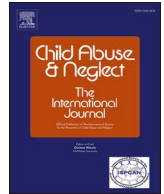




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## The effects of COVID-19 on the development of reported incidents of child maltreatment over time: A systematic literature review

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## ABSTRACT

**Background:** During the COVID-19 pandemic, the life of families all over the world changed unprecedentedly, risks and vulnerabilities for child maltreatment might have altered. While several studies and reviews look at altered reports to child protective services and other organizations in the child protection system, particularly during the first lockdown in spring 2020, there is a gap in research on trends of reported child maltreatment incidents over time.

**Objective:** To bridge the gap on mid- to long-term developments and trends of changes over time, we aimed at summarizing findings on monthly breakdowns of CM reports over time during the pandemic.

**Methods:** In systematic searches of academic literature databases, we have identified 11 articles that adhere to the inclusion criteria of monthly breakdown data from child protective services during the COVID-19 pandemic with a pre-pandemic comparison period. Three additional grey literature reports have been identified. Both studies and reports had to be published in either English, Arabic, French, German, Portuguese, or Spanish.

**Results:** Notably, overall, the level of reported incidents has decreased compared to the years before the COVID-19 pandemic. Overall, no clear and reliable picture emerges in developments by different types of reporters. If the number of reports decreases overall, consequently, the overall number or responses to reports does. Some studies, however, report an altered proportion of responses that increased.

**Conclusion:** There is still a lot to be investigated and understood when it comes to the impact of the COVID-19 pandemic on CM. Policy-makers are called to not only invest into more research on the topic, but, first and foremost, to anticipate a potentially surging need in improved responses to a vulnerable group.

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## 1. Introduction

During the COVID-19 pandemic, the life of families all over the world changed unprecedentedly. An estimated 90 % or more of children and adolescents globally faced school closures (UNESCO, 2020). For prolonged periods, social contacts were limited and out-of-home leisure time activities were cancelled (Imperial College COVID-19 Response Team, 2020), resulting in the inability to meet friends and family and a loss of daily structures (Achterberg et al., 2021). Both in high- and middle-income countries, many parents had to balance working from home with taking care of children and supporting them with home-schooling (Carroll et al., 2020). Others, like health care workers, cleaning staff, or grocery personnel, faced challenges of organizing childcare and home-schooling while being out-of-home for work. Increases in unemployment and wage cuts caused financial pressure, closely associated with stress and consequently family conflicts (Elder, 2018; Elder & Conger, 2000). Unsurprisingly, studies have reported an increased burden of pandemic-related stressors in families (Taylor et al., 2021), higher rates of parental stress were shown across countries (Jansen et al., 2021), resulting in increased rates of parental burnout (Aguirer et al., 2021) and mental health problems (Penna et al., 2023). Altogether, this can severely affect parenting and – in the worst case – lead to neglectful behaviour, and erupt in physical and psychological violence among families in low, middle and high income countries likewise (Fegert, Vitiello, et al., 2020). While this review focusses on high income countries, specific pandemic challenges of families in low- or middle-income countries have been described elsewhere (e.g., Katz et al., 2021; Sharpe et al., 2021).

While much has been written and assumed about the increased risk of child maltreatment (CM) during the pandemic (Fegert, Vitiello, et al., 2020), evidence on how child protection systems responded to the challenges of increased vulnerability is scarce so far. Focusing on the systems' responses is important to potentially identify gaps in providing support and protection to the vulnerable. Systematic reviews aiming to summarize findings on CM during the pandemic show heterogeneous results: In a set of 12 articles on CM reports in different sectors and countries, Rapp et al. found five original studies reporting increased CM in their systematic search conducted in medical databases in December 2020, six reported on a decrease and one stated no difference in CM (Rapp et al., 2021). Marmor et al. identified twenty-five studies published between March and October 2020, mainly reporting decreases of CM in official reports while other sources simultaneously report an increase in CM testimonials, CM risk factors, and helpline use (Marmor et al., 2023). A similar finding was reported by Kourti et al. in their systematic search conducted in July 2020: While CM-related helpline calls increased, official reports show declined rates of CM (Kourti et al., 2023). In their review including studies between January 2020 and August 2022, Huang et al. identified 16 studies on both the prevalence of CM during COVID-19 and reported incidents, showing an overall decline in CM allegations but an increase in severe CM cases (Huang et al., 2023). In parallel, 22 studies were identified demonstrating lockdown measures and subsequent effects for families to be main risk factors contributing to CM (Huang et al., 2023). Katz et al. (Katz et al., 2022) analyzed population-based data across 12 countries and regions during the second COVID-19 wave and found a negative impact on the operation of child protective services (CPS) due to disruption of in-person services. Reports of CM widely varied across the regions. Together, systematic reviews targeting reported rates of CM during COVID-19 display heterogeneous results, mainly due to different data sources and target populations. All identified systematic reviews based their search on medical and psychological electronic databases. The majority of systematic reviews included articles only from the beginning of the pandemic and its associated lockdowns in spring 2020, thereby missing the long-lasting effects of COVID-19 on reported CM rates in later periods of the pandemic. This is important as the impact of the COVID-19 pandemic on child protection systems' performance is likely going beyond school closures and shelter in place policies: The effects of an economic downturn during the pandemic might hit both the families and services with a lag. Scarcer financial resources might affect families' vulnerabilities and consequently the number of identifiable incidents. Reduced tax revenues might affect social budgets and consequently services capacities to support and protect. To bridge the gap on mid- to long-term developments in how child protection systems respond to the challenges and trends of changes of reported incidents over time, we aimed at summarizing findings on monthly breakdowns of CM reports over time during the pandemic. To gain more comparable results, focused our review on one type of data source: Administrative data on reports to CPSs of Western high-income countries published in English or German were analyzed. We focused on this set of countries to both increase societal comparability and reduce noise due to gaps in the structures of the child protection system. Moreover, nationally standardized administrative data on reported CM incidents are regularly lacking in low-income countries. However, even many high- or middle-income countries in Europe lack sufficiently standardized administrative data at the national level which led to the EU-sponsored pan-European initiative Euro-CAN ([www.euro-can.org](http://www.euro-can.org)) aiming to improve administrative data collection on CM incidents. To complement results from this review, a parallel systematic literature research on the effects of COVID-19 on CM rates was conducted.

