 to 6) [C42].
- Children and adolescents with a *depressed parent* experienced more negative impact on their life satisfaction and more internalising problems during the first lockdown [C20].
- *Mental wellbeing of parents* did not relate to the level of emotional problems and behavioural problems of children with autism during the lockdown [C69].

### **Adversity due to Covid-19**

- *A negative change of family situation*, for instance dismissal of one of the parents, related to more mental problems [C02].
- *A negative change in the work situation of parents* related to more anxiety, depression, anger and sleeping problems with children and adolescents from the population at large [C02].
- Adolescents who were confronted more with *adversity in the household and in the socio-economic field* at the outset of the pandemic, had a more negative mood (e.g. feelings of stress and depression). At a later stage of the pandemic they were also less satisfied with their lives [C36].
- *Knowing someone who had lived through a Covid-19 infection* related to less social anxiety [C51] and fewer depressive thoughts [C51].
- *Covid-19-related stress* (such as fearing that a family member will fall ill) forecast internalising problems [C09].
- Decreasing life satisfaction related to *worries about the social consequences of Covid-19* [C06].
- *Children who experienced more stress during the first lockdown* suffered more externalising behaviour [C34].
- *Children who experienced more stress during the first lockdown* showed more negative coping strategies [C34].
- Both adolescents and young adults who *stayed at home more during the lockdown* experienced less life happiness [C38].
- Parents who reported more *negative impact of the Covid-19 pandemic* also observed more sleeping problems of their young child (1 to 6). Parents reporting more positive impact also reported fewer sleeping problems [C42].
- *Stricter measures* were connected with lower life satisfaction, more internalising problems and worse psychosomatic health, both with children and adolescents with chronic illnesses as with their healthy peers [C53].

## 3. Social environment

For a better understanding of the development of mental wellbeing of youth during the Covid-19 crisis, we also look at changes in the world around them. It is known that the environment of young people has impact on their development and their mental wellbeing [O10, O11].

**We will focus on several environmental factors:**

- Family
- Peers
- School
- Leisure and lifestyle
- Perspective
- Covid-19 measures

### 3.1 Family

What happened in families during the Covid-19 crisis? Children were schooled online during the pandemic and did their homework at home. The majority of parents worked from home. This meant the whole family was at home and parents needed to combine their work with overseeing their children's schoolwork. Parents who did go to work struggled with the care for their children. Moreover, not all parents felt suitably equipped to support their children's schoolwork. Several studies looked at what changed at home in families during the Covid-19 crisis. They looked at the ambiance and the support experienced in families, parents' feelings of stress, parenting styles, and also the degree to which child abuse occurred.

#### 3.1.1 Ambiance and support in the family

##### Scientific literature

Adolescents and their parents indicated that they spent more time together during the first lockdown than before the pandemic [C61]. Eighth grade pupils reported fewer negative interactions with their parents during the first lockdown than before the pandemic [C12]. In a study by Achterberg et al [C34] both 10 to 13 year old children and their parents reported that they spent more time together and 41% of the children reported that their parents paid more attention to them.

On the contrary, children and adolescents (8 to 18) during the first lockdown indicated that the ambiance at home had on average worsened slightly compared to the period before Covid-19 [C01]. Children in eighth grade reported that they received less support from their parents than before the

pandemic [C12] and parents themselves reported less positive parenthood [C12]. Parents of 10 to 13 year old children experienced more negative feelings during the first lockdown compared to previous years, primarily because of increased stress levels [C34].

Bakx et al [C14, C15] reported on the level of stress experienced by parents during the first lockdown. In primary education the group of parents who experienced more stress during the first lockdown was larger than the group who experienced less stress [C14]. In secondary education the division was the other way around. [C15]. According to parents more stress occurred primarily due to the combination of working from home and assisting distance learning. Less stress occurred primarily because parents themselves had more leisure time and fewer obligations [C14, C15]. Later on in the pandemic, between the first and second lockdown, adolescents in the Rotterdam region reported that family stress decreased, but also that emotional neglect increased [C33].

At the end of the first lockdown, when children took turns going to school with half of their class, Klootwijk et al [C57] researched how much support children received from their parents and how many conflicts they had. There was no difference between schooldays and home education days. In the period that they went back to school more often, children reported that they received growing support from their parents. In vocational education, students with lower socio-economic status perceived less support from their parents, and this difference increased between a measurement before the pandemic and a measurement at the start of the first reopening phase. The average support that vocational students received from their parents diminished slightly [C18].

When looking at changes in parents' parenting style, adolescents and their parents reported that when the first lockdown started, parents allowed less space to develop autonomy and set more rules at home [C61]. The initial reaction in parents' behaviour seemed to be a reinforcement of the behaviour they already used to show. Families which already greatly supported autonomy before the pandemic, reported an increase (or a smaller than average decrease) at the start of the first lockdown; parents in families with much psychological control before the pandemic, reported a stronger increase and the same goes for parents in families with much supervision of behaviour before the pandemic. As the first lockdown continued, parents indicated that they showed less supervision on behaviour and offered more support for their child's autonomy [C61].

Burgard et al [C21] also studied various parenting styles during the pandemic using questionnaires for secondary school pupils and their parents. Two styles of parenting appeared to lead to a strongly felt impact of the Covid-19 crisis, the authoritarian parenting style (in short: the parent is in charge, the child has to obey) and the neglectful parenting style (in short: parents present few rules and little security and support; the child has to sort it out himself). Two other ways of parenting even led to a slighter impact of the Covid-19 crisis among adolescents. Those are the democratic parenting style (in short: parents set out the rules but at the same time have an eye for the wishes and needs of their child) and the permissive (yielding) parenting style (in short: parents pay much attention to the wishes and needs of their child and try to submit to them).

### **Polls and monitors**

Researchers of the University of Amsterdam [M16] looked at the experiences of parents with children from 6 to 11 years old and adolescents from 12 to 17, during the first lockdown and the period after the first lockdown in the summer of 2020. Parents of children between 6 and 17 years old indicated a higher level of problems in the relation between parent and child during the lockdown compared to the period after the lockdown. Especially parents of younger children (6 to 11) felt that problems diminished after the lockdown. Use of physical punishment also declined. Parents also indicated that they experienced higher levels of stress and depressive feelings during the period when their children were educated at home.

*Although there were signs of improved ambiance in families in the early days of the lockdown, the overall picture is that the ambiance in Dutch families worsened during the first lockdown. Children experienced less support from their parents. This effect varied between families, for instance due to the parenting style applied.*



### 3.1.2 Child abuse

#### Scientific literature

During the Covid-19 pandemic two large prevalence studies were conducted into child abuse. During the first lockdown Vermeulen et al [C19] estimated on the basis of this informants survey that approximately 14 out of 1,000 children were abused or neglected emotionally, physically, sexually or otherwise. The number of children who were suspected of being emotionally neglected (including neglecting education and witnessing domestic violence), was higher than during an inquiry of the same informants group in 2017. Informants also indicated that they had suspicions about more children than they had registered. They also stated there were children about whom they had already worried before, but with whom they had lost touch during the lockdown. It concerns an estimated additional 19,000 children, or six out of every 1,000.

For half of the children the informants indicated that the concerns about the child had not started during the lockdown, but had worsened during the lockdown. Families in which child abuse took place relatively more often during the lockdown, had a number of characteristics in common:

- lower educational levels of parents;
- unemployed parents;
- families with four or more children.

Characteristics that did not lead to a higher risk were:

- migration background;
- single-parent families or stepfamilies;
- child's gender;
- child's age.

During the second lockdown, based on a new informants survey, Vermeulen et al [C68] estimated that 12 out of every 1.000 children in the Netherlands experienced abuse. As the estimates have a broad margin of uncertainty, this figure was not significantly lower than the estimate during the first lockdown. Again, during the second lockdown informants indicated that they suspected child abuse for more children than they had registered. For nearly half (46%) of the children their worries existed already before the lockdown and the situation had worsened. For 37% of children the worries existing before lockdown had remained identical. One tenth of suspicions had started during lockdown and 3% after the reopening of schools and child day care centres.



### **Polls and monitors**

CBS [M19] keeps count of the number of counsels given by Veilig Thuis (Safe Home) and the number of reports received in cases of child abuse. The number of counsels was higher in 2020 and 2021 than in 2019. Especially the number of requests for counsel by citizens increased. However the number of reports of child abuse by professionals and citizens decreased. The police in particular reported fewer cases in 2020 and 2021. Reports and counsels by Veilig Thuis do not necessarily say anything about the actual child abuse in families. It could also be that citizens and professionals conclude that something is child abuse or that they ask for assistance sooner.

*The estimated number of children experiencing child abuse was higher during both the first and second lockdown than before the Covid-19 crisis.*

## **3.2 Peers**

The Covid-19 measures allowed fewer opportunities for young people to meet face to face with peers. Therefore several studies looked into the way contact with peers developed during the Covid-19 crisis. They looked in particular at how young people experienced contact with peers compared to before the pandemic.

### **Scientific literature**

A study by Luijten et al [C01] found that almost all children (90%) felt that measures had negatively affected them. They mentioned especially that they could not go to school and missed contact with their peers. Children and young people missing their classmates and friends emerges from several studies [C02, C09, C51, C14, C15, C51, C59]. They did have online contacts but enjoyed those less [C59].

Pupils in eighth grade indicated during the first lockdown that they received less support from their friends and gave less support to their friends than before the pandemic [C09]. In studies by Bakx et al [C14, C15] during the first lockdown, parents of children in primary and secondary education stated that children felt less connected with their classmates. In a study by Sweijen et al [C37] children and young people themselves reported that they gave more prosocial support to their friends during the second lockdown in November 2020 than during the first lockdown in May 2020. Daily prosocial support to friends predicted giving support to others, such as a Covid-19 patient or someone in poor health. The researchers stated that this confirmed that social experiences of adolescents promoted their giving support to others who needed it during the pandemic.

In a study among vocational students Stevens et al [C47] found that adolescents had slightly more problems with peers during the first and second lockdown than before the pandemic. Klootwijk et al [C57] studied the amount of support secondary school pupils received from their friends and how many conflicts they had. This took place at the end of the first lockdown, when schools reopened and adolescents went to school half of the schooldays. The researchers did not find any differences in

social support and social conflicts between the days adolescents actually went to school and when they were taught online. They did find an improvement (fewer conflicts and more support) during the duration of the study.

Zijlmans et al [C52] asked a group of 8 to 18 year olds to assess their relationships with peers at five moments before and during the pandemic. Relations with peers were best before the pandemic and worst during the first lockdown in March/April 2020, when schools were closed. At the time of the last measurement, in March/April 2022, when most measures had been relaxed again, children and adolescents assessed their relations with friends similar to before the pandemic. There were no visible differences between boys and girls. Pinkse-Schepers et al [C51] found that longing for more contact with friends during the first lockdown coincided with more depressive thoughts and more social anxiety only for girls.

### **Polls and monitors**

Leiden University [M12] found that children and adolescents (8 to 18 years old) were most affected socially between June 2020 and January 2021. The researchers asked children and adolescents how they felt specific themes developed during the Covid-19 period. The themes mentioned most often were a worsening in 'contacts with others than parents' (62%) and 'talking with friends' (49%). In October 2020 SCP [M14] asked young adults (16 to 29 years old) how much they missed small gatherings. More than 60% indicated that they missed these badly.

Findings from a poll by CBS [M15] are in keeping with this. A large part of adolescents and young adults indicated that they experienced a negative impact of the Covid-19 crisis during the first months of 2021. Adolescents said this was mostly because of barriers to contact with friends. Half of the 12 to 18 year olds and two-thirds of the 18 to 25 year olds named missing seeing friends at home very much. Two-thirds of the adolescents and young adults indicated that they missed face-to-face contacts with people outside of their household moderately to very much.

*In conclusion we can say that children, adolescents and young adults missed their friends during the lockdowns. They received less support from their friends, gave less support themselves, had more conflicts and felt less connected with them. As the measures relaxed, the quality of relations with peers improved again. Most likely because they were again able to meet each other face to face more frequently.*

### 3.3 School

Some studies emphasised the way children experienced their school period during the Covid-19 crisis. They focused on school motivation and psychological educational needs. Studies into developmental delays have not been taken into consideration in this survey.

#### Scientific literature

Primary school pupils' parents reported that their child's school motivation had declined during online education. This effect was stronger for girls than for boys, diminishing the already existing difference in school motivation between boys and girls [C14]. Secondary school pupils reported lower school motivation during the first lockdown's online education period than in the period of face-to-face teaching after the first lockdown [C57].

Parents of secondary school pupils also indicated that their child's motivation during online education was lower than during face-to-face teaching before the lockdown [C13, C15].

To what extent was online education during the first lockdown able to satisfy the (psychological) education needs of pupils? According to a study by Achterberg et al [C34] two-thirds of children between 10 and 13 years old indicated that they missed their classmates during the first lockdown. And 60% indicated they missed school activities.

Parents said that children's need to feel connected with teachers and classmates was satisfied less, both among primary and secondary school pupils [C13, C14, C15]. This appeared to be primarily the case for children in primary education with behavioural disturbances [C14] and for children in secondary education with learning disabilities [C15]. The level to which the need for autonomy and



competency of secondary school pupils was met with, was less on average during online education than before the lockdown, according to parents. This linked to diminished school motivation [C13]. Parents with a child in primary education felt that the level to which their child's need for autonomy and competency was met with, was similar during the first lockdown and before the pandemic [C14]. For highly gifted children and children with autism or ADHD, satisfaction of their needs, motivation and wellbeing did not diminish, and sometimes even increased.

### **Polls and monitors**

Following the closure of schools, ResearchNed and the Interstedelijk Studenten Overleg (Dutch National Student Association) [M26] assessed the experiences with home education of students in higher and university education. More than eleven thousand students filled out a questionnaire just before the 2020 Christmas holiday. It showed that the more students followed online education, the more problems they experienced in the field of concentration and motivation. Nearly half of the students who had completely followed online education indicated they were hardly ever or never strongly motivated to pursue their studies during the Covid-19 crisis. Interaction with fellow students and professors was also missed during the Covid-19 crisis. This was the aspect of online education that students found least positive. In university education 72% felt that interaction with fellow students was poor and 42% felt interaction with professors was poor. Students' opinions varied on the quality of knowledge transfer. One third of higher education students felt that the quality of knowledge transfer was bad during the online education period. Just as many higher education students felt positive about the transfer of knowledge.

CBS (2021) [M15] sounded the level of stress caused by school or studies among 12 to 25 year olds. When asked whether school stress had changed during the Covid-19 crisis, almost half of the 12 to 25 year olds indicated that stress occurred more often than before the crisis. However, 18% said that stress had decreased. Especially pupils in higher general secondary education and students in intermediate vocational education and higher professional education indicated that school or study stress had increased. Utrecht University [M17] also found an increase of study pressure among intermediate vocational students. In the autumn of 2019 one-fifth of students experienced serious study pressure. In the autumn of 2020, during the school closure, this was 37%.

The HBSC-report [M25] also shows that the school pressure experienced by girls increased in 2020 and 2021, but this is in line with developments in previous years. School appreciation of both girls and boys further decreased in these years. School appreciation has been decreasing since 2013 already.

*Both in primary education and secondary education and higher education there were clear indications that school motivation and connection with classmates and fellow students decreased during school closure. Contacts with classmates and teachers was sorely missed. In addition, a number of polls showed that school and study stress increased during the Covid-19 crisis.*

### 3.4 Leisure and lifestyle

The restrictions experienced by children, adolescents and young adults during the Covid-19 crisis partly related to leisure time activities, because sports venues, cultural and recreational locations were closed, events were cancelled and gathering in groups was restricted.

#### Scientific literature

In the study by Luijten et al [CO1] children and adolescents between 8 and 18 indicated that they missed playing sports and doing fun things during the first lockdown. Achterberg et al [C34] found that 79% of children between 10 and 14 years old said they experienced more leisure time during the first lockdown. However, 69% of these children indicated they were bored.

Research among secondary school pupils showed they had fewer physical activities during the first lockdown than before Covid-19. They ate slightly less healthy. They smoked as much during the lockdown as before the pandemic [C24]. Among university students binge drinking decreased and the use of cannabis grew. The number of students who smoked remained the same. The use of cannabis increased especially among male students, students not living with their parents, students in the bachelor phase of their studies and students with a student loan [C65].

#### Polls and monitors

Regular polls took place into the leisure time activities of children, adolescents and young adults. This showed that young people missed out on a lot during the Covid-19 crisis. In an inquiry by CBS [M15] many adolescents and young adults stated they missed outdoor activities due to the crisis. This was indicated by almost three quarters of 18 to 25 year olds and 58% of 12 to 18 year olds. Large events and sports or hobby activities in clubs were also missed, by 48% of young adults and 38% of adolescents. In general, young adults missed these activities more than adolescents did.

At the same time, in some polls children and adolescents mentioned that they experienced more leisure time during the first lockdown. In the Children's Ombudsman study [M20] for instance more than half of 8 to 18 year olds indicated this. In a University of Leiden poll [M12] among 8 to 18 year olds, 28% said they experienced more leisure time due to the Covid-19 crisis. 59% saw no changes compared to before the Covid-19 crisis and 12% experienced a change for the worse.

The GGD health monitor showed a decline in sports and exercise among children, adolescents and young adults. At the same time, adolescents spent more time gaming and made more use of social media. The share of adolescents at risk of problematic gaming and social media use also increased between 2019 and 2021 [M01].

The CBS Health Monitor [M21] also indicated that adolescents and young adults had less exercise during the Covid-19 crisis. The percentage of 12 to 18 year olds that met the criteria for exercise established by the Health Council of the Netherlands (Gezondheidsraad) decreased from 41 to 36%. Among 18 to 35 year olds it went from 56 to 50%.



For years already the Dutch National Olympic Committee/Dutch Sports Federation (NOC\*NSF) has monitored sports participation per age group on a monthly basis. These figures show that participation in sports decreased strongly among children and adolescents. In February 2020 more than 80% of 5 to 12 year olds participated in sports every week, whereas in April 2020 this decreased to less than 40%. Sports participation also decreased among 13 to 18 year olds, from 74% to 60%. It remained more or less the same among 18 to 30 year olds. At the beginning and end of 2021, when the country was in lockdown again, there was another strong decrease among children, adolescents and young adults. In June 2022 sports participation among children and adolescents appeared to be at the level of June 2019 again. Although the percentage among 19 to 30 year olds was still slightly lower, 64% compared to 69% [M22].

*In short we saw that children and young people during the lockdown clearly spent their leisure time in a different way from before the lockdown. A straight consequence of the Covid-19 measures, due to closing sports and entertainment venues. They had more leisure time, felt bored more often, had less exercise, played less sports and made more use of computer games and social media.*



### 3.5 Perspective

Would the huge changes in society caused by the Covid-19 crisis change the perspective on the future of children, adolescents and young adults? Some studies focused on this question and looked at how adolescents and young adults viewed their future during the Covid-19 crisis.

#### Scientific literature

During the first lockdown, Heskens et al [C48] talked with young adults (16 to 24 year olds) about their views on Covid-19 and what the pandemic meant for their future. At that time those adolescents and young adults did not feel that the pandemic would impact on their education, career or relationship in the long run. During the first lockdown they were optimistic, able to focus on the good things and convinced that they could continue their lives after the pandemic. They did feel their lives were on hold. Their idea that the pandemic was temporary did help. The young people were quite able to distinguish between the pandemic's impact on their own lives and on society at large.

Fakkel et al [C18] found that adolescents's trust in the future and feeling of control remained stable between before Covid-19 until the first lockdown. Young people with diminishing sense of control during the pandemic, gained more confidence for the future, and vice versa.

Parental support linked to the way adolescents envisaged their perspectives. Adolescents who already received more support from their parents before Covid-19, declined more in perspective during the pandemic than adolescents who received less parental support before Covid-19. It was especially the change in parental support during the pandemic that mattered. Adolescents who started to experience more support from their parents than they had been used to before, gained more confidence for the future. In addition, adolescents who reported more negative Covid-19 experiences, felt less confident of the future [C18].

Van Loon et al [C46] studied adolescents' worries during the second lockdown. They were most worried about their educational delays and the lack of social activities. Adolescents worried least about money, but those worries did increase during the second lockdown. Adolescents who already had more stress, worse coping and internalising problems before the pandemic, worried more.



### **Polls and monitors**

The findings above were confirmed by a poll conducted by EenVandaag [M23] among adolescents and young adults (16 to 24 year olds). The largest share (three quarters) of respondents felt positive about the future. However, 35% had begun to change their ideas about their (outline of the) future.

In a poll among vocational students during the second lockdown in the autumn of 2020, Utrecht University [M17] found that the percentage of adolescents feeling positive about the future was lower than during the first lockdown. It decreased from 82% to 78%. Before the Covid-19 crisis, in the autumn of 2019, 87% of vocational students indicated feeling positive about the future.

*Research findings showed that adolescents and young adults did not change their perspective on the future at first and as a rule remained positive. Later, during the second lockdown, worries seemed to increase and their confidence in the future possibly diminished.*

## **3.6 Perception and observance of Covid-19 measures**

Covid-19 measures made a huge change in adolescents' and young adults' daily activities, since they have more connections outside the family than any other age group. While they were least at risk of becoming seriously ill by the virus. A number of studies researched the way young people perceived the measures, and their willingness to observe them.

### **Scientific literature**

When looking at the observance of Covid-19 measures, Rozendaal et al [C35] found that adolescents (aged 10 to 18) and young adults (aged 17 to 25) from the Rotterdam region focused strongly on their peers during the first lockdown, more than on media coverage. The more adolescents and young adults felt other young people kept to the required 1,5 metres distancing, the more they kept their distance themselves. Students in whom the social media messages raised more negative feelings, kept less at a distance as they followed the media more. Adolescents, but not young adults, kept their distance less carefully as time passed.

De Leeuw et al [C38] studied the level of happiness in relation to Covid-19 measures with the same adolescents and young adults. They found that the level of happiness of adolescents and young adults did not diminish if they kept their distance, but did when they stayed at home more often.

During the second lockdown, Te Brinke et al [C39] questioned a group existing primarily of women of various ages (16 to 50, average 23 years old). To a large extent (84%) they were willing to be vaccinated. If a Covid-19 passport were to be introduced, they would not try to gain more latitude for themselves, for instance by forging a passport or intentionally searching a Covid-19 contamination. The willingness to keep a distance and to test when suffering complaints, diminished as the degree of vaccination increased. Many respondents (62%) felt their opinion was important during the crisis. One third felt a need to let their own voice be heard and only a small part (5%) felt that young people's voice was taken into account when making policy decisions.



In June 2021 RIVM [C70] studied the willingness to be vaccinated among adolescents (12 to 18). Around three quarters of respondents said they were willing to be vaccinated. Adolescents refusing to be vaccinated, mainly did so due to unfamiliarity with the vaccine and possible (long term) side effects.

### **Polls and monitors**

A poll by Leiden University [M12] among children and adolescents between 8 and 18 showed that during the second lockdown especially adolescents had a feeling that they were not being heard by the government. A small part of adolescents however indicated that government should not involve children and young people.

During the second lockdown, with a curfew, Erasmus University [M13] studied the way students felt about the measures. More than 65% of students did not support the measures. It was felt to be particularly unnecessary to close amateur sports facilities after 5pm. Also, students indicated they would like to have their voices heard and to be involved in decision making, while at the same time feeling that young people's opinions were hardly taken into account in decision making.

*In conclusion, we can say that young people were willing to keep to the measures, as long as the vaccination level was low and their peers also kept to the measures. Young people felt insufficiently heard in decision making about changing measures, especially during the second lockdown. This also impacted on their willingness to keep to the measures.*

## 4. Lessons learnt

This report aims to provide an insight into the mental wellbeing of Dutch children and young people during the Covid-19 pandemic (2020 – 2022). Various domains of mental wellbeing are dealt with, such as quality of life, depressive feelings, anxiety and psychosomatic symptoms. We also focused on what happened in the social environment of children and young people, for instance in families, among peers, in their leisure time and at school.

This report is the result of cooperation between a large group of Dutch university researchers and knowledge organisations and fourteen young people. The researchers combined all their studies into mental wellbeing during the Covid-19 crisis. The Netherlands Youth Institute (Nji) was the point of assembly for all studies. The young people came from the Mental Health Panel of the national Youth Council (NJR), the children's advisory group of Foundation Alexander and the youth panel of the Netherlands Youth Institute (Nji).

During a working conference, researchers and young people jointly started to assess the findings from all the studies. At several tables and in plenary reflections, lessons for the future were formulated. These lessons are intended for all (youth) policy makers and all people interested in (youth) policy.

### 4.1 What happened to Dutch youth's mental wellbeing during the Covid-19 crisis?

#### **The quality of life experienced seem to diminish for a while**

Research findings indicate a (slight) negative course of life satisfaction and life happiness. This negative trend seemed to be stronger during the second lockdown than during the first one. Other factors besides the Covid-19 crisis might also play a part, such as increasing pressure to achieve and stress or worries due to the climate crisis.

#### **Internalising problems seemed to get worse, but is this caused by the Covid-19 crisis?**

The picture around internalising problems (a child's emotions directed inwardly) during the Covid-19 crisis varies. Generally the trend seems to point towards an increase of internalising problems of children and young people during the pandemic compared to the period before the pandemic. This was certainly the case with children and young people with already existing mental problems. Young

people growing up in less favourable environments also seemed to report a stronger increase of internalising problems. During the last phase of the pandemic the internalising problems seemed to stabilise. Studies involving both youth and parents, showed a discrepancy between the ideas of young people themselves regarding internalising problems and the way in which parents perceived the internalising problems of their child. There are no clear indications that the Covid-19 crisis is the cause of the increase in internalising problems. Researchers point out that this trend had already started before the pandemic.

### **Feeling connected helped against internalising problems**

Children and adolescents who felt more connected with their friends during the pandemic, suffered fewer internalising problems. Children who had experienced much support from their friends before the pandemic, also suffered fewer internalising problems.

Children were happier during the pandemic when they could help their friends. Adolescents and young adults were happier when they could offer support to people other than their families and friends.

### **Feelings of anxiety seemed to increase during the first and second lockdown**

Initially feelings of anxiety among children and young people seemed to increase and then decrease during the course of the pandemic. Despite this decreasing trend the anxiety complaints were still worse at the end of the pandemic than before the pandemic. Children and young people who already had mental problems before the Covid-19 crisis, seemed to suffer an increase of their anxiety complaints during the whole pandemic.

### **Especially monitors and polls showed increasing loneliness**

Several polls and monitors showed signs that loneliness among children, adolescents and young adults increased, especially during the second and third lockdown.

### **Children and young people reported higher levels of depressive feelings**

The general trend seems to be that children's and young people's mood problems, including depressive thoughts, increased during the pandemic compared to the period before the pandemic. However, it is relevant to understand that the research findings provided a mixed picture. Research into the course of low spirits during the whole pandemic showed that at the end of the pandemic low spirits had decreased in the children's and young people's population at large, but had not yet returned to the level before the pandemic. Low spirits were at their worst at the end of the pandemic in the group of children and young people with existing mental problems. We also know that in 2022 relatively many young people still visited general practitioners with depressive or suicidal feelings.

### **We know little about psychosomatic complaints**

Studies presented varying images of the development of psychosomatic complaints, but overall did not show a worsening in the first year of the Covid-19 crisis. As yet, there is little information about the final period of the pandemic. There is only inconclusive evidence of an increase of sleeping problems of children and young people.

### **No changes in externalising behaviour**

Externalising behaviour (behaviour to demonstrate emotions outwardly) among young people does not seem to have increased substantially during the Covid-19 crisis. Most studies reported no large, permanent changes among children and young people. However, the level of change per young person did vary quite a lot.

### **Not all children, adolescents and young adults react the same**

Many studies found differences between groups of children and young people in the way their mental wellbeing changed during the pandemic. Older children and young people were more affected than younger children, girls more than boys and children with weaker executive functions (skills helping to plan, organise and execute tasks) were more affected than children with stronger executive skills. Family composition and parenting styles also made a difference. And mental wellbeing of children decreased more severely when they had suffered adversity during the pandemic and when they had experienced much stress. In addition to these differences between groups of children, substantial variety also occurred between individual children. For instance, we found substantial differences between children in studies into behavioural problems of children with autism.



## 4.2 What happened to the social context of children and young people during the Covid-19 crisis?

### **Initially positive, but later more negative signs regarding family ambiance**

Although the signs showed an improved ambiance in families at the very outset of the lockdown, the predominant image is that ambiance in Dutch families worsened during the first lockdown. Children experienced less support from their parents. This varied between families, for instance depending on parenting style. It is alarming that the estimated number of children experiencing child abuse, both during the first and second lockdown, was higher than before the Covid-19 crisis.

### **Social contacts with peers was sorely missed**

Children, adolescents and young adults missed their friends during the lockdowns. They received less support from their friends, provided less support themselves, had more conflicts and felt less connected with them. As the measures relaxed, the quality of relationships with peers increased again. Most likely because they could meet face-to-face again more often.

### **Closure of schools was harmful for connection with peers and school motivation**

Both in primary and secondary education and higher education there were clear indications that school motivation and connection with classmates and fellow students decreased during school closures. Contacts with classmates and teachers was sorely missed. In addition, a number of polls showed that school and study stress increased during the Covid-19 crisis.

### **Leisure time activities changed during the Covid-19 pandemic**

Children and adolescents clearly spent their leisure time in different ways during the lockdown than before the lockdown. A logical consequence of the Covid-19 measures imposed, such as closing sports and relaxation facilities. Children and adolescents had more free time, were bored more often, had less exercise, played less sports and made more use of computer games and social media.

### **Few worries about the future initially, more later**

Research findings showed that adolescents and young adults at first did not look differently to the future and remained largely positive. Later, during the second lockdown, their worries seemed to increase slightly and their confidence in the future possibly diminished.

### **Whether young people complied with the measures depended on the situation**

In general, young people were prepared to comply with the Covid-19 measures, while the vaccination levels were low and their peers also complied with the measures. Young people felt insufficiently heard in decisions concerning changing of the measures, particularly during the second lockdown. This also impacted on their willingness to comply with the measures.



## 4.3 Lessons learnt for policy and practice

### 1. Attach as much importance to mental health as to physical health

Both the working conference and this report's results emphasize that the importance of young people's mental health needs to be weighed against the acute health effects of the Covid-19 virus. Young people participating in the working conference emphasized that they had suffered more seriously from the measures than from the virus itself. They pointed out that mental health should in all circumstances weigh as much as physical health. Not just in a crisis, but at all times.

### 2. Always choose a tailor-made approach

Of course, it is obvious that children and young people from 0 to 23 do not form one group. Still, the studies teach us that we should look more closely into the various factors that could cause vulnerability. It was clear for instance that young adults in particular suffered relatively much from the lack of contacts with their peers, because their healthy development depends more on this than for instance younger children's. We also saw that family composition and family situation affect the consequences of the pandemic on children and adolescents' mental wellbeing.

During the working conference young people indicated that it is important to take these mutual differences into consideration. They called for a tailor-made approach. On the one hand, a tailor-made approach for adolescents compared to adults or elderly people. But also, a tailor-made approach between children and adolescents themselves, because they are not alike. For instance: during online-education not all pupils had the digital means and a quiet place to learn at home, or some pupils lacked the skills to keep their





concentration before the screen. And when various institutions to support young people closed, young people with (mental) help questions could no longer find help. One of the young people at the working conference stated: 'It makes sense that things go wrong then, doesn't it?'

### **3. Crisis or not, invest in the community based context**

The community based context within which children, adolescents and young adults grow up, fell away to a large extent during the Covid-19 crisis. This community based context is shaped by mutual contacts between people, their social relationships and the connection with what is available in their environments [O11]. But the measures prevented these contacts. There were no alternative ways for children and young people to meet each other. In addition, the opportunities for organised leisure were limited and schools were closed. In the report we noted that cancelling these basic contacts had various consequences for children and young people. Some had ample fall-back options when things did not go well, others did not. That is why it was important for instance for children with divorced parents, to be able to continue seeing both parents, despite measures to limit the number of visitors at home. Children placed in care also needed to continue having visitors. We also saw that children and young people suffered fewer internalising problems if they remained feeling connected with their friends, despite the restrictions. And if they received support and were able to provide support. So offer focused activities for children to meet and support each other, even when physical contact is out of the question.

With regard to the restrictive measures, young people at the working conference said: 'Always allow for meeting places and opportunities for active sports. That is necessary both for physical and mental health. Take a closer look at what young people need to grow up and develop in a good way and what needs to happen to allow that.'

### **4. Choose an approach in consultation with children and young people**

There were good reasons for the Covid-19 measures. But, if there is something we learned, it is that we should never again develop (youth) policies without consulting with children and young people. They made clear that the Covid-19 measures were viewed primarily from an adult and elderly perspective. Communication, information and approach did not link to them. So they felt continually less inclined to observe the measures. It is important to develop plans together with children and young people. For instance, by examining together what might work if schools cannot remain fully open. Or what is feasible when meeting is less obvious. Consider together with children what they need and how they could help. To make policies work for everyone.

## 4.4 Lessons learnt for research

### 5. Lesson for researchers: cooperate, with each other and with children and young people

It was an inspiring and meaningful experience for researchers to gather their studies in this publication and to discuss them jointly at the working conference. We call for researchers to cooperate more often and on a more permanent basis. It helps when researchers attune measuring tools, definitions used, and demarcations of research groups, and describe results in more similar ways in their articles. This facilitates mutual comparison of research findings and unambiguous interpretation.

Cooperation with young people was very useful as well. Researchers and young people agree that research becomes more meaningful when researchers plan and conduct it in co-creation with children and young people. For instance, by discussing together which topics should be addressed and which questions should be posed to children and young people.

### 6. A sustainable monitor of youth mental wellbeing is needed!

The wake-up call of the decreasing mental health of children and young people created more attention for the mental wellbeing of youth during the pandemic. It is hard to state with certainty that the mental wellbeing of children and young people really changed by the Covid-19 crisis. In actual practice it is difficult to separate age effects and societal trends from the impact of the Covid-19 crisis, related measures and later relaxation of measures to limit the negative impact on children's and young people's mental health. At least, we learned to look more closely at the mental wellbeing of our youth during the pandemic. It is to be recommended to continue monitoring the mental wellbeing of children and young people while joining forces at national level. It is important that researchers and policy makers jointly establish a national research and monitoring infrastructure. It helps to standardise monitors to a higher degree. In order to monitor the mental wellbeing of our youth, it is better to follow young people in the Netherlands by repeatedly asking them the same questions at fixed ages and repeating these measurements with various cohorts of young people. Then we can really see what is happening. These data should also be made available in a proper and accessible way for further research and for policy purposes. So that we can improve our knowledge of the problems for which children and young people really need help. And we can continue to improve our thinking on how to apply the strength of the community based context to maintain the mental health of our youth.

## 4.5 Where do we go from here?

### **Continued attention for mental wellbeing of children and young people**

Young people's appeal to pay more attention to their mental wellbeing is justified. During the pandemic we saw an increase in mental problems of children and young people. We noticed it, because we began looking in better ways, improved our research and started measuring more. We cannot be sure whether the Covid-19 crisis is the cause.

Initial worries concerning a large scale increase of mental problems seem to be uncalled for. Not all children and young people suffered, and from those children and young people who did develop complaints, a great many bounced back towards the end of the pandemic. Still it seems that there also is a vulnerable group suffering serious and lasting problems. These are mainly children and young people with pre-existing mental complaints before the Covid-19 crisis. Mental problems also seem to be worse with children growing up in less favourable families and environments and it seems there is a risk that they continue longer.

Researchers point out that the decline in mental wellbeing is a trend already showing in figures before the pandemic. Several social factors seem to play a part. For instance: pressure to achieve, growing up in poverty, worries about the climate crisis or the housing crisis, stress because one is expected to be totally happy all the time. The pandemic may be behind us, but these stress factors are and will remain part of our society. We need to guard that these stress factors do not get worse in the aftermath of the pandemic, for instance by putting more emphasis on educational disadvantages and thereby further increasing the pressure to achieve.

### **Continue learning and improving**

The researchers who cooperated in this report would like to continue with the lessons learnt. Together with young people. And in dialogue with policy makers. There are plans for a follow-up working conference. To improve the monitor that will allow us to screen the mental wellbeing of children and young people. To decide on a joint research agenda. To cooperate in improving the support and help for children and young people who need it. To learn together how our society can decrease the social pressure on children and young people. To continue to build a hopeful world for children and young people to grow up in.

# References

## Selected studies on mental wellbeing in and after the Covid-19 crisis

Initially 71 sources were gathered for this report. These were coded with a capital C followed by a number (C01 to C71). Following selection (see chapter 1) 40 studies were included in this survey. Following is the list of those 40 selected studies. These kept their original C number, which explains the ‘holes’ in the sequence of the numbers in the list below.

- C01 Luijten, M.A.J., van Muilekom, M.M. & Teela, L. et al. (2021) The impact of lockdown during the COVID-19 pandemic on mental and social health of children and adolescents. *Qual Life Res* 30, 2795–2804. <https://doi.org/10.1007/s11136-021-02861-x>
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- C02 Zijlmans, J., Teela, L., van Ewijk, H., Klip, H., van der Mheen, M., Ruisch, H., Luijten, M.A.J., van Muilekom, M.M., Oostrom, K.J., Buitelaar, J., Hoekstra, P.J., Lindauer, R., Popma, A., Staal, W., Vermeiren, R., van Oers, H.A., Haverman, L. & Polderman, T.J.C. (2021). Mental and Social Health of Children and Adolescents With Pre-existing Mental or Somatic Problems During the COVID-19 Pandemic Lockdown. *Front. Psychiatry* 12. <https://doi.org/10.3389/fpsy.2021.692853>
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- C03 Fischer, K., Tieskens, J.M., Luijten, M.A.J. et al. (2022). Internalizing problems before and during the COVID-19 pandemic in independent samples of Dutch children and adolescents with and without pre-existing mental health problems. *Eur Child Adolesc Psychiatry*. <https://doi.org/10.1007/s00787-022-01991-y>
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- C06 Van der Laan, S. E., Finkenauer, C., Lenters, V. C., Van Harmelen, A. L., van der Ent, C. K., & Nijhof, S. L. (2021). Gender-specific changes in life satisfaction after the COVID-19–related lockdown in dutch adolescents: a longitudinal study. *Journal of Adolescent Health*, 69(5), 737-745. <https://doi.org/10.1016/j.jadohealth.2021.07.013>
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- C09 Bernasco, E. L., Nelemans, S. A., van der Graaff, J., & Branje, S. (2021). Friend support and internalizing symptoms in early adolescence during COVID-19. *Journal of Research on Adolescence*, 31(3), 692-702. <https://doi.org/10.1111/jora.12662>
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- C12 Donker, M. H., Mastrotheodoros, S., & Branje, S. (2021). Development of parent-adolescent relationships during the COVID-19 pandemic: The role of stress and coping. *Developmental Psychology*, 57(10), 1611–1622. <https://doi.org/10.1037/dev0001212>
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- C13 Hornstra, L., van den Bergh, L., Denissen, J. J., Diepstraten, I., & Bakx, A. (2021). Parents’ perceptions of secondary school students’ motivation and well-being before and during the COVID-19 lockdown: the moderating role of student characteristics. *Journal of Research in Special Educational Needs*. <https://doi.org/10.1111/1471-3802.12551>
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- C14 Bakx, A. W. E. A., Samsen-Bronsveld, E., Hornstra, T. E., Diepstraten, I., Speetjens, P., Bergh, L., ... & van der Ven, S. H. G. (2020). Het welbevinden en motivatie van kinderen in het basisonderwijs tijdens onderwijs op school en afstandsonderwijs: De visie van ouders [The wellbeing and motivation of children in primary school during school education and online education: Parents' vision]. <https://www.point013.nl/wp-content/uploads/2020/09/PO-Rapportage-Afstandsonderwijs.pdf>
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- C15 Bakx, A., Samsen-Bronsveld, E., Hornstra, T. E., Speetjens, P. A. M., van den Bergh, L., Denissen, J., & Van der Ven, S. (2020). Het welbevinden en motivatie van middelbare scholieren tijdens onderwijs op school en afstandsonderwijs: De visie van ouders [The wellbeing and motivation of children in primary school during school education and online education: Parents' vision]. <https://www.point013.nl/wp-content/uploads/2020/09/VO-Rapportage-Afstandsonderwijs.pdf>
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- C18 Fakkkel, M., Peeters, M., Branje, S., Stevens, G.W.J.M & Vollebergh, W.A.M. (2022). Decline in future orientations among Dutch adolescents during covid-19: The role of 4 socioeconomic status, parental support, and sense of control. [draft]
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- C19 Vermeulen, S., Alink, L. R. A., & van Berkel, S. R. (2023). Child Maltreatment During School and Childcare Closure Due to the COVID-19 Pandemic. *Child Maltreatment*, 28(1), 13–23. <https://doi.org/10.1177/10775595211064885>
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- C20 Snetselaar, R.S., Liber, J.M., Geurts, S.M. et al (2022). Examination of risk exposure models during COVID-19 in relation to youth life satisfaction and internalizing symptoms. *Sci Rep* 12, 16252. <https://doi.org/10.1038/s41598-022-20661-2>
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- C21 Burgard, S.S.C., Liber, J.M., Geurts, S.M. et al. (2022) Youth Sensitivity in a Pandemic: The Relationship Between Sensory Processing Sensitivity, Internalizing Problems, COVID-19 and Parenting. *J Child Fam Stud* 31, 1501–1510. <https://doi.org/10.1007/s10826-022-02243-y>
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- C24 van den Broek, N., Verhagen, M., Larsen, J. et al. Een cohortvergelijking van eetgedrag, leefstijl en sociaal-emotionele gezondheid bij jongeren vóór en tijdens de coronacrisis [Cohort comparison of eating behaviour, lifestyle and socio-economic health of young people before and during the Covid-19 crisis]. *TSG Tijdschr Gezondheidswet* 100, 40–48 (2022). <https://doi.org/10.1007/s12508-022-00331-4>
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- C32 Van de Groep, S., Zanolie, K., Green, K. H., Sweijen, S. W., & Crone, E. A. (2020). A daily diary study on adolescents' mood, empathy, and prosocial behavior during the COVID-19 pandemic. *PloS one*, 15(10). <https://doi.org/10.1371/journal.pone.0240349>
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- C34 Achterberg, M., Dobbelaar, S., Boer, O.D. et al. (2021). Perceived stress as mediator for longitudinal effects of the COVID-19 lockdown on wellbeing of parents and children. *Sci Rep* 11, 2971. <https://doi.org/10.1038/s41598-021-81720-8>
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- C35 Rozendaal, E., van Woudenberg, T., Crone, E., Green, K., van de Groep, S., de Leeuw, R., ... Buijzen, M. (2021). Communication and COVID-19 Physical Distancing Behavior Among Dutch Youth. *Health Psychology Bulletin*, 5(1), 81–102. DOI: <http://doi.org/10.5334/hpb.33>
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- C36 Green, K., Becht, A., van de Groep, S., van der Cruijisen, R., Sweijen, S., & Crone, E. (2021). Adolescents' Social Environment and Executive Functions Predict Long-term Mental Health and Feelings of Future Uncertainty Throughout the COVID-19 Pandemic [preprint].  
<https://doi.org/10.31234/osf.io/zpy25>
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- C37 Sweijen, S.W., van de Groep, S., Green, K.H. et al. (2022). Daily prosocial actions during the COVID-19 pandemic contribute to giving behavior in adolescence. *Sci Rep* 12, 7458.  
<https://doi.org/10.1038/s41598-022-11421-3>
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- C38 De Leeuw, R. N. H., van Woudenberg, T. J., Green, K. H., Sweijen, S. W., van de Groep, S., Kleemans, M., Tamboer, S. L., Crone, E. A., & Buijzen, M. (2023). Moral Beauty During the COVID-19 Pandemic: Prosocial Behavior Among Adolescents and the Inspiring Role of the Media. *Communication Research*, 50(2), 131–156.  
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- C39 Te Brinke, L., van der Cruijisen, R., Green, K., & Crone, E. (2021). De behoeftes van jongeren tijdens de weg uit de coronacrisis: De houding van jongeren over het coronapaspoort & de maatregelen met een stijgende vaccinatiegraad [The needs of young people during the way out of the Covid-19 crisis: Young people's attitude towards the Corona-passport & the measures with an increasing level of vaccination]. <https://www.eur.nl/media/2021-05-rivm-rapport>
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- C42 Van Eldik, W. & van Baar, A. (2021). Substudy of: COVID-19 Unmasked Global Collaboration-longitudinal cohort study examining mental health of young children and caregivers during the pandemic. [Draft].
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- C46 Van Loon, A. W., Creemers, H. E., Vogelaar, S., Miers, A. C., Saab, N., Westenberg, P. M., & Asscher, J. J. (2021). Prepandemic risk factors of COVID-19-related concerns in adolescents during the COVID-19 pandemic. *Journal of Research on Adolescence*, 31(3), 531-545.  
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- C47 Stevens, G. W., Buyukcan-Tetik, A., Maes, M., Weinberg, D., Vermeulen, S., Visser, K., & Finkenauer, C. (2022). Examining Socioeconomic Disparities in Changes in Adolescent Mental Health Before and During Different Phases of the COVID-19 Pandemic. *Stress and Health*, 39(1), 169-181. <https://doi.org/10.1002/smi.3179>
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- C48 Henkens, J. H. D., Visser, K., Finkenauer, C., & Stevens, G. W. J. M. (2022). 'I Think It'll All Blow Over in the End': How Young People Perceive the Impact of COVID-19 on Their Future Orientations. *Young*, 30(4), 309-326. <https://doi.org/10.1177/11033088221085137>
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- C50 Plak, R., Rippe, R., Merkelback, I. & Begeer, S. (2022). Psychosocial Outcomes in Autistic Children Before and During the COVID-19 Pandemic. [Draft]
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- C51 Pinkse-Schepers et al. (2022). Impact of COVID-19 and subsequent social distancing on the development of depression and social anxiety in Dutch adolescents: A longitudinal, quasi-experimental study. [Draft]
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- C52 Zijlmans, J., Luijten, M., van Oers, H., Tieskens, J., Alrouh, H.; Haverman, L., Bartels, M., Popma, A., Polderman, T.J.C. (2022). Mental Health Problems During the COVID-19 Pandemic in Dutch Children and Adolescents With and Without Pre-existing Mental Health Problems. *J Am Acad Child Adolesc Psychiatry*, 61(10), S253. <https://doi.org/10.1016/j.jaac.2022.09.357>
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- C53 Hoefnagels, J.W., Schoen, A.B., van der Laan, S.E.I., Rodijk, L.H., van der Ent, C.K., van de Putte, E.M., Dalmeijer, G.W. & Nijhof, S.L. (2022). The Impact of the COVID-19 Outbreak on Mental Wellbeing in Children with a Chronic Condition Compared to Healthy Peers. *Int. J. Environ. Res. Public Health*, 19 (5). <https://doi.org/10.3390/ijerph19052953>
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- C57 Klootwijk, C. L., Koele, I. J., van Hoorn, J., Güroğlu, B., & van Duijvenvoorde, A. C. (2021). Parental support and positive mood buffer adolescents' academic motivation during the COVID-19 pandemic. *Journal of Research on Adolescence*, 31(3), 780-795. <https://doi.org/10.1111/jora.12660>
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- C59 Asscheman, J. S., Zanolie, K., Bexkens, A., & Bos, M. G. (2021). Mood variability among early adolescents in times of social constraints: a daily diary study during the COVID-19 pandemic. *Frontiers in psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.722494>
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- C60 Van der Velden, P. G., van Bakel, H. J., & Das, M. (2022). Mental health problems among Dutch adolescents of the general population before and 9 months after the COVID-19 outbreak: A longitudinal cohort study. *Psychiatry Research*, 311. <https://doi.org/10.1016/j.psychres.2022.114528>
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- C61 Keijsers, L., Bülow, A. (2021). Growing Up in Times of COVID-19: When a Window of Opportunity is Temporarily Closed. In: Aarts, E., Fleuren, H., Sitskoorn, M., Wilthagen, T. (2021). *The New Common*. Springer, Cham. [https://doi.org/10.1007/978-3-030-65355-2\\_17](https://doi.org/10.1007/978-3-030-65355-2_17)
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- C63 Bouter, D.C., Zarchev, M., de Neve-Enthoven, N.G.M. et al. (2022) A longitudinal study of mental health in at-risk adolescents before and during the COVID-19 pandemic. *Eur Child Adolesc Psychiatry*. <https://doi.org/10.1007/s00787-021-01935-y>
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- C65 Van Hooijdonk, K. J., Rubio, M., Simons, S. S., van Noorden, T. H., Luijten, M., Geurts, S. A., & Vink, J. M. (2022). Student-, Study-and COVID-19-Related Predictors of Students' Smoking, Binge Drinking and Cannabis Use before and during the Initial COVID-19 Lockdown in The Netherlands. *International journal of environmental research and public health*, 19(2), 812. <https://doi.org/10.3390/ijerph19020812>
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- C67 Van der Laan, S. E., Lenters, V. C., Finkenauer, C., van Harmelen, A. L., van der Ent, C. K., & Nijhof, S. L. (2022). Tracking mental wellbeing of Dutch adolescents during the first year of the COVID-19 lockdown: a longitudinal study. *Journal of Adolescent Health*, 17(4), 414-422. <https://doi.org/10.1016/j.jadohealth.2022.06.006>
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- C68 Vermeulen, S., van Berkel, S., & Alink, L. (2022). Kindermishandeling tijdens de tweede lockdown [Child abuse during the second lockdown]. Instituut Pedagogische Wetenschappen, Universiteit Leiden. <https://hdl.handle.net/1887/3513305>
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- C69 De Maat, D., Van der Hallen, R., De Nijs, P., Visser, K., Bastiaansen, D., Truijens, F., ... Dekker, L. (2022). Children With Autism Spectrum Disorder in Times of COVID-19: Examining the Impact of the Pandemic on Emotional and Behavioral Problems and the Role of Parental Well-Being in Resilience. [preprint]. <https://doi.org/10.31219/osf.io/h3s2u>
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- C70 Euser, S., Kroese, F., Derks, M., & Bruin, M. (2022). Understanding COVID-19 vaccination willingness among youth: A survey study in the Netherlands. *Vaccine*, 40(6), 833-836. <https://doi.org/10.1016/j.vaccine.2021.12.062>
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## Monitors and polls on mental wellbeing during and after the Covid-19 crisis

In addition to the selected studies, 26 monitors and polls on mental wellbeing with children, adolescents and young adults were used as sources. These sources have been coded with a capital M followed by a number (M01 to M26).

- M01 Health monitor – GGD GHOR. (2022, 24 mei). Middelbare scholieren minder gelukkig dan voor de coronacrisis [Secondary school pupils less happy than before the Covid-19 crisis]. <https://ggdghor.nl/actueel-bericht/middelbare-scholieren-minder-gelukkig-dan-voor-de-coronacrisis/>
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- M02 Annual poll – CBS. (2022, 20 april). Geluksgevoel bij jongvolwassenen afgenomen [Feelings of happiness of young adults diminished]. <https://www.cbs.nl/nl-nl/nieuws/2022/16/geluksgevoel-bij-jongvolwassenen-afgenomen>
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- M03 Annual poll – CBS. (2022, 18 maart). CBS StatLine - Welzijn; kerncijfers, persoonskenmerken [Wellbeing; indicators, personal characteristics]. <https://opendata.cbs.nl/#/CBS/nl/dataset/82634NED/table>
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- M04 Periodic poll – RIVM. (2022, 6 juni). Ervaren vrijheid in een periode van versoepelingen [Freedom experienced in a period of relaxations]. <https://www.rivm.nl/gedragsonderzoek/ervaren-vrijheid-in-periode-van-versoepelingen>
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- M05 Analysis of registration data – Hek, K., Jansen, T., Bolt, E., & van Dijk, L. (2022) Voorschrijven van psychofarmaca door de huisarts tijdens de coronapandemie, 6 jan 2020 – 10 juli 2022 [Prescribed psych pharmaceuticals by general practitioners during the Covid-19 pandemic, 6 Jan 2020 – 10 July 2020]. Nivel. <https://www.nivel.nl/nl/publicatie/voorschrijven-van-psychofarmaca-door-de-huisarts-tijdens-de-coronapandemie-6-jan-2020-10>
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- M06 Monitor health data – Bosmans, M., Baliatsas, C., Hooiveld, M., & Dückers, M. (2022) Kort-cyclisch Cijferoverzicht gezondheidsmonitor COVID-19: 4e gegevensrapportage jeugd (april-juni 2022) [Short-cycle overview of figures health monitor Covid-19: 4th data report youth (April-June 2022)]. Nivel. <https://www.nivel.nl/nl/publicatie/kort-cyclisch-cijferoverzicht-gezondheidsmonitor-covid-19-4e-gegevensrapportage-jeugd>
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- M07 Analysis of registration data – De Kindertelefoon (2021). Wat kinderen bezighoudt in coronatijd, periode 14 december 2020 t/m 10 januari 2021 [What occupies children in Covid-19 times, period 14 December 2020 until 10 January 2021]. <https://www.ncj.nl/wp-content/uploads/media-import/docs/2e9b7245-f96d-45f2-906a-a7a7b293fba2.pdf>
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- M08 Analysis of registration data – De Kindertelefoon (2022). Trends en signalen Q3/Q4 2021 en januari 2022 [Trends and signs Q3/Q4 2021 and January 2022].
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- M09 Analysis of registration data – 113 zelfmoordpreventie (2022). Meer suïcides onder jongvolwassenen tussen 20 en 30 jaar [More suicides among young adults between the age of 20 and 30]. <https://www.113.nl/actueel/meer-suicides-onder-jongvolwassenen-tussen-20-en-30-jaar>
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- M10 Annual poll – CBS (2022, 1 juni). Mentale gezondheid jongeren afgenomen [Mental health young people diminished]. <https://www.cbs.nl/nl-nl/nieuws/2022/22/mentale-gezondheid-jongeren-afgenomen>
- 
- M11 Two-yearly poll – CBS (2022, 29 september). Vooral jongeren emotioneel eenzaam in 2021 [Young people in particular emotionally lonely in 2021]. <https://www.cbs.nl/nl-nl/nieuws/2022/39/vooral-jongeren-emotioneel-eeenzaam-in-2021>
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- M12 Nonrecurring poll – Amerongen, B. van, Booij, A., Hanssen, I. et al (2021). Hoe ervaren kinderen en jongeren in Nederland de coronacrisis en wat zouden zij adviseren aan beleids-makers?; Een onderzoek vanuit kinderrechtenperspectief [How do children and young people in the Netherlands experience the Covid-19 crisis and what would their advice to policy makers be?; A study from the perspective of children's rights]. Universiteit Leiden. <https://scholarlypublications.universiteitleiden.nl/access/item%3A3161069/view>
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- M13 Nonrecurring poll – Brinke, L. te, van Rossenberg, F. & Crone, E. (2022). De impact van de avondlockdown op de mentale en fysieke gezondheid van studenten [The impact of the curfew on the mental and physical health of students]. <https://www.eur.nl/en/essb/media/2021-12-rapportimpactavondlockdown>
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- M14 Poll and literature – Klerk, M. de, Olsthoorn, M., Plaisir, I. e.a. (2021). Een jaar met corona. SCP.
- 
- M15 Nonrecurring poll – CBS (2021, 14 december). Bijna helft jongeren ervoer uitsluitend negatieve invloed van coronacrisis [One year with Covid-19. Almost half of young people experienced nothing but negative impact of Covid-19 crisis]. <https://www.cbs.nl/nl-nl/nieuws/2021/50/bijna-helft-jongeren-ervoer-uitsluitend-negatieve-invloed-van-coronacrisis#>
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- M16 Periodic poll – Creasey, N., Lalihatu, E., Leijten, P. & Overbeek, G. (2021). Covid-19 Family Study report: April 2020 - September 2020. Universiteit van Amsterdam. <https://doi.org/10.5281/zenodo.4423235>
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- M17 Periodic poll – Stevens, G., Weinberg, D., Visser, K. e.a. (2021). Het welzijn van mbo-studenten in tijden van corona [The wellbeing of vocational education students in times of Covid-19]. Universiteit Utrecht. <https://www.uu.nl/sites/default/files/Factsheet-Welzijn-MBO-Studenten-corona.pdf>
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- M18 Nonrecurring poll – CBS (2021, 3 september). Ervaren impact corona op mentale gezondheid en leefstijl [Impact of Covid-19 experienced on mental health and lifestyle]. <https://www.cbs.nl/nl-nl/longread/statistische-trends/2021/ervaren-impact-corona-op-mentale-gezondheid-en-leefstijl>
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- M19 Analysis of registration data – CBS (2021). Impactmonitor aanpak huiselijk geweld en kindermishandeling 2021 [Impact monitor approach domestic violence and child abuse 2021]. <https://www.cbs.nl/nl-nl/longread/rapportages/2021/impactmonitor-aanpak-huiselijk-geweld-en-kindermishandeling-2021>
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- M20 Nonrecurring poll – De Kinderombudsman (2020). Als je het ons vraagt - Thuis in 2020 [If you ask us – At home in 2020]. <https://www.kinderombudsman.nl/publicaties/als-je-het-ons-vraagt-thuis-in-2020-0>
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- M21 Periodic poll – CBS (2022, 16 mei). 18- tot 35-jarigen bewogen minder in 2021 [18 to 35 year olds exercised less in 2021]. <https://www.cbs.nl/nl-nl/nieuws/2022/20/18-tot-35-jarigen-bewogen-minder-in-2021#>
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- M22 Nonrecurring poll – NOC\*NSF (2022). Landelijke Sportdeelname Index [National sports participation index]. <https://nocnsf.nl/sportdeelnameindex>
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- M23 Nonrecurring poll – Kamphuis, L. (2021). 3Vraagt: Jongeren in coronatijd. EenVandaag Opiniepanel [Young people in Covid-19 times. EenVandaag Opinion panel]. [https://eenvandaag.assets.avrotros.nl/user\\_upload/PDF/2021\\_3Vraagt\\_tweede\\_lockdown.pdf](https://eenvandaag.assets.avrotros.nl/user_upload/PDF/2021_3Vraagt_tweede_lockdown.pdf)
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- M24 Poll – Janse, M. & Van Hummel, N. (2022). Gedaald welbevinden, geknakt vertrouwen [Less wellbeing, broken trust]. Nederlands Jeugdinstituut. <https://www.nji.nl/sites/default/files/2022-05/Nji-Gedaald-welbevinden-Geknakt-vertrouwen.pdf>
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- M25 Four-yearly poll – Boer, M., Van Dorsselaer, S., De Looze, M. e.a. (2022). HBSC 2021: Gezondheid en welzijn van jongeren in Nederland [Health and wellbeing of young people in the Netherlands]. Universiteit Utrecht, Trimbos Instituut, SCP & HBSC. <https://www.scp.nl/publicaties/publicaties/2022/09/14/gezondheid-en-welzijn-van-jongeren-in-nederland---hbsc-2021>
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- M26 Nonrecurring poll – Brink, M., Van den Broek, A. & Ramakers, C. (2021). Ervaringen van studenten met onderwijs en toetsen op afstand tijdens corona [Students' experiences with online education and examination during Covid-19]. Interstedelijk Studenten Overleg. <https://www.iso.nl/wp-content/uploads/2021/02/ResearchNed-%E2%80%93-Ervaringen-van-studenten-met-onderwijs-en-toetsen-op-afstand-tijdens-corona.pdf>
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## Other sources

In addition to the studies selected and the monitors and polls, other relevant sources have been used for this survey. These other sources have been coded with a capital O followed by a number (001 t/m 012).

- 001 Hayden, J., Côté, P., & Bombardier, C. (2006). Evaluation of the quality of prognosis studies in systematic reviews. *Annals of Internal Medicine* 144(6), 427-437.  
<https://doi.org/10.7326/0003-4819-144-6-200603210-00010>
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- 002 Rijksoverheid (2022). Coronavirus tijdlijn [Covid-19 timeline].  
<https://www.rijksoverheid.nl/onderwerpen/coronavirus-tijdlijn>
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- 003 RIVM (2022). Tijdlijn van coronamaatregelen 2022 [Timeline Covid-19 measures 2022].  
<https://www.rivm.nl/gedragsonderzoek/tijdlijn-maatregelen-covid>
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- 004 UNICEF (2020). Coronacrisis en kinderen en jongeren in Nederland - Een inventarisatie van de impact van de coronacrisis op kinderen en jongeren in Nederland [Covid-19 crisis and children and young people in the Netherlands – An inventory of the impact of the Covid-19 crisis on children and young people in the Netherlands].  
<https://www.unicef.nl/files/UNC-Rapport-Coronacrisis-en-jongeren-FINAL-compleet.pdf>
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- 005 SCP (2020). Verwachte gevolgen van corona voor de psychische gezondheid [Expected consequences of Covid-19 on mental health]. <https://www.scp.nl/publicaties/publicaties/2020/07/07/verwachte-gevolgen-van-corona-voor-de-psychische-gezondheid>
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- 006 Nederlands Jeugdinstituut (2021). De effecten van corona op jeugd, gezin en jeugdveld. Een literatuuroverzicht [The effect of Covid-19 on youth, families and youth field. A literature survey].  
<https://www.nji.nl/sites/default/files/2021-06/Effect-van-corona-op-jeugd%2C-gezin-en-jeugdveld.pdf>
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- 007 Bosmans, M., Marra, E., Alblas, E., Baliatsas, C., Vetten, M. de, Gameren, R. van, Schulpen, S., Moleman, Y., Bhattathiri, G., Gerbecks, J., Ditchev, L. & Dückers, M. (2022). De gevolgen van de coronapandemie voor de gezondheid en het welzijn van de jeugd: een systematische literatuurstudie [The consequences of the Covid-19 pandemic on health and wellbeing of youth: a systematic literature study]. Nivel & RIVM: <https://www.nivel.nl/nl/publicatie/de-gevolgen-van-de-coronapandemie-voor-de-gezondheid-en-het-welzijn-van-de-jeugd-ee>
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- 008 Nederlands Centrum Jeugdgezondheid (2016). Richtlijn: Psychosociale problemen (2016) [Directive: Psychosocial problems].  
<https://www.jgzrichtlijnen.nl/alle-richtlijnen/richtlijn/?richtlijn=35&rlpag=1745>
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- 009 Nederlands Jeugdinstituut (2023). Definitie van gedragsproblemen [Definition of behavioural problems]. <https://www.nji.nl/gedragsproblemen/definitie>
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- 010 Trimbos Instituut (sd). Opgroeien in een Kansrijke Omgeving en het IJslandse model [Growing up in a favourable environment and the Icelandic model]. <https://www.trimbos.nl/aanbod/opgroeien-in-een-kansrijke-omgeving/ijslandse-preventiemodel/>
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- 011 Nederlands Jeugdinstituut (2022). Opgroeien doe je samen. Bouwen aan een stevige pedagogische basis [Growing up is a job to share. Building a firm community based context] <https://www.nji.nl/sites/default/files/2022-12/Opgroeien%20doe%20je%20samen.pdf>
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- 012 Van Yperen, T., Hofstede, K., Hageraats, R. & van de Maat, A. (2023). Andere kijk op groeiend jeugdzorggebruik. Voor een hoopvolle wereld om in op te groeien [Another view on growing youth care use. For a hopeful world to grow up in]. Nederlands Jeugdinstituut. <https://www.nji.nl/sites/default/files/2023-04/Andere-kijk-op-groeiend-jeugdzorggebruik.pdf>
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# Appendix (in Dutch)

## Appendix 1: Beoordeling methodologische kwaliteit van de onderzoeken

Aanvankelijk zijn 71 bronnen verzameld. Deze hebben een volgnummer gekregen met de hoofdletter C ervoor (C01 t/m C071). Na selectie (zie hoofdstuk 1) is van 44 onderzoeken de methodologische kwaliteit beoordeeld. Deze hebben hun oorspronkelijke C-volnummer behouden en dat verklaart 'de gaten' in de nummering van het volgnummer in onderstaande lijst.

### Checklist met beoordelingscriteria

THEMA	SCORING
Onderzoeksvraag	0 = Het is niet duidelijk wat de onderzoeksvraag is 0.5 = Het is duidelijk wat de onderzoeksvraag is 1 = Het is duidelijk wat de onderzoeksvraag is én hij is relevant
Onderzoekspopulatie	0 = Onderzoekspopulatie is niet benoemd en beschreven 0.5 = Onderzoekspopulatie wordt benoemd met beschrijving van de kenmerken 1 = Onderzoekspopulatie wordt benoemd met beschrijving van de kenmerken én past bij de onderzoeksvraag
Beschrijving steekproef <i>*Geslacht, opleidingsniveau, leeftijd, regionale spreiding</i>	0 = De steekproefbeschrijving ontbreekt 0.5 = De steekproef is beschreven in relatie tot de belangrijke kenmerken van de onderzoekspopulatie 1 = De steekproef is beschreven én deze is representatief ten opzichte van de onderzoekspopulatie
Response <i>*Alleen bij kwantitatief onderzoek</i>	0 = Het is niet duidelijk hoe hoog het responsepercentage is 0.5 = Het is duidelijk hoe hoog het responsepercentage is 1 = Het is duidelijk hoe hoog het responsepercentage is én er is gecorrigeerd voor mogelijke verschillen tussen uitgevallen groep en nog deelnemende groep
Beschrijving meetinstrumenten	0 = De beschrijving van de meetinstrumenten ontbreekt 0.5 = De meetinstrumenten worden beschreven 1 = De meetinstrumenten worden beschreven én zijn betrouwbaar en valide



THEMA	SCORING
Covariabelen	0 = De covariabelen zijn niet beschreven 0.5 = De covariabelen zijn beschreven 1 = De covariabelen én de uitkomsten zijn beschreven
Covariabele: moment in de pandemie	0 = De maatregelen die golden ten tijde van de dataverzameling zijn niet beschreven 0.5 = De maatregelen die golden ten tijde van de dataverzameling zijn wel beschreven 1 = De maatregelen die golden ten tijde van de dataverzameling zijn beschreven én er is gereflecteerd op de impact ervan op de resultaten
Analysemethode	0 = De analysemethode wordt niet beschreven 0.5 = De analysemethode wordt beschreven 1 = De analysemethode is beschreven én past bij de onderzoeksvraag
Databeschrijving	0 = Significanties of effectgroottes worden niet genoemd  *Alleen als er een verschil of relatie wordt onderzocht 1 = Significanties of effectgroottes worden genoemd én de toetswaarden zijn beschreven
Selectiviteit van de resultaten	0 = De onderzoeksvragen worden niet allemaal behandeld in de resultaten 0.5 = Alle onderzoeksvragen worden behandeld in de resultaten 1 = Alle onderzoeksvragen worden behandeld in de resultaten en niet-significante resultaten worden ook weergegeven
Conclusie	0 = De conclusies volgen niet logisch uit de resultaten 0.5 = De conclusies volgen logisch uit de resultaten 1 = De conclusies volgen logisch uit de resultaten en worden geduid vanuit de literatuur of maatschappelijke ontwikkelingen
Beperkingen	0 = De beperkingen van het onderzoek worden niet beschreven 0.5 = De beperkingen van het onderzoek worden beschreven 1 = De beperkingen van het onderzoek worden beschreven én er wordt gereflecteerd op wat dat zou kunnen betekenen voor de uitkomsten
Implicatie	0 = Er zijn geen implicaties voor de praktijk 0.5 = Er zijn wel implicaties voor de praktijk 1 = Er zijn implicaties voor de praktijk én er zijn concrete aanbevelingen beschreven
Coronaeffect	0 = De studie biedt geen inzicht in een coronaeffect (niet gereflecteerd op de mogelijke impact van de coronacrisis of op een veranderende situatie in coronatijd) 1 = De studie biedt wel inzicht in een coronaeffect? (wel gereflecteerd op de mogelijke impact van de coronacrisis of op een veranderende situatie in coronatijd)

## Resultaten kwaliteitsbeoordeling

C-nummer	Eerste auteur	Publicatie-type	Onderzoeksvraag	Onderzoekspopulatie	Beschrijving steekproef	Respons	Beschrijving meetinstrumenten	Covariabelen	Covariabele: moment in pandemie	Analysemethode	Databeschrijving	Selectiviteit resultaten	Logica van conclusie	Beschrijving beperkingen	Implicaties praktisch beschreven	Inzicht in coroneffect	TOTAALSCORE (absoluut)	% punten uit maximum aantal punten
C01	Luijten	Artikel	1,0	1,0	1,0	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	1,0	12,5	89
C02	Zijlmans	Artikel preprint	1,0	1,0	0,5	0,5	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,0	1,0	12,0	86
C03	Fischer	Artikel preprint	1,0	1,0	1,0	0,0	1,0	0,0	0,5	1,0	1,0	1,0	1,0	1,0	0,0	1,0	10,5	75
C06	Van der Laan	Artikel	1,0	1,0	0,5	1,0	1,0	0,5	1,0	1,0	1,0	1,0	1,0	1,0	0,0	1,0	12,0	86
C09	Bernasco	Artikel	1,0	1,0	0,5	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	1,0	12,0	86
C12	Donker	Artikel	1,0	1,0	0,5	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	12,5	89
C13	Hornstra	Artikel	1,0	1,0	0,5	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	12,5	89
C14	Bakx	Rapport	1,0	0,0	0,0	0,0	0,5	0,0	1,0	1,0	1,0	1,0	0,5	1,0	1,0	1,0	9,0	64
C15	Bakx	Rapport	1,0	0,0	0,0	0,0	0,5	0,0	1,0	1,0	1,0	1,0	0,5	1,0	1,0	1,0	9,0	64
C18	Fakkel	Artikel ingediend	1,0	0,0	0,5	1,0	1,0	1,0	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	11,5	82
C19	Vermeulen	Artikel	1,0	1,0	0,5	1,0	0,5	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	1,0	12,5	89
C20	Snetselaar	Artikel	1,0	0,0	0,0	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	0,0	1,0	9,5	68
C21	Burgard	Artikel	1,0	0,0	0,0	0,0	1,0	0,5	1,0	1,0	1,0	1,0	1,0	1,0	0,0	1,0	9,5	68
C23	Van den Broek	Rapport	0,0	1,0	0,5	0,0	0,0	1,0	0,5	1,0	1,0	1,0	0,0	0,0	0,0	0,0	6,0	43
C24	Van den Broek	Artikel	0,5	0,5	0,5	0,5	0,5	0,0	0,5	1,0	1,0	1,0	1,0	0,5	0,5	1,0	9,0	64
C28	Buimer	Rapport	1,0	0,0	0,0	0,0	1,0	0,5	1,0	0,5	0,0	0,5	1,0	1,0	0,0	1,0	7,5	54
C32	Van de Groep	Artikel	1,0	1,0	0,5	0,5	1,0	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	12,0	86
C33	Green	Artikel	1,0	0,0	0,5	0,0	1,0	0,0	0,5	1,0	1,0	1,0	1,0	1,0	1,0	1,0	10,0	71

C-nummer	Eerste auteur	Publicatie-type	Onderzoeksvraag	Onderzoekspopulatie	Beschrijving steekproef	Respons	Beschrijving meetinstrumenten	Covariabelen	Covariabele: moment in pandemie	Analysemethode	Databeschrijving	Selectiviteit resultaten	Logica van conclusie	Beschrijving beperkingen	Implicaties praktijk beschreven	Inzicht in coroneffect	TOTAALSCORE (absoluut)	% punten uit maximum aantal punten
C34	Achterberg	Artikel	1,0	1,0	0,0	1,0	1,0	0,0	1,0	1,0	1,0	1,0	1,0	1,0	0,0	1,0	11,0	79
C35	Rozendaal	Artikel	1,0	0,5	0,5	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	12,0	86
C36	Green	Artikel preprint	1,0	1,0	0,5	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	13,5	96
C37	Sweijen	Artikel preprint	1,0	1,0	0,5	1,0	1,0	1,0	0,0	1,0	1,0	1,0	1,0	0,5	0,5	1,0	11,5	82
C38	De Leeuw	Artikel preprint	1,0	0,5	0,5	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,0	1,0	0,0	10,0	71
C39	Te Brinke	Rapport	1,0	0,5	0,5	0,0	0,5	0,5	0,0	1,0	1,0	1,0	1,0	0,5	1,0	0,0	8,5	61
C40	Green	Rapport	1,0	1,0	0,5	0,0	0,0	1,0	0,0	0,0	0,0	0,5	1,0	0,0	1,0	1,0	7,0	50
C41	Te Brinke	Rapport	1,0	1,0	0,5	0,0	0,0	0,0	1,0	0,5	0,0	0,5	1,0	0,0	1,0	1,0	7,5	54
C42	Van Eldink	Artikel concept	1,0	1,0	0,5	0,0	1,0	1,0	0,5	1,0	1,0	1,0	x	x	x	1,0	9,0	64
C46	Van Loon	Artikel	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	1,0	13,5	96
C47	Stevens	Artikel preprint	1,0	0,5	0,5	1,0	0,5	1,0	0,5	1,0	1,0	1,0	1,0	1,0	0,5	1,0	11,5	82
C48	Henkens	Artikel preprint	1,0	0,5	x	x	x	0,5	1,0	1,0	x	x	1,0	1,0	0,0	1,0	7,0	78
C50	Plak	Artikel concept	1,0	0,0	0,5	0,0	0,5	1,0	0,5	1,0	1,0	1,0	1,0	1,0	0,0	1,0	9,5	68
C51	Pinkse-Schepers	Artikel concept	1,0	0,5	0,5	1,0	1,0	1,0	0,5	1,0	1,0	1,0	1,0	0,5	0,5	1,0	11,5	82
C52	Zijlmans	Artikel ingediend	1,0	1,0	1,0	0,5	1,0	1,0	0,5	1,0	1,0	1,0	1,0	1,0	0,0	1,0	12,0	86
C53	Hoefnagels	Artikel	1,0	0,0	0,5	0,0	1,0	0,0	1,0	1,0	1,0	1,0	1,0	0,5	0,0	1,0	9,0	64
C57	Klootwijk	Artikel	1,0	1,0	0,5	0,0	0,5	1,0	1,0	1,0	1,0	1,0	1,0	0,5	0,0	1,0	10,5	75
C59	Asscheman	Artikel	1,0	1,0	0,5	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	13,5	96
C60	Van der Velden	Artikel	1,0	0,5	1,0	1,0	1,0	1,0	0,5	1,0	1,0	1,0	1,0	1,0	0,0	1,0	12,0	86
C61	Bülow	Artikel	1,0	0,0	0,5	0,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	1,0	11,0	79

C-nummer	Eerste auteur	Publicatie-type	Onderzoeksvraag	Onderzoekspopulatie	Beschrijving steekproef	Respons	Beschrijving meetinstrumenten	Covariabelen	Covariabele: moment in pandemie	Analysemethode	Databeschrijving	Selectiviteit resultaten	Logica van conclusie	Beschrijving beperkingen	Implicaties praktijk beschreven	Inzicht in coroneffect	TOTAALSCORE (absoluut)	% punten uit maximum aantal punten
C63	Bouter	Artikel	1,0	1,0	0,5	1,0	1,0	1,0	0,0	1,0	1,0	1,0	1,0	1,0	0,0	1,0	11,5	82
C65	Van Hooijdonk	Artikel	1,0	1,0	0,5	0,5	0,0	1,0	0,0	1,0	1,0	1,0	0,5	1,0	1,0	1,0	10,5	75
C67	Van der Laan	Artikel	1,0	0,5	0,5	1,0	1,0	0,0	0,5	1,0	1,0	1,0	1,0	1,0	0,0	1,0	10,5	75
C68	Vermeulen	Rapport	1,0	1,0	1,0	0,5	0,5	1,0	1,0	1,0	1,0	1,0	1,0	1,0	0,5	1,0	12,5	89
C69	De Maat	Artikel preprint	1,0	1,0	0,0	0,0	1,0	1,0	0,5	1,0	1,0	1,0	1,0	0,5	1,0	1,0	11,0	79
C70	Euser	Artikel	1,0	1,0	0,5	0,5	0,5	1,0	0,0	1,0	1,0	1,0	1,0	0,0	1,0	0,0	9,5	68

## Appendix 2: Tabel met algemene kenmerken van de geselecteerde onderzoeken

Aanvankelijk zijn 71 bronnen verzameld. Deze hebben een volgnummer gekregen met de hoofdletter C ervoor (CO1 t/m CO71). Na selectie (zie hoofdstuk 1) zijn uiteindelijk 40 onderzoeken opgenomen in dit overzichtsrappport, waarvan de algemene kenmerken zijn beschreven. Deze hebben hun oorspronkelijke C-volgnummer behouden en dat verklaart 'de gaten' in de nummering van het volgnummer in onderstaande lijst.

In de tabel met de beschrijving van de algemene kenmerken van de geselecteerde onderzoeken is een code gebruikt om aan te duiden in welk fase van de pandemie de metingen van het onderzoek plaats hebben gevonden. Hierbij een toelichting op deze codes:

Codes subfases	Fase	Tijdperiode fase
O-Pre	Voor de pandemie	vóór maart 2020
a-LD1-SG	Eerste lockdown (LD1), scholen gesloten (SG)	maart 2020 – half mei 2020
b-OF1-SO	Eerste openingsfase (OF1), scholen open (SO)	half mei 2020 – augustus 2020
c-LD2-SO-AK	Tweede lockdown (LD2), scholen deels open (SO) en deels dicht (SD), deels wel en niet een avondklok (AK)	augustus 2020 – april 2021
d-OF2-SO	Tweede openingsfase (OF2), scholen open (SO)	mei 2021 – oktober 2021
e-LD3-SO en SG	Derde lockdown (LD3), scholen deels open (SO) en dicht (SG)	november 2021 – januari 2022
f-OF3	Derde openingsfase (OF3)	vanaf februari 2022

## Algemene kenmerken van de geselecteerde onderzoeken

Volgnr 1 <sup>e</sup> auteur	Publicatie- type	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode data- verzameling	Fase in pandemie
C01 Luijten	Artikel	Kinderen en adolescenten, 8-18 jaar, tijdens de pandemie (N=844) en voor de pandemie (N=2401)	Angst, depressie, woede, algemene gezondheid, slaapproblemen, sfeer thuis, beleving lockdown maatregelen	Doelen: kwantificeren van het verschil in mentale en algemene gezondheid van kinderen en adolescenten voor en tijdens de pandemie, identificeren van factoren die samenhangen met slechtere mentale gezondheid, onderzoeken van veranderingen in de sfeer thuis voor en tijdens de pandemie, en beoordelen van de impact van de lockdown op het dagelijks leven van kinderen en adolescenten.	Cross-sectioneel, met data uit een longitudinaal onderzoek, met vragenlijsten voor ouders en kinderen	voor pandemie; 10 april - 5 mei 2020	O-Pre; a-LD1-SG
C02 Zijlmans	Artikel preprint	Kinderen en adolescenten, 8-18 jaar, met psychische problemen (N=249), met chronische lichamelijke ziekte (N=90), en uit algemene populatie (N=844)	Algemene gezondheid, slaapproblemen, internaliserende problemen, relatie met leeftijdsgenoten, sfeer thuis, beleving lockdown maatregelen	Doel: beoordelen van mentale en sociale gezondheid, gedurende eerste lockdown, van brede populatie kinderen en adolescenten met al bestaande psychiatrische of somatische problemen en deze vergelijken met de algemene populatie van kinderen en adolescenten.	Cross-sectioneel, met vragenlijsten voor ouders en kinderen	begin april - eind mei 2020	a-LD1-SG
C03 Fischer	Artikel preprint	Kinderen en adolescenten, 8-18 jaar, met psychische problemen (N=4487 voor pandemie; N=1008 tijdens 1e lockdown; N=1536 tijdens 2e lockdown) en uit algemene populatie (N=35.357 voor pandemie; N=3938 tijdens 1e lockdown; N=1489 tijdens 2e lockdown)	Internaliserende problemen	Doel: inzicht krijgen in de ontwikkeling van internaliserende problemen tijdens de coronapandemie onder kinderen en jongeren met reeds bestaande mentale klachten en in vergelijking met gezonde leeftijdgenoten.	Data uit 4 verschillende cohortstudies, met vragenlijsten voor ouders en kinderen, longitudinaal en cross-sectioneel	voor pandemie; april - mei 2020; nov - dec 2020	O-Pre; a-LD1-SG; c-LD2.2-SG
C06 Van der Laan	Artikel	Adolescenten, 12-16 jaar (N=224 voor pandemie; N=158 tijdens 1e lockdown)	Mentaal welbevinden, levenstevredenheid, internaliserende problemen, psychosomatische klachten, COVID-stress, gender	Is mentaal welbevinden veranderd tijdens de lockdown maatregelen en verschilt dit voor geslacht? Heeft COVID-gerelateerde stress invloed gehad op het mentaal welbevinden?	Longitudinaal cohortonderzoek, met vragenlijsten en een gezondheidsonderzoek	maart 2019; april-mei 2020	O-Pre; a-LD1-SG

Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode data-verzameling	Fase in pandemie
C09 Bernasco	Artikel	Kinderen, in hun laatste jaar van de basisschool, gemiddeld 11.6 jaar (N=245), en één van hun ouders	Internaliserende problemen, steun vanuit vrienden, tijd doorbrengen met vrienden, COVID-gerelateerde stress	Wat is de relatie tussen ervaren steun van vrienden en internaliserende problemen en wordt deze relatie gemodereerd door de tijd die jongeren doorbrengen met vrienden, tijdens de pandemie in vergelijking met daarvoor?	Longitudinaal cohortonderzoek, met vragenlijsten	najaar 2019; april - juli 2020	O-Pre a-LD1-SG en b-OF1-SO
C12 Donker	Artikel	Kinderen, in hun laatste jaar van de basisschool, gemiddeld 11.4 jaar (N=240 voor en N=190 tijdens pandemie) en één van hun ouders (N=236 voor en N=195 tijdens pandemie)	Ouder-kindrelatie	Wat waren de veranderingen in ouder-kindrelaties en ouderschap in een periode van zes maanden (van voor COVID tot tijdens COVID)? Hangen veranderingen in ouderschap en ouder-kindrelatie samen met door ouders en kinderen waargenomen stress rond COVID? Wordt de relatie tussen stress en ouderschap en ouder-kindrelatie minder sterk door actieve copingstrategieën?	Longitudinaal cohortonderzoek, twee metingen, met vragenlijsten	herfst 2019; lente 2020	O-Pre; a-LD1-SG
C13 Hornstra	Artikel	Adolescenten op de middelbare school, gemiddelde 14.23 jaar, via hun ouders (N=470)	Psychologische basisbehoeften (autonomie, verbondenheid, competentie), welbevinden, schoolmotivatie	Hoe was het tijdens de lockdown met de basisbehoeften van adolescenten en hoe heeft dat effect gehad op welbevinden en schoolmotivatie (volgens hun ouders)? En in hoeverre hing dit samen met opleidingsniveau van ouders, schoolniveau, geslacht en speciale onderwijsbehoeften?	Retrospectief pre-test-post-test design, met vragenlijst	april - mei 2020 met terugblik naar voor de pandemie	a-LD1-SG
C14 Bakx	Rapport	Schoolkinderen in het basisonderwijs, via hun ouders (N=428)	Ouderlijke stress, opvoedvraagstukken, ondersteuning onderwijs, welbevinden, schoolmotivatie, psychologische basisbehoeften	Hoe hebben ouders het afstandsonderwijs ervaren en de invloed ervan op hun kind? Hoe is dit verschillend voor verschillende groepen ouders en kinderen?	Cross-sectioneel, met vragenlijsten	april - mei 2020	a-LD1-SG



Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode data-verzameling	Fase in pandemie
C15 Bakx	Rapport	Adolescenten in het voortgezet onderwijs, via hun ouders (N=367)	Ouderlijke stress, opvoedvraagstukken, ondersteuning onderwijs, welbevinden, schoolmotivatie, psychologische basisbehoeften	Hoe hebben ouders het afstandsonderwijs ervaren en de invloed ervan op hun kind? Hoe is dit verschillend voor verschillende groepen ouders en kinderen?	Cross-sectioneel, met vragenlijsten	april - mei 2020	a-LD1-SG
C18 Fakkel	Artikel ingediend	Adolescenten, 16+ , gemiddeld 17.8 jaar (N=1372)	Toekomstperspectief, kwaliteit van opvoeding	Zijn er verschillen in toekomstperspectief tussen kinderen van verschillende SES achtergronden toegenomen tijdens de pandemie? En worden deze verschillen verklaard door verschillen in ouderlijke steun, SES, gevoel van controle of door hoe hard je getroffen bent door COVID?	Cross-sectioneel met vragenlijsten; data uit longitudinaal onderzoek	okt 2019 - jan 2020; mei - juni 2020	O-pre a-LD1-SG en b-OF1-SO
C19 Vermeulen	Artikel	Schoolkinderen, 5-12 jaar en adolescenten, 12-18 jaar (N=444 professionals uit kinderopvang en onderwijs als informanten met zicht op N=6917 kinderen in totaal)	Kindermishandeling, emotionele verwaarlozing	Doel: via de visie en expertise van professionals inschatten of en in hoeverre kindermishandeling en huiselijk geweld is toegenomen tijdens of direct na de sluiting van de scholen en kinderdagverblijven.	Cross-sectioneel, met vragenlijsten voor professionals	maart – juni 2020; september 2020	a-LD1-SG; b-LD2.1-SO
C20 Snetselaar	Artikel	Schoolkinderen en adolescenten, 9-18 jaar (N=400) en hun ouders (N=395)	Levenstevredenheid, internaliserende problemen	Wat is de impact van additieve en cumulatieve risicofactoren op de ervaren negatieve impact van COVID? Wat is de relatie met welbevinden (levenstevredenheid en internaliserende problemen) onder jeugd?	Cross-sectioneel met vragenlijsten voor ouders en kinderen; data uit een longitudinaal onderzoek	april - juli 2020	a-LD1-SG en b-OF1-SO
C21 Burgard	Artikel	Schoolkinderen en adolescenten, 9-18 jaar (N=404)	Hoogsensitiviteit, internaliserende problemen, opvoedingsstijl	Wat is de relatie tussen hoogsensitiviteit en internaliserende problemen onder jongeren en hoe medieert de door jongeren ervaren COVID-impact deze relatie? En modereert de opvoedingsstijl van ouders de relatie tussen hoogsensitiviteit en de ervaren COVID-impact?	Cross-sectioneel met vragenlijsten voor kinderen; data uit een longitudinaal onderzoek	april - juli 2021	a-LD1-SG en b-OF1-SO

Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode data-verzameling	Fase in pandemie
C24 Van den Broek	Artikel	Adolescenten, gemiddeld 15.0 jaar (N=177 voor pandemie) en adolescenten, gemiddeld 14.9 jaar (N=188 tijdens pandemie)	Relatie met ouders, levenstevredenheid, eenzaamheid, stress, stemming, leefstijl	Doel: inzicht krijgen in sociale relaties en mentaal welbevinden bij jongeren vóór en tijdens de coronacrisis.	Cross-sectioneel, met data van twee momenten (andere cohorten) uit een longitudinaal onderzoek, met vragenlijsten	najaar 2019; voorjaar 2020	O-Pre; a-LD1-SG
C32 Van de Groep	Artikel	Adolescenten, 10-20 jaar (N=53)	Stemming (energie en spanning), empathie, sociaal gedrag	Wat is het effect van de pandemie en lockdown op de stemming, empathie en sociaal gedrag van Nederlandse adolescenten tijdens een cruciale fase voor de ontwikkeling van sociaal gedrag? En in hoeverre verandert hun neiging om te geven aan mensen die een rol spelen tijdens de lockdown?	Gedurende drie weken dagelijkse vragenlijst over stemming en sociaal gedrag; wekelijkse vragenlijst over empathie en maatschappelijke bijdragen; begin- en eindmeting over geefgedrag en sociale waarden, en dagelijkse serious game over geefgedrag; vergelijking met data uit longitudinaal cohortonderzoek	voor pandemie (cohort); 30 mrt - 17 apr 2020 (dagboek-onderzoek)	O-Pre; a-LD1-SG
C33 Green	Artikel	Adolescenten en jongvolwassenen, 10-25 jaar, in twee apart geanalyseerde samples: adolescenten, 10-18 jaar (N=462; N=238 bij follow up) en jongvolwassenen, 17-25 jaar (N=371; N= 231 bij follow up)	Stemming, stressfactoren, emotionele reactiviteit, sociaal gedrag	Wat zijn de korte en lange termijn effecten van de pandemie op de stemming van adolescenten en jongvolwassenen en hoe beïnvloeden stressfactoren de stemming, emotionele reactiviteit en het zelforiënterend gedrag?	Gedurende twee weken iedere werkdag dezelfde vragenlijst (dagboek) en zes maanden later bij follow up nogmaals. Prospectief, twee keer dezelfde steekproef	mei 2020; november 2020 (follow up)	a-LD1-SG; c-LD2.1-SO
C34 Achterberg	Artikel	Schoolkinderen, 10-13 jaar (N=151) en hun ouders (N=106)	Negatieve gevoelens ouders, internaliserend en externaliserend gedrag, gepercipieerde stress, coping	Welke impact heeft de corona lockdown op het welbevinden van ouders en kinderen? Hoe wordt deze relatie beïnvloed door de stress die kinderen en ouders waarnemen? En welke genetische en omgevingsfactoren hebben invloed op de waargenomen stress van kinderen?	Longitudinale tweelingenstudie; data uit lopend cohortonderzoek. Extra meting ingelast in 2020, met vragenlijst voor ouders en voor kinderen	voor pandemie; 28 april - 10 mei 2020	O-Pre; a-LD1-SG

Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode data-verzameling	Fase in pandemie
C35 Rozendaal	Artikel	Twee apart geanalyseerde samples: adolescenten 10-18 jaar (N=481) en jongvolwassenen, 17-25 jaar (N=404)	Beleving van of houding t.o.v. coronamaatregelen	Doel: beter begrijpen van de naleving van 'social distancing' door jongeren, door inzicht te krijgen in hoe bedreigend jongeren corona vinden, de sociale normen die ze ervaren, hoeveel gebruik ze maken van massa- en sociale media en hoe ze de communicatie ervaren (positief, neutraal of negatief).	Twee weken lang iedere werkdag dezelfde vragenlijst; prospectief, twee keer dezelfde steekproef	mei 2020	a-LD1-SG
C36 Green	Artikel preprint	Adolescenten, 10-20 jaar (N=177)	Stemming, levenstevredenheid, stress in gezin, bestaansonzekerheid, executieve functies, toekomstperspectief	Doelen: exploreren van het stemmingsverloop tijdens de pandemie, onderzoeken of kwetsbaarheden gerelateerd aan de maatregelen een daling in het mentaal welbevinden voorspellen en in hoeverre dit te linken is aan individuele verschillen in onzekerheidsgevoelens, in executief functioneren en in leeftijd.	Op de eerste twee meetmomenten gedurende twee weken elke werkdag dezelfde vragenlijst (dagboek) en op testdag vijf een extra vragenlijst; op meetmoment drie één vragenlijst; Prospectief, dezelfde steekproef	mei 2020; november 2020; mei 2021	a-LD1-SG; c-LD2.1-SO; d-OF2-SO
C37 Sweijen	Artikel preprint	Adolescenten en jongvolwassenen, 10-25 jaar (N=888 in mei 2020, N=494 in november 2020, N=373 in mei 2021)	Prosociaal gedrag	Doel: onderzoeken van het dagelijkse prosociale gedrag ten opzichte van vrienden en familie in relatie tot het geefgedrag van de respondenten met mogelijke invloeden van persoonlijkheden.	Op twee meetmomenten dagelijkse vragenlijst (dagboek), twee weken lang; op meetmoment drie een enkele vragenlijst. Dezelfde steekproef	mei 2020; november 2020; mei 2021	a-LD1-SG; c-LD2.1-SO; d-OF2-SO
C38 De Leeuw	Artikel preprint	Adolescenten, 10-18 jaar (N= 481) en jongvolwassenen, 17-25 jaar (N= 404)	Prosociaal gedrag, levensgeluk, ontroering door media, blootstelling aan nieuws over COVID, afstand houden	Leidt prosociaal gedrag tot meer geluk bij jonge mensen en inspireren verhalen in de media jonge mensen om anderen te helpen?	Dagelijkse vragenlijst (dagboek), twee weken lang	mei 2020	a-LD1-SG
C39 Te Brinke	Rapport	Jongvolwassenen, 16-40 jaar, gemiddeld 23.6 jaar (N=711)	Coronapaspoort, naleving regel, jongeren betrekken bij beleid	Wat vinden jongeren (16-40 jaar) van de mogelijke invoering van een coronapaspoort? Zouden zij op creatieve manieren vrijheden creëren? Hoe is de vaccinatiebereidheid onder jongeren? Hoe interpreteren jongeren de maatregelen naarmate de vaccinatiegraad toeneemt?	Een online vragenlijst en daarna jongerenpanels voor een verdieping op de resultaten	21 april - 2 mei 2021	c-LD2.4-SO-AK

Volgnr 1 <sup>e</sup> auteur	Publicatietype	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode dataverzameling	Fase in pandemie
C42 Van Eldink	Artikel concept	Jonge kinderen, 1-6 jaar, via hun ouders (N=1208)	Mentale gezondheid	Wat is de mentale gezondheid van jonge kinderen? Wat is de relatie tussen de mentale gezondheid van kinderen en contextuele risico- en beschermende factoren (inclusief COVID-19 factoren)? Hebben jonge kinderen tijdens COVID meer problemen met hun mentale gezondheid dan verwacht wordt in een normale populatie?	Cross-sectioneel, met data uit een longitudinaal onderzoek, met vragenlijst voor ouders	24 november 2020 - 5 juni 2021	c-LD2 (LD2.1-2.4) stukje d-OF2-SO
C46 Van Loon	Artikel	Adolescenten, gemiddeld 13.49 jaar (N=188)	COVID-19-gerelateerde zorgen, mentaal welbevinden, stress, internaliserende problemen, coping, sociale steun	Doel: beschrijven van de mate van COVID-19-gerelateerde zorgen bij adolescenten en onderzoeken of er samenhang is met geslacht, leeftijd (d.w.z. schooljaar), of opleidingsniveau en of deze zorgen veranderden in de loop van de pandemie en daarnaast onderzoeken welke individuele prepandemische factoren voorspellend waren voor COVID-19-gerelateerde zorgen.	Longitudinaal onderzoek, drie metingen bij hetzelfde cohort, met vragenlijsten	februari - begin maart 2020; eind sept. - begin oktober 2020; eind nov. - begin dec. 2020	O-Pre  c-LD2.1-SO  c-LD2.1-SO
C47 Stevens	Artikel preprint	Adolescenten, gemiddeld 17.9 jaar (N=1429, waarvan N=386 in alle drie de meetmomenten)	Mentaal welbevinden, levenstevredenheid, emotionele problemen, peer-relatieproblemen, gedragsproblemen, hyperactiviteit/concentratie	Wat is de samenhang tussen de SES van een gezin en de mentale gezondheid van adolescenten op verschillende momenten tijdens de coronacrisis?	Longitudinaal onderzoek, drie metingen bij hetzelfde cohort, met vragenlijsten	okt 2019 – jan 2020; mei - juni 2020; nov 2020 - jan 2021	O-Pre; b-OF1-SO; c-LD2.1-SO
C48 Henkens	Artikel preprint	Jongvolwassenen, 16-24 jaar (N=34)	Toekomstperspectief	Beïnvloed de lockdown het toekomstperspectief van jonge mensen?	Kwalitatief onderzoek, semigestructureerde diepte-interviews	voorjaar 2020	a-LD1-SG
C50 Plak	Artikel concept	Ouders en verzorgers van kinderen met autisme (N=244)	Emotionele en relationele problemen, hyperactiviteit, gedragsproblemen en prosociaal gedrag	Verschillen de psychosociale uitkomsten van kinderen met autisme tijdens de coronapandemie t.o.v. voor de coronapandemie en welke voorspellers beïnvloeden deze uitkomst?	Longitudinaal onderzoek, drie metingen bij hetzelfde cohort, met vragenlijsten	2017-2020; juli 2020; nov - dec 2020	O-pre b-OF1-SO; c-LD2.1-SO

<b>Volgnr 1<sup>e</sup> auteur</b>	<b>Publicatie-type</b>	<b>Doelgroep (N)</b>	<b>Thema's/Onderwerpen</b>	<b>Vraagstelling/Doel van de studie</b>	<b>Onderzoeksmethode</b>	<b>Periode data-verzameling</b>	<b>Fase in pandemie</b>
C51 Pinkse-Schepers	Artikel concept	Adolescenten, gemiddeld 13.0 jaar (N=406 met minimaal twee van drie de metingen)	Depressie, sociale angst, behoefte aan contact met leeftijdsgenoten	Doelen: onderzoeken van de impact van de afstandsmaatregelen op de ontwikkeling van depressie en sociale angst en de relatie daarvan met sekse, verminderd peercontact, ervaringen met COVID-19 en financiële consequenties.	Longitudinaal cohortonderzoek, quasi-experimenteel design, met vragenlijsten	voor pandemie (cohort) eerste 12 weken van pandemie	O-Pre  a-LD1-SG
C52 Zijlmans	Artikel ingediend	Schoolkinderen en adolescenten van 8-18 jaar (N varieert tussen 222 en 1333 voor de verschillende steekproeven op de verschillende meetmomenten in de pandemie)	Algemene (mentale) gezondheid, internaliserende en externaliserende problemen en relatie met leeftijdsgenoten	Doel: onderzoeken hoe de mentale gezondheid van kinderen en jongeren zich heeft ontwikkeld sinds het begin van de pandemie tot twee jaar in de pandemie (april 2022), zowel in de algemene populatie als bij kinderen en jongeren met al bestaande problemen. En uitzoeken of geslacht en leeftijd invloed heeft op COVID-gerelateerde problemen.	Longitudinaal cohortonderzoek met vragenlijsten	voor pandemie; maart - april 2020; nov - dec 2020;  maart - april 2021; nov - dec 2021;  maart - april 2022	O-Pre; a-LD1-SG; c-LD2.1-SO en c-LD2.2-SG c-LD2.4-SO-AK; e-LD3.1-SO en e-LD3.2-SG; f-OF3-SO

Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode data-verzameling	Fase in pandemie
C53 Hoefnagels	Artikel	Schoolkinderen en adolescenten, 8-18 jaar, met chronische ziektes (N=934 voor pandemie, N=503 tijdens pandemie) en hun 'gezonde' leeftijdgenoten (N=166)	Levenstevredenheid, internaliserende problemen en psychosomatische gezondheid	Hoe is de mentale gezondheid van chronisch zieke kinderen voor en tijdens de lockdown en in vergelijking met gezonde kinderen? Wat is de impact van de strengheid van de maatregelen op de mentale gezondheid?	Cohortonderzoek, vragenlijsten; PROactive cohort (vanaf 2016) met chronische zieke kinderen en WHISTLER cohort (selectie vanaf 2019) uit algemene adolescenten populatie en cross-sectionele vergelijking tussen steekproeven uit beide cohorten	PROactive cohort: vóór pandemie en tijdens lockdown in periode 3 juli 2020 - 18 juli 2021  WHISTLER cohort: vóór pandemie en tijdens lockdown in periodes 18 juli-5 oktober 2020, 19 oktober-24 november 2020 en 2 februari-9 maart 2021	O-Pre c-LD2-SO-SG-AK d-OF2-SO  O-Pre c-LD2.1-SO c-LD2.4-SO-AK
C57 Klootwijk	Artikel	Adolescenten, 12-16 jaar (N=102)	Schoolmotivatie, sociaal functioneren, stemming, ouderlijke steun	De impact van online en fysieke schooldagen op de schoolmotivatie, sociale interactie en stemming van adolescenten. Wat is de relatie tussen sociaal conflict en stemming op de schoolmotivatie tijdens online en fysieke schooldagen?	Dagelijkse vragenlijst (dagboek) gedurende twintig dagen, prospectief, dezelfde steekproef	18 mei - 3 juni; 22 juni - 23 juli 2020	a-LD1-SG; b-OF1-SO

Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode data-verzameling	Fase in pandemie
C59 Asscheman	Artikel	Schoolkinderen, 9-12 jaar (N=54)	Stemming, internaliserend, sociale verbinding en sociale interactie	Hoe ontwikkelde de stemming van vroeg-adolescenten tijdens de eerste maanden van de coronacrisis? Welke impact heeft sociale verbinding met leeftijdsgenoten en ouders op de stemming? Wat is de relatie tussen verbinding met leeftijdsgenoten en ouders en internaliserende problemen? Welke invloed hebben de maatregelen op de kwantiteit en kwaliteit van sociale online en offline interactie?	Dagelijkse vragenlijst (dagboek), gedurende vier verschillende weken; prospectief, dezelfde steekproef	20 april - 23 juni 2020	a-LD1-SG en b-OF1-SO
C60 Van der Velden	Artikel	Jongvolwassenen, 16-20 jaar (N=346 in 2012, N=253 in 2016 en N=251 tijdens pandemie)	Angst, depressie, zorggebruik en slaapproblemen	Wat is de impact van de coronacrisis op de mentale gezondheid van jongvolwassenen?	Longitudinale cohortstudie, met vragenlijsten	nov - dec 2012 en nov - dec 2016; nov - dec 2020	O-Pre c-LD2.1-SO c-LD2.2-SG
C61 Bülow	Artikel	Adolescenten, 12-17 jaar (N=179) en (hun) ouders (N=144; 36-67 jaar)	Ouder-kind-relatie	Hoe verandert de ouder-kind-relatie voor en gedurende een lockdown? Is deze verandering anders voor gezinnen die verschillen in beginniveau van relatie, kindgedrag, reactie op COVID en demografie? In hoeverre zijn de familie-routines verstoord en in hoeverre accepteren adolescenten de regels van hun ouders?	Longitudoonaal onderzoek, met vragenlijsten	januari 2020; half mei 2020	O-Pre; a-LD1-SG
C63 Bouter	Artikel	Adolescenten, leeftijdsrange niet bekend (N=445 tijdens 1e lockdown; N=333 tijdens 2e lockdown)	Depressie, angst, stress, provocerend gedrag, psychotisch ervaringen, suicidaliteit	Wat is de impact van de eerste twee lockdowns op de prevalentie van mentale gezondheidsproblemen onder jongeren die al emotionele of gedragsproblemen hadden voor de coronacrisis?	Longitudinale vragenlijst (iBerry study) met twee metingen tijdens de coronacrisis	april - mei 2020 januari 2021	a-LD1-SG c-LD2.3-SG-AK
C65 Van Hooijdonk	Artikel	Jongvolwassenen: studenten op het hbo en wo (N=9967)	Leefstijl, middelengebruik	Welke veranderingen zijn er in het wekelijkse roken, drinken en cannabisgebruik voor en tijdens de eerste lockdown? En welke kenmerken zijn geassocieerd met dit middelengebruik? Welke kenmerken dragen bij aan veranderingen in het middelengebruik tijdens de coronacrisis?	Vragenlijsten binnen de COVID-19 International Student Well-Being Study	april 2020; juli 2020	a-LD1-SG; b-OF1-SO



Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Doelgroep (N)	Thema's/Onderwerpen	Vraagstelling/Doel van de studie	Onderzoeksmethode	Periode data-verzameling	Fase in pandemie
C67 Van der Laan	Artikel	Adolescenten, 12-16 jaar (N=224 voor pandemie; N=158 tijdens 1e lockdown; N=149 tijdens de versoepelingen; N=152 tijdens de gedeeltelijke lockdown; N=128 tijdens de 2e lockdown)	Levenstevredenheid, internaliserende problemen en psychosomatische gezondheid	Welke veranderingen zijn er in het mentaal welbevinden tijdens de verschillende coronalockdowns in vergelijking met voor de pandemie?	Longitudinale cohortstudie, met vragenlijsten	maart 2019; mei 2020; juli 2020; oktober 2020; februari 2021	0-pre; b-OF1-SO; c-LD2.1-SO; c-LD2.1-SO; c-LD2.4-SO-AK
C68 Vermeulen	Rapport	Schoolkinderen, 5-12 jaar en adolescenten, 12-18 jaar (N=373 professionals uit kinderopvang en onderwijs als informanten met zicht op N=7014 kinderen in totaal)	Kindermishandeling, emotionele verwaarlozing	Doel: via de visie en expertise van professionals inschatten of en in hoeverre kindermishandeling en huiselijk geweld is toegenomen tijdens of direct na de sluiting van de scholen en kinderdagverblijven.	Longitudinaal onderzoek, tweede meting bij dezelfde steekproef, met vragenlijsten voor professionals	december 2020 - maart 2021	c-LD2.2-SG en c-LD2.3-SG-AK en c-LD2.4-SO-AK
C69 De Maat	Artikel preprint	Kinderen met ASS gemiddeld 13 jaar (N=62) en kinderen zonder ASS gemiddeld 13 jaar (N=213)	Emotionele en gedragsproblemen van kinderen; mentale gezondheid en eenzaamheid van ouders	Wat is de impact van corona op de emotionele en gedragsproblemen van kinderen met ASS in vergelijking met kinderen zonder ASS. Hoe hangt dit samen met de mentale gezondheid en eenzaamheid van hun ouders?	Longitudinaal onderzoek, tweede meting bij dezelfde steekproef, met vragenlijsten voor ouders en kinderen	jan 2018 - 1 mrt 2020; 21 december 2020 - 26 mei 2021	0-pre; c-LD2.2-SG c-LD2.3-SG-AK c-LD2.4-SO-AK
C70 Euser	Artikel	Jongeren, 12-18 jaar oud (N=1465)	Vaccinatiebereidheid	Wat is de vaccinatiebereidheid van jongeren en hoe hangt die samen met demografische factoren, persoonlijke overtuigingen en sociale normen?	Cross-sectioneel, met vragenlijst	22 juni 2021 - 27 juni 2021	d-OF2-SO

## Appendix 3: Tabel met methodologische kenmerken van de geselecteerde onderzoeken

Aanvankelijk zijn 71 bronnen verzameld. Deze hebben een volgnummer gekregen met de hoofdletter C ervoor (C01 t/m C071). Na selectie (zie hoofdstuk 1) zijn uiteindelijk 40 onderzoeken opgenomen in dit overzichtsrapport, waarvan de methodologische kernmerken zijn beschreven. Deze hebben hun oorspronkelijke C-volgnummer behouden en dat verklaart ‘de gaten’ in de nummering van het volgnummer in onderstaande lijst.

### Methodologische kenmerken van de geselecteerde onderzoeken

Volgnr 1 <sup>e</sup> auteur	Publicatie- type	Onderzoeksmethode	Representativiteit onderzoeksgroep	Uitkomstmaat (Gebruikte instrumenten)	Analysemethode
C01 Luijten	Artikel	Cross-sectioneel, met data uit een longitudinaal onderzoek, met vragenlijsten voor ouders en kinderen	De steekproef is representatief voor de Nederlandse populatie kinderen en adolescenten en hun ouders. Er is gekeken naar leeftijd, geslacht, etniciteit, regio en onderwijsniveau.	Socio-demografische vragenlijst voor ouders, COVID-19-gerelateerde vragenlijst voor ouders en kinderen, kort vragenlijstje over sfeer in huis voor kinderen, Dutch Patient-Reported Outcomes Measurement Information System (PROMIS): algemene gezondheid, relaties met leeftijdgenoten, angst, depressie, boosheid en slaapproblemen (retrospectief laatste 7 dagen op een 5-puntsschaal).	Covariantie-analyse (ANCOVA) om verschillen te testen in (mentale) gezondheid voor en tijdens pandemie, met correctie voor sociodemografische kenmerken. Multivariabele lineaire regressie-analyse voor het verband tussen mentale gezondheid en sociodemografische kenmerken. T-test voor de verschillen in de sfeer thuis. Kwalitatieve analyse voor de impact van de pandemie op het dagelijkse leven.
C02 Zijlmans	Artikel preprint	Cross-sectioneel, met vragenlijsten voor ouders en kinderen	Representativiteit onduidelijk. Psychiatrische groep: 249 kinderen (response: 4.4%), gemiddeld 12.8 jaar, 56.2% man, 17.7% met geïnfecteerde familie/vriend, en bij 18.9% van de ouders was de werksituatie negatief veranderd door corona. Pediatrische groep: 90 kinderen (response: 7.1%), gemiddeld 12.9 jaar, 55.6% was man, 33.3% met geïnfecteerde familie/vriend, en bij 21.1% van de ouders was de werksituatie negatief veranderd door corona. Algemene populatie: 844 kinderen (response: 8.4%), gemiddeld 13.4 jaar, 47.4% man, 23.7% had geïnfecteerde familie/vriend, en bij 26.2% van de ouders was de werksituatie negatief veranderd.	Socio-demografische vragenlijst voor ouders, COVID-19-gerelateerde vragenlijst voor ouders en kinderen, kort vragenlijstje over sfeer in huis voor kinderen, Dutch Patient-Reported Outcomes Measurement Information System (PROMIS): algemene gezondheid, relaties met leeftijdgenoten, angst, depressie, boosheid en slaapproblemen (retrospectief laatste 7 dagen op een 5-puntsschaal).	Covariantie-analyse om te kijken hoeveel kinderen in ieder van de drie groepen ernstige problemen had en hoe ze de sfeer thuis ervaren, met correctie voor leeftijd, sekse en geboorteland. Ook een ANCOVA voor de drie groepen samen met als onafhankelijke variabelen: huwelijks staat van ouders, regio, aantal kinderen in het gezin, opleidingsniveau ouders, verandering in werk door corona, besmette familie. T-tests om verschillen tussen rapportage van ouders en kinderen te onderzoeken.

Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Onderzoeksmethode	Representativiteit onderzoeksgroep	Uitkomstmaat (Gebruikte instrumenten)	Analysemethode
C03 Fischer	Artikel preprint	Data uit 4 verschillende cohortstudies, met vragenlijsten voor ouders en kinderen, longitudinaal en cross-sectioneel	Steekproef representatief. Er is gebruik gemaakt van data van kinderen tussen de 8 en 18 jaar oud uit vier grote landelijke samples: (n=34038, n=1319, n=1395 en n=3092).	Internaliserende problemen gemeten via twee verschillende vragenlijsten: Brief Problem Monitor door ouders (BPM), Patient-Reported Outcomes Measurement Information System door kinderen (PROMIS).	T-scores berekend om binnen ieder sample verschillen te onderzoeken tussen pre-corona en twee meetmomenten tijdens de pandemie. Chi-kwadraat toetsen om het aandeel respondenten met zorgelijke scores te vergelijken.
C06 Van der Laan	Artikel	Longitudinaal cohortonderzoek met vragenlijsten en een gezondheidsonderzoek	Steekproef niet representatief voor de Nederlandse populatie adolescenten. 224 adolescenten (12-16 jaar) uit de Whistler-studie (jongeren uit één wijk in Utrecht) in de eerste meting en daarvan 158 in de follow up meting. De groepen in de eerste en tweede meting zijn vergelijkbaar qua leeftijd, etniciteit en opleidingsniveau. De groep is niet representatief voor de hele Nederlandse populatie. Kinderen van ouders met een laag opleidingsniveau en een niet-westerse migratieachtergrond zijn ondervertegenwoordigd.	Vragenlijsten op twee momenten. Cantril ladder (levenstevredenheid), Revised child Anxiety and Depression Scale (angst en depressie), HBSC 2017 (psychosomatische gezondheid). Bij de tweede meting een vertaling van de COVID-19 Adolescent Symptomand Psychological Experience Questionnaire van Ladouceur (2020).	General linear model repeated-measures analysis of variance voor elke wellbeing indicator. Gender/tijd interactie toegevoegd. Verschil in psychosomatische symptomen werd gemeten door McNemar's Chi-squared tests. Relatie met covid-stress op mentaal welbevinden gemeten door lineaire regressie analyse.
C09 Bernasco	Artikel	Longitudinaal cohortonderzoek met vragenlijsten	Steekproef niet representatief voor de Nederlandse populatie basisschoolleerlingen en hun ouders. 245 leerlingen in laatste jaar van primair onderwijs en hun ouders. Kleine steekproef uit voornamelijk stedelijke omgeving, met hoge sociaal economische status, weinig eenoudergezinnen en weinig ouders met een migratieachtergrond. Wel spreiding over het land.	Online vragenlijsten op twee meetmomenten. Revised Child Anxiety and Depression Scale (depressie en angst ingevuld door kinderen). Child Behavior Checklist (angst, terugtrekken en somatische klachten, ingevuld door ouders). Network of Relationships Inventory (steun door vrienden, ingevuld door kinderen). Vier vragen uit de Friendship Quality scale (kwaliteit van vriendschap ingevuld door kinderen).	Path models, met wald tests op significantie. Anova op herhaalde metingen om verschillen in internaliserende problemen over tijd te meten.

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C12 Donker	Artikel	Longitudinaal cohortonderzoek, twee metingen, met vragenlijsten	De representativiteit is onduidelijk. Steekproef van 240 leerlingen uit groep 8 van de basisschool. De SES, leeftijd en het inkomen van hun ouders wordt beschreven, maar niet in relatie tot wat in Nederland gemiddeld is. Ook is niet beschreven of de kinderen vooral uit stedelijke gebieden komen, wat hun culturele achtergrond is en welk vo-advies ze hebben.	NRI (ouderlijke steun, negatieve interacties, ingevuld door kinderen), Alabama Parenting Questionnaire (positief ouderschap, discipline, ingevuld door ouders), Utrechtse Coping Lijst (tijdens eerste meting: interne coping, actieve coping en terugtrekken, ingevuld door ouders en kinderen), door onderzoekers opgestelde vragenlijst voor stress ingevuld door ouders en kinderen (tijdens tweede meting).	Confirmatory Factor Analysis; Latent Change Score models in R.
C13 Hornstra	Artikel	Retrospectief pre-test-post-test design, met vragenlijst	Steekproef is niet representatief voor de Nederlandse populatie middelbare scholieren. Er zijn 470 ouders bevraagd van leerlingen van twee middelbare scholen. Het artikel beschrijft kenmerken van de steekproef (geslacht, leeftijd en gediagnostiseerde of vermoede leerproblemen of hoogbegaafdheid van de leerlingen, opleidingsniveau van de ouders), maar niet in relatie tot wat in Nederland gemiddeld is. De regionale spreiding of het onderwijsniveau van de leerlingen wordt niet besproken.	Basic Needs Satisfaction and Frustration Scale (bevrediging van autonomie, competentie en verbondenheid met leerkracht en klasgenoten). En zelf opgestelde items over motivatie, schoolmotivatie, welbevinden. Alle vragenlijsten ingevuld door ouders.	Paired t-test voor verschil tussen (retrospectieve) pre-test en post-test. En MEMORE in SPSS voor repeated measures op welbevinden en motivatie met verschillende mediators (de basisbehoeften). En dan een repeated measures MANOVA voor het effect van tijd op behoeften, motivatie en welbevinden en interacties met achtergrondkenmerken van de leerlingen.
C14 Bakx	Rapport	Cross-sectioneel, met vragenlijsten	De steekproef is niet representatief voor de Nederlandse populatie ouders in het basisonderwijs. Er zijn 428 ouders bevraagd met kinderen op de basisschool, voornamelijk uit het netwerk van de onderzoekers. De respondenten zijn voornamelijk hoogopgeleid en veel hebben kinderen met hoogbegaafdheid. Geen informatie over regionale spreiding.	Vragenlijsten opgesteld door de onderzoekers, deels vanuit bestaande vragenlijsten. De betrouwbaarheid van de vragenlijsten is voldoende tot goed. Persoonlijkheidskenmerken van de kinderen is onderzocht middels de BFI2-XS (extraversie, vriendelijkheid, nauwkeurigheid, emotionele stabiliteit, openheid) en prikkelgevoeligheid middels de Children's Environmental Sensitivity Questionnaire.	Variantie-analyse. Herhaalde metingen voor het effect van schoolsituatie. Persoonlijkheidskenmerken als covariaat.

<b>Volgr 1<sup>e</sup> auteur</b>	<b>Publicatie-type</b>	<b>Onderzoeksmethode</b>	<b>Representativiteit onderzoeksgroep</b>	<b>Uitkomstmaat (Gebruikte instrumenten)</b>	<b>Analysemethode</b>
C15 Bakx	Rapport	Cross-sectioneel, met vragenlijsten	De steekproef is niet representatief voor de Nederlandse populatie kinderen en ouders op de middelbare school. Er zijn 367 ouders bevraagd van leerlingen op twee middelbare scholen. Ouders waren voornamelijk hoog opgeleid. Relatief veel kinderen met een gedrag- of leerstoornis. Geen informatie over regionale spreiding.	Vragenlijsten opgesteld door de onderzoekers, deels vanuit bestaande vragenlijsten. De betrouwbaarheid van de vragenlijsten is voldoende tot goed. Persoonlijkheidskenmerken van de kinderen is onderzocht middels de BFI2-XS (extraversie, vriendelijkheid, nauwkeurigheid, emotionele stabiliteit, openheid) en prikkelgevoeligheid middels de Children's Environmental Sensitivity Questionnaire.	Variatie-analyse. Herhaalde metingen voor het effect van schoolsituatie. Persoonlijkheidskenmerken als covariaat.
C18 Fakkel	Artikel ingediend	Cross-sectioneel met vragenlijsten; data uit een longitudinaal onderzoek	De onderzoeksgroep is niet representatief voor de Nederlandse populatie adolescenten. Er zijn 1372 adolescenten bevraagd uit 72 klassen op 4 mbo-scholen, uitsluitend in de regio Utrecht. Informatie over de sociaal-economische status van de respondenten wordt besproken in het artikel, maar niet in relatie tot wat landelijk gemiddeld is.	Family Affluence Scale (sociaal-economische status); Vragenlijst opgesteld door de onderzoekers voor toekomstperspectief, ouderlijke steun, gevoel van controle en "covid-19 hardships". De betrouwbaarheid van de schalen is voldoende tot goed.	Univariate latent change score modellen voor toekomstperspectief, ouderlijke steun en gevoel van controle. Latent changes werden bewaard voor gebruik in het structurele model. Voor gehele analyse: structural equation model.
C19 Vermeulen	Rapport	Cross-sectioneel, met vragenlijsten voor professionals	De steekproef is geografisch representatief voor de Nederlandse populatie professionals in kinderopvang, basisonderwijs en voortgezet onderwijs. In totaal hebben 444 professionals geparticipeerd. Om de representativiteit zo goed mogelijk te waarborgen, is Nederland opgedeeld in vijf zones met ongeveer evenveel kinderen per zone. Het totaal aantal aan te schrijven informant(en) is zo verdeeld dat per geografisch gebied ongeveer dezelfde aantallen kinderen (potentieel of daadwerkelijk) worden gezien.	Er is gebruik gemaakt van een standaard digitaal registratieformulier. Hierin omschrijven respondenten het vermoeden van kindermishandeling. Ze vullen alle beschikbare informatie in over de situatie en de betrokken personen, evenals om de vorm(en) van mishandeling. Deze informatie is door drie getrainde codeurs gecodeerd als één of meer typen kindermishandeling, gebaseerd op de definitie van kindermishandeling.	Vanuit het percentage kindermishandeling dat in de steekproef gevonden is, is de landelijke prevalentie berekend.

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C20 Snetselaar	Artikel	Cross-sectioneel met vragenlijsten voor ouders en kinderen; data uit een longitudinaal onderzoek	De steekproef is niet representatief voor de Nederlandse populatie schoolkinderen en ouders. Er zijn 487 ouder-kindparen bevraagd. Van de kinderen zat 60% op de middelbare school en 40% op de basisschool. Meeste ouders zijn hoog opgeleid en hebben geen migratie-achtergrond.	Cantril Ladder of Life Satisfaction (levenstevredenheid), Patient Health Questionnaire (internaliserende symptomen, ouderlijke stress, depressie, angst), vragenlijst voor sociale competentie door Valkenburg & Peter (2005), Parenting Style Inventory (ouderlijke responsiviteit), vragenlijst van Sweeting & West (1998) over de frequentie van ouder-kind activiteiten en een door de onderzoekers opgestelde vragenlijst over de impact van de pandemie.	Lineaire regressie analyses en multi-pele regressie analyses.
C21 Burgard	Artikel	Cross-sectioneel met vragenlijsten voor kinderen; data uit een longitudinaal onderzoek	De steekproef is niet representatief voor de Nederlandse populatie schoolkinderen. Er zijn 401 leerlingen bevraagd van middelbare scholen (69%) en basisscholen. De meeste ouders van deze kinderen hadden geen migratie-achtergrond.	Highly Sensitive Child Scale (sensorische verwerkingsgevoeligheid), Parenting Style Inventory-II (autonomie gunnen, autonomie eisen, responsiviteit), Patient Health Questionnaire (internaliserende problemen), een vragenlijst opgesteld door de onderzoekers om impact van covid-19 te meten (zwakke betrouwbaarheid).	Stepwise aanpak: Pearson correlatie voor intercorrelaties tussen sensitiviteit, internaliseren en covid-impact. Mediatie en moderatie gemeten door Process-macro. Bootstrapping om betrouwbaarheidsintervallen van directe en indirecte effecten te berekenen.
C24 Van den Broek	Artikel	Cross-sectioneel, met data van twee momenten (andere cohorten) uit een longitudinaal onderzoek, met vragenlijsten	De steekproef is niet representatief voor de Nederlandse populatie middelbare scholieren. Er zijn 177 middelbare scholieren uit leerjaar 3 bevraagd in het voorjaar van 2019 en een jaar later 188 leerlingen, ook uit leerjaar 3. Het zijn veel meisjes en veel leerlingen van hogere opleidingsniveaus.	Voedsel frequentie vragenlijst (Eet- en drinkgedrag); Vragenlijst voor leefstijl (deels zelf geformuleerd, deels gebaseerd op de International Physical Activity Questionnaire); Vragenlijst voor Sociaal-Emotionele gezondheid (deels zelf geformuleerd, Leuvense Eenzaamheidschaap voor Kinderen en Adolescenten en de levenskwaliteit ladder van Cantril).	Beschrijvende statistiek, onafhankelijke t-toetsen, chi-kwadraat-toetsen met Bonferroni-correctie. Samenhang gemeten middels Pearson- en Spearman-correlaties.

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C32 Van de Groep	Artikel	Gedurende drie weken dagelijkse vragenlijst over stemming en prosociaal gedrag; wekelijkse vragenlijst over empathie en maatschappelijke bijdragen; begin en eindmeting over geefgedrag en sociale waarden, en dagelijkse videogame over geefgedrag; vergelijking met data uit longitudinaal cohortonderzoek	De steekproef is niet representatief is voor de Nederlandse populatie kinderen en adolescenten. Het gaat om een kleine onderzoeksgroep (53 kinderen/jongeren), vooral meisjes. Respons was hoger onder meisjes en de deelnemers scoorden voor corona hoger op empathic concern en altruïsme dan niet-deelnemers. Er was geen verschil in stemming, perspective-taking, leeftijd en prosociaal gedrag in een crisis tussen deelnemers en niet-deelnemers.	Dictator Game; Interpersonal Reactivity Index; General Contribution to Society; aangepaste vragen uit Opportunities for Prosocial Actions Scale; Profiles of Mood States; subschalen van de Prosocial Tendencies Measure Revised en de Social Value Orientation slider measure.	Beschrijvende statistiek en Generalized Estimated Equation Models.
C33 Green	Artikel	Gedurende twee weken iedere werkdag dezelfde vragenlijst (dagboek) en zes maanden later bij follow up nogmaals. Prospectief, twee keer dezelfde steekproef	De steekproef is niet representatief voor de Nederlandse populatie adolescenten. Er zijn 462 adolescenten bevraagd (leeftijd tussen de 10-20 jaar oud) op het eerste meetmoment en 238 van hen ook op het tweede meetmoment. Ook zijn er 371 jongvolwassenen (leeftijd 17-25 jaar oud) bevraagd tijdens het eerste meetmoment en 231 van hen ook op het tweede meetmoment. Alle respondenten komen uit regio Rotterdam, ze zijn voornamelijk hoger opgeleid en vrouw en de jongvolwassenen zijn allemaal universitair student.	Profile of mood states scale (kracht, spanning en depressie); Pandemis Questionnaire (familiale spanning); Childhood Trauma Questionnaire-Short Form (emotionele verwaarloosing, emotioneel misbruik); Inequality of Opportunity in Home schooling Questionnaire (financiële zorgen tijdens de pandemie en ongelijkheid bij thuisonderwijs); Pandemic Questionnaire (waargenomen belang van de regels, niet naleven van regels); aangepaste versie van Opportunities for Prosocial Actions (emotionele steun aan familie en vrienden); Contributions to Society questionnaire (bereidheid om anderen te helpen).	Repeated Measures ANOVA om te kijken of de gemiddelde score op stemming verschilde tussen de twee meetmomenten. Om leeftijdseffecten mee te nemen werd lineair en quadratische leeftijd stapsgewijs meegenomen in het model. Om verschillende onderdelen van stemming (kracht, depressie en spanning) met elkaar te vergelijken is een Bonferroni correctie uitgevoerd.



Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Onderzoeksmethode	Representativiteit onderzoeksgroep	Uitkomstmaat (Gebruikte instrumenten)	Analysemethode
C34 Achterberg	Artikel	Longitudinale tweelingenstudie; data lopend cohortonderzoek. Extra meting ingelast in 2020, met vragenlijst voor ouders en voor kinderen	De steekproef is niet representatief voor de Nederlandse populatie kinderen en ouders. Er namen 106 ouders en 151 kinderen (10-13 jaar) deel. Ouders zijn voornamelijk moeders met middel tot hoge sociaal-economische status. En allemaal ouder van een tweeling. De deelnemende kinderen zijn allemaal tweeling.	Brief Symptom Inventory (negatieve gevoelens van ouders); Parenting Scale (overreageren door ouders); Strengths and Difficulties Questionnaire (procosiaal, hyperactiviteit, gedragsproblemen, problemen met vrienden, emotionele problemen). Daaraan toegevoegd covid-gerelateerde vragen. De betrouwbaarheid van de subschalen is goed en opgenomen in het artikel.	Non-parametric Friedman's test voor longitudinale verschillende in negatieve oudergevoelens en internaliserend en externaliserend gedrag van kinderen. Verschil in overgevoeligheid van ouders gemeten met repeated measures ANOVA. Ook moderaties en mediaties gemeten met PROCESS. Om factoren te herleiden die invloed hebben op waargenomen stress, zijn multi-pele regressie-analyses uitgevoerd.
C35 Rozendaal	Artikel	Twee weken lang iedere werkdag dezelfde vragenlijst; prospectief, twee keer dezelfde steekproef	De steekproef is niet representatief voor de Nederlandse jeugd. Het onderzoek vond plaats onder twee separaat geanalyseerde onderzoeksgroepen. Jongeren konden zichzelf voor de studie aanmelden. De groep schoolkinderen bestond uit 481 kinderen (10-18 jaar oud) van vijf middelbare scholen in Rotterdam. Er wordt niet beschreven welke onderwijsniveaus. De groep universiteitsstudenten bestond uit 404 studenten (17-25 jaar oud) van de Erasmus Universiteit in Rotterdam. Er wordt niet beschreven van welke studierichtingen. Aan het onderzoek namen geen jongeren deel op het mbo/hbo of jongeren die niet (meer) naar school gaan.	Twee aparte dagelijkse vragenlijsten: één voor adolescenten en één voor jongvolwassenen. Vragenlijst opgesteld door de onderzoekers. De betrouwbaarheid van de subschalen is goed en opgenomen in het artikel.	NHST mixed-effect modeling in het lme4 package in R. Om de hypothesen te testen, worden multivariate lineaire mixed-effect modellen gebruikt. Om het medierend effect van gevoel op de relatie tussen mediagebruik en naleving van de maatregel te meten, is gebruik gemaakt van een multi-level mediation analyse.
C36 Green	Artikel preprint	Op de eerste twee meetmomenten gedurende twee weken elke werkdag dezelfde vragenlijst (dagboek) en op testdag vijf een extra vragenlijst; op meetmoment drie één vragenlijst; Prospectief, dezelfde steekproef	De onderzoeksgroep is niet representatief voor de Nederlandse populatie adolescenten. Er namen 485 adolescenten (10 tot 22 jaar oud) deel van basisscholen, middelbare scholen, hbo en universiteit. 177 (10 tot 18 jaar oud) van hen namen deel aan alle drie de meetmomenten. Alle deelnemers gaan in Rotterdam naar school of universiteit, de onderzoeksgroep is te hoogopgeleid en bevat teveel vrouwen.	POMS (stemming), (Satisfaction With Life Scale (levenstevredenheid), Pandemic Questionnaire en Childhood Trauma Questionnaire Short-Form (moeilijkheden thuis en sociaal economische moeilijkheden), vragenlijst van Green et al. (bestaansonzekerheid), Web-Based Executive Function Questionnaire (executieve functies).	Multivariate Linear Mixed-effects modellen.

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C37 Sweijen	Artikel preprint	Op twee meetmomenten dagelijkse vragenlijst (dagboek), twee weken lang. Op meetmoment drie een enkele vragenlijst. Dezelfde steekproef	De onderzoeksgroep is niet representatief voor de Nederlandse populatie adolescenten. De steekproef is te hoogopgeleid en alle respondenten gaan naar school in de regio Rotterdam. Op het eerste meetmoment zijn 511 adolescenten bevraagd, tussen de 10 en 22 jaar oud, en 471 universiteitsstudenten, tussen de 17 en 44 jaar oud. Op het tweede en derde meetmoment waren de steekproeven kleiner, maar wel representatief voor de hele groep (behalve voor geslacht).	OPA (Prosociaal gedrag), Dictator Game (Geefgedrag), EAQ-R (emotionele betrokkenheid), SRQ-A (gevoeligheid voor sociale erkenning), Webexec (executief functioneren), GCS (bereidheid om bij te dragen aan de maatschappij), PTM-R (altruïsme), een zelfontwikkelde vragenlijst voor zelfcontrole.	Repeated Measures ANOVA with target (friends, family) as a within-subject factor.
C38 De Leeuw	Artikel preprint	Dagelijkse vragenlijst (dagboek), twee weken lang	De steekproef is niet representatief voor de Nederlandse populatie adolescenten en jongvolwassenen. Er namen 481 adolescenten deel (10 tot 18 jaar oud) en 404 jongvolwassenen (17 tot 25 jaar oud). De onderzoeksgroep is geworven op middelbare scholen in (de omgeving) van Rotterdam en op de Erasmus Universiteit in Rotterdam. Anders dan over geslacht en leeftijd wordt in het Artikel niet gesproken over representativiteit.	Faces Scale (geluk), de Opportunities for Prosocial Actions (OPA, steun bieden aan anderen) en Childhood Trauma Questionnaire (ondersteuning door je gezin). Verder zelf opgestelde vragenlijsten. Cronbach's alpha's worden genoemd in het artikel.	Beschrijvende statistiek en multilevel linear mixed effects models.
C39 Te Brinke	Rapport	Een online vragenlijst en daarna jongerenpanels voor een verdieping op de resultaten	De steekproef is niet representatief voor de Nederlandse populatie jongeren. De online vragenlijst is uitgezet via whatsapp / sociale media in de netwerken van de organisaties en onderzoekers. Dat leverde 711 deelnemers op tussen de 16 en 40 jaar oud. De deelnemers waren veelal vrouwen. Ook de woonsituatie van de responsgroep is beschreven, maar niet afgezet tegen de doelgroep. Deelnemers voor de jongerenpanels zijn geworven via HBO's, universiteiten en jongerenwerkers. De representativiteit ten opzichte van de doelgroep wordt niet beschreven.	Een vragenlijst opgesteld door de onderzoekers.	Beschrijvende statistiek, correlaties en repeated measures ANOVA.

Volgnr 1 <sup>e</sup> auteur	Publicatie-type	Onderzoeksmethode	Representativiteit onderzoeksgroep	Uitkomstmaat (Gebruikte instrumenten)	Analysemethode
C42 Van Eldink	Artikel concept	Cross-sectioneel, met data uit een longitudinaal onderzoek, met vragenlijst voor ouders	De steekproef is niet representatief voor de Nederlandse populatie ouders met jonge kinderen. Er zijn 1208 vragenlijsten ingevuld, voornamelijk door moeders die in Nederland geboren zijn. er zijn weinig laagopgeleide respondenten. In het artikel worden kenmerken van de respondenten niet afgezet tegen kenmerken van de volledige populatie.	Patient-Reported Outcomes Measurement Information System Early Childhood Parent Report measures (PROMIS EC: angst, boosheid, depressieve symptomen, zelf-regulatie/frustratie tolerantie, positief affect, slaapproblemen), COVID-19 Pandemic Exposure and Loss Questions (direct gevolg en verlies), Pandemic Impact Questionnaire: Early Childhood (negatieve impact, positieve impact), Depression, Anxiety and Stress Scale (symptomen van depressie, angst en stress van ouders), Parenting as Social Construct Questionnaire - Toddler version (afwijzing van kind door ouder), COVID-19 Pandemic Parenting Survey (vermijdende coping, actieve emotie-regulatie, materialen gebruiken op het niveau van het kind).	Beschrijvende statistiek en Hiërarchische Regressie Analyse (stepwise).
C46 Van Loon	Artikel	Longitudinaal onderzoek, drie metingen bij hetzelfde cohort, met vragenlijsten	De steekproef is representatief voor de Nederlandse populatie adolescenten op het gebied van culturele achtergrond en opleidingsniveau. De steekproef is niet representatief op het gebied van regio, de respondenten komen allemaal uit dezelfde grote stad. Het kan dat er selectiebias is doordat alleen leerlingen die graag mee wilden doen met het programma hebben meegedaan. De vragenlijsten zijn ingevuld door 188 adolescenten (leerlingen uit de 1e, 2e en 3e klas van de middelbare school).	CSQ-CA (stress), Y-OQ-30.1 (internaliserende problemen), CERQ-short (coping), WHO-index (welbevinden), SSL-i (sociale steun) en een door de onderzoekers opgestelde vragenlijst voor COVID-gerelateerde zorgen. Cronbach's alpha wordt genoemd in het artikel.	Beschrijvende statistiek en gepaarde T-tests, onafhankelijke T-tests en ANOVA's met post-hoc testen, regressieanalyse.
C47 Stevens	Artikel preprint	Longitudinaal onderzoek, drie metingen bij hetzelfde cohort, met vragenlijsten	De steekproef is niet representatief voor de Nederlandse populatie adolescenten. De respondenten komen van drie beroepsopleidingen uit dezelfde regio. In totaal hebben 386 adolescenten (16 jaar en ouder) deelgenomen aan alle drie meetmomenten.	SDQ-R (mentale gezondheid); Cantril Ladder (levenstevredenheid); FAS (SES van het gezin). Van allemaal wordt de validiteit en betrouwbaarheid gerapporteerd.	Latent Growth Model voor alle indicatoren van mentale gezondheid; Multigroup analyse om te kijken hoe de verschillen waren tussen SES categorieën.

<b>Volgnr 1<sup>e</sup> auteur</b>	<b>Publicatie-type</b>	<b>Onderzoeksmethode</b>	<b>Representativiteit onderzoeksgroep</b>	<b>Uitkomstmaat (Gebruikte instrumenten)</b>	<b>Analysemethode</b>
C48 Henkens	Artikel preprint	Kwalitatief onderzoek, semigestructureerd diepte-interviews	Niet van toepassing. Het betreft een kwalitatieve studie met een beperkt aantal respondenten.	Er werd naar de volgende constructen gevraagd: tijdelijkheid, optimisme, parallel denken, verantwoordelijkheid, agency en individualization of the Life-Course.	Kwalitatieve analyse. Er is thematisch gecodeerd op basis van transcripties van de interviews.
C50 Plak	Artikel concept	Longitudinaal onderzoek, drie metingen bij hetzelfde cohort, met vragenlijsten	Het is onduidelijk of de steekproef representatief is voor de Nederlandse populatie ouders van een kind met autisme. Er hebben 331 ouders deelgenomen aan de studie.	Longitudinale vragenlijst uitgezet onder ouders en verzorgers. Autism Spectrum Quotient-Child-28; SDQ (emotionele problemen, gedragsproblemen, hyperactiviteit/aandachtsproblemen, problemen met vrienden, pro sociaal gedrag); Cantril Ladder (sociaal welbevinden en algemeen welbevinden).	Multilevel regression models.
C51 Pinkse-Schepers	Artikel concept	Longitudinaal cohortonderzoek, quasi-experimenteel design, vragenlijsten	Het is onduidelijk of de steekproef representatief is voor de Nederlandse populatie adolescenten. Er hebben 406 adolescenten deelgenomen aan de studie.	CES-DC (Depressie); SAS-A (Sociale angst); Vragenlijst (Impact van corona: blootstelling aan de ziekte, veranderingen in sociale interactie, impact op financiële status; Vragenlijst van Brans et al, 2013 voor de emotieregulatie copingstrategieën.	Latent Growth modellen.
C52 Zijlmans	Artikel ingediend	Longitudinaal onderzoek met vragenlijsten	De steekproef is redelijk representatief voor de algemene en de klinische populatie Nederlandse kinderen en adolescenten. Met kanttekeningen dat het mogelijk is dat er een bias zit op het vrijwillig meedoen aan de studie, dat de hoge SES-groep in een van de steekproeven overgerepresenteerd is, en dat binnen de klinische sample het goed mogelijk is dat lage SES-families de weg naar hulp minder goed weten te vinden.	BPM (ouderrapportage voor een van de samples uit de algemene populatie en de klinische sample) (gedragsproblemen en emotionele problemen); PROMIS (kindrapportages voor een van de samples uit de algemene populatie en de klinische sample) (angst, depressie, boosheid, slaapproblemen, algemene gezondheid en problemen met leeftijdsgenoten).	ANCOVA's, met leeftijd en sekse als covariaten.


Volgnummer 1 <sup>e</sup> auteur	Publicatietype	Onderzoeksmethode	Representativiteit onderzoeksgroep	Uitkomstmaat (Gebruikte instrumenten)	Analysemethode
C53 Hoefnagels	Artikel	Cohortonderzoek met vragenlijsten; PROactive cohort (vanaf 2016) met chronische zieke kinderen en WHISTLER cohort (selectie vanaf 2019) uit algemene adolescenten populatie en cross-sectionele vergelijking tussen steekproeven uit beide cohorten	De steekproef is niet representatief voor de Nederlandse populatie kinderen met en zonder chronische ziekte. De klinische groep (n = 944 voor de pandemie; n = 545 gedurende de pandemie) is vanuit één ziekenhuis geworven en bevat grotendeels meisjes. De respondenten uit de algemene populatie (n = 166) hebben relatief hoog opgeleide ouders en zijn allemaal afkomstig uit de Regio Utrecht.	Cantril ladder (levenstevredenheid); RCADS (internaliserende problemen); HBSC-SCL (psychosomatische gezondheid); OxCGRT (strengheid van maatregelen per dag).	ANOVA voor verschil in tijd. Voor verschillen per groep is een stratified ANOVA uitgevoerd. Om het effect van de strengheid van de lockdown op het welbevinden van kinderen met en zonder chronische ziekte te bepalen is gebruik gemaakt van een hiërarchische lineaire regressie.
C57 Klootwijk	Artikel	Dagelijkse vragenlijst (dagboek) gedurende twintig dagen, prospectief, dezelfde steekproef	De steekproef is niet representatief voor de Nederlandse populatie adolescenten. Er hebben 102 adolescenten (12 tot 16 jaar oud) deelgenomen. Slechts 2% zat op vmbo, de rest op havo en vwo. Ook de sociaal-economisch status van de deelnemers was hoog.	DMD (stemming); SRQ-A (schoolmotivatie) en door de onderzoekers opgestelde dagboekvragen. De vragen staan uitgewerkt in het artikel, de betrouwbaarheid wordt niet beschreven.	Linear mixed models en ANOVA. Bonferroni correctie voor correlerende variabelen.
C59 Asscherman	Artikel	Dagelijkse vragenlijst (dagboek), gedurende vier verschillende weken; prospectief, dezelfde steekproef	De steekproef is niet representatief voor de Nederlandse populatie jonge adolescenten. De kinderen komen voornamelijk uit gezinnen met een relatief hoog inkomen. Er hebben 54 kinderen (9-12 jaar oud) deelgenomen.	Daily Mood Device (DMD, stemming); IPPA (verbondenheid met peers en ouders); SDQ (internaliserende problemen). Er is direct gevraagd naar de tijd die doorgebracht is met vrienden en naar de duur van het contact per dag.	Stemmingsontwikkeling getoets met Latent growth models (Lavaan package). Hierarchical regression analyses voor interactie met sociale verbinding. PROCES Macro om mediatie van stemming te onderzoeken in relatie tussen sociale verbinding en internaliserende problemen.
C60 Van der Velden	Artikel	Longitudinale cohortstudie, met vragenlijsten	De steekproef is representatief voor Nederlandse populatie adolescenten. Er hebben 850 adolescenten deelgenomen.	MHI-5 (angst en depressie) en de in het LISS panel gebruikelijke Health module (vermoeidheid, medicijngebruik, slaapproblemen en zorggebruik).	Chi-kwadraattoetsen, multivariate logistische regressie analyse, ANOVA.

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C61 Bülow	Artikel	Longitudinaal onderzoek, met vragenlijsten	De steekproef is niet representatief voor de Nederlandse populatie adolescenten en hun ouders. Er hebben 179 middelbare scholieren van één middelbare school in Limburg deelgenomen en 144 ouders van dezelfde school (grotendeels, maar niet uitsluitend) van dezelfde leerlingen). Het sample is wat hoger opgeleid dan wat landelijk gemiddeld is.	NRI (ouderlijke warmte, conflicten), POPS (ondersteuning van autonomie), Psychological Control-Disrespect Scale (psychologische controle), Oppositional Defiance Scale (oppositieel verzet), State-Trait Anxiety Inventory Short (angst en zorgen van ouders). Door onderzoekers opgestelde vragen over controle van gedrag, tijd met ouders/vrienden, coronaregels thuis en legitimiteit van ouderlijk gezag.	Piecewise growth models.
C63 Bouter	Artikel	Longitudinale vragenlijst (iBerry study) met twee metingen tijdens de coronacrisis	De steekproef is niet representatief voor de Nederlandse populatie risico-adolescenten. Er hebben 445 adolescenten deelgenomen tijdens de eerste meting, 333 tijdens tweede. De steekproef bestaat uitsluitend uit jongeren uit regio Rotterdam. De jongeren zijn geselecteerd op zelf-gerapporteerde sub-klinische symptomen voor emotionele en gedragsproblemen. Zoals verwacht heeft dus een relatief groot deel van de adolescenten in de steekproef een klinische achtergrond.	Vragenlijst op basis van de Achenbach System of Empirically Based Assessment (ASEBA). Verantwoording van deze vragenlijst is ander artikel.	Multilevel random intercept regression models toegepast met een Restricted Maximum Likelihood estimator.
C65 Van Hooijdonk	Artikel	Vragenlijsten binnen de COVID-19 International Student Well-Being Study	Het is onduidelijk hoe representatief de steekproef is voor de Nederlandse populatie studenten uit hoger onderwijs. Er hebben 9967 studenten van verschillende Nederlandse universiteiten en hogescholen deelgenomen. Representativiteit op het gebied van leeftijd, ouderlijke ses, studierichting en leeftijd wordt niet besproken.	Gevalideerde vragenlijsten, niet verder genoemd of besproken.	Chi-kwadraattoetsen, multivariate logistische regressie-analyse.

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C67 Van der Laan	Artikel	Longitudinale cohortstudie, met vragenlijsten	De steekproef is niet representatief voor de Nederlandse populatie adolescenten. De respondenten komen allemaal uit dezelfde wijk in Utrecht. Voor de pandemie namen 224 (12-16 jaar oud) respondenten deel (binnen het WHISTLER cohort-onderzoek). Daarna minimaal 128 tot maximaal 158 ingevulde vragenlijsten per meting. De hoeveelheid ingevulde vragenlijsten is niet representatief voor de algemene populatie adolescenten vanwege verschillen in SES, etnische en culturele achtergronden, relatief veel vrouwen en relatief veel uit de regio Utrecht in de onderzoeksgroep.	Oxford Government Response Tracker (strengheid van de maatregelen); Cantril ladder (levensstrevredenheid); RCADS (internaliserende problemen); HBSC-SCL (psychosomatische gezondheid).	Generalized estimating equations (GEE), McNemar's chi-kwadraattoets en multiple imputation voor missende data.
C68 Vermeulen	Rapport	Longitudinaal onderzoek, tweede meting bij dezelfde steekproef, met vragenlijsten voor professionals	De steekproef is geografisch representatief voor de Nederlandse populatie professionals in kinderopvang, basisonderwijs en voortgezet onderwijs. In totaal hebben 373 professionals geparticipeerd. Om de representativiteit zo goed mogelijk te waarborgen, is Nederland opgedeeld in vijf zones met ongeveer evenveel kinderen per zone. Vervolgens is het totaal aantal aan te schrijven informanten zo verdeeld over de gebieden dat per geografisch gebied ongeveer dezelfde aantallen kinderen (potentieel of daadwerkelijk) worden gezien.	Er is gebruik gemaakt van een standaard digitaal registratieformulier. Hierin omschrijven respondenten het vermoeden van kindermishandeling. Ze vullen alle beschikbare informatie in over de situatie en de betrokken personen, evenals om de vorm(en) van mishandeling. Deze informatie is vervolgens door drie getrainde codeurs gecodeerd als één of meer typen kindermishandeling, gebaseerd op de definitie van kindermishandeling.	Vanuit het percentage kindermishandeling dat in de steekproef gevonden is, is de landelijke prevalentie berekend.
C69 De Maat	Artikel preprint	Longitudinaal onderzoek, tweede meting bij dezelfde steekproef, met vragenlijsten voor ouders en kinderen	Het is onduidelijk of de steekproef representatief is voor de Nederlandse populaties kinderen met en zonder ASS. Wel zijn beide steekproeven (kinderen met en zonder ASS) zijn grondig gematched.	Brief Problem Monitor, parent report en adolescent report (emotionele en gedragsproblemen); Brief Symptom Inventory (subschalen voor angst en depressie); Three-Item Loneliness Scale (eenzaamheid).	lineaire regressie analyse, multiple regressie analyse en exploratieve logistische regressie



<b>Volgnr 1<sup>e</sup> auteur</b>	<b>Publicatie- type</b>	<b>Onderzoeksmethode</b>	<b>Representativiteit onderzoeksgroep</b>	<b>Uitkomstmaat (Gebruikte instrumenten)</b>	<b>Analysemethode</b>
C70 Euser	Artikel	Cross-sectioneel, met vragenlijst	De onderzoekers beschrijven het sample als representatief. Er worden geen uitspraken gedaan over geografische spreiding of demografische kenmerken anders dan geslacht, thuistaal en onderwijsniveau. Deze drie kenmerken worden alleen van de onderzoeksgroep besproken, niet van de populatie.	Een door de onderzoekers opgestelde vragenlijst om de mening van jongeren te onderzoeken.	Beschrijvende statistiek en logistische regressie analyses

A photograph of a child's legs and feet on a paved surface. The child is wearing blue denim jeans with the cuffs rolled up and white sneakers. The child's right hand is visible, holding a piece of pink chalk and drawing a pink line on the pavement. The background is a blurred outdoor setting.

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