## 2. Methods

The conduct and reporting of this systematic review are in line with the recommendations of the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines (Page et al., 2021). The review protocol was published in the international prospective register of systematic reviews (PROSPERO) on January 19, 2023 (Record ID: CRD42023386874, available from: [https://www.crd.york.ac.uk/prospero/display\\_record.php?ID=CRD42023386874](https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42023386874)).

### 2.1. Eligibility criteria

Inclusion and exclusion criteria of this review are based on the PECO scheme (population, exposure, comparison, outcome; Morgan et al., 2018) and were determined a priori.

**Population:** Publications concerning children and adolescents aged 0–18 years were included in this review.

**Exposure:** Relevant outcome data during the COVID-19 pandemic period (from 03/2020 and after) should be reported.

**Comparison:** Relevant pre-pandemic outcome data should be reported. The impact of COVID-19 and associated measures to curb down the spread of the Coronavirus were assessed by a comparison of trends of CM incidents in administrative data on CM.

**Outcomes:** We included only studies reporting monthly breakdowns of CPS administrative data, particularly assessing the incidence/prevalence of CM through the following: reported incidents of CM, rates of screened-out, non-substantiated and substantiated incidents, rate of reported incidents with ongoing services. The different outcomes are included as totals or, where available, stratified by (alleged) CM types. Thus, we excluded studies with non-administrative data, qualitative descriptions or data from non-representative samples.

**Study design:** This systematic review included any type of prospective studies, repeated cross-sectional studies or CPS data reports reporting relevant outcomes at multiple time points (before and during the pandemic).

**Setting:** We included studies from high income Western countries with nationally registered CPS data accessible in English or German.

**Publication type:** Studies were eligible for inclusion if they were peer-reviewed publications reporting original study results or were data reports or statistics from relevant CPS or government sites; we consequently excluded other publication types, e. g. reviews, letters to the editor, opinion papers, conference abstracts, etc. We also excluded articles published before March 2020.

## 2.2. Data sources and search strategy

We searched MEDLINE and Web of Science up to December 13, 2022. Based on the pre-defined eligibility criteria, we used a combination of search terms referring to population and CM outcomes (“child\* and (maltreatment or abuse or neglect\* or violence)”), the COVID-19 pandemic (“covid\* or corona virus or coronavirus or pandemic\* or SARS-CoV-2”), data source/context (“surveillance or Child Protect\* Service\* or CPS or welfare service\* or family service\* or administrative”), and data type of interest (“report\* or response\* or case\* or prevalence or inciden\* or registr\*”). Searches were individually adapted to the respective search engine, where applicable, including Medical Subject Headings (MeSHs). The full search strategy can be found in the Supplement, Appendix 1.

To access grey literature and national reports on CPS trends, we added Google searches in English, Arabic, French, Portuguese, and Spanish – languages that are official languages in several countries on more than one continent. Search terms were translated with DeepL software and double-checked by native-speaking academics from the field of child protection. Hits were checked up to a minimum of 10 Google output pages. These searches were further validated by accessing the most recent and by far the most comprehensive effort of comparing child welfare data internationally, the ROCKWOOL-Duke Global Child Welfare Database (cf. Roehrkasse et al., 2023). It includes annualized country-level data from 44 countries between 2000 and 2020. We have double-checked for reports in high-income Western countries with a longer history of publishing reported or confirmed incidents of CM (cf. Roehrkasse et al., 2023) and have added Germany due to its accessibility for the authors.

## 2.3. Study selection

After de-duplication of the records retrieved from the database searches, the titles and available abstracts were screened for eligibility by two reviewers (MH, AK, EO, LYL) in a first step. In the second step, two reviewers (AJ, VC) independently screened full texts of all included records for eligibility based on the above reported criteria. Results were then compared and any discrepancies were discussed until consensus was reached, involving a third reviewer if necessary.

Reference lists of included studies and identified relevant reviews were screened for further potentially eligible publications.

EndNote was used to collect and de-duplicate studies. For the screening of titles and abstracts, we used the web-based application Rayyan ([www.rayyan.ai](http://www.rayyan.ai)).

## 2.4. Data extraction process

Study characteristics and study data were extracted independently by CL and JZ and entered into a Microsoft Excel spreadsheet. Extracted study data was checked for completeness and correctness by two additional reviewers (AJ, MJ).

The following information was extracted: study (1st author, year), country, data source (organization), jurisdictional/organizational level of data provision, number of subjects, sample characteristics like age and gender, time period, sampling approach, number of reports and CPS responses over time (where available also by CM subtype), study results in terms of variability/trajectories/changes in outcomes (see Table 2).

## 3. Results

### 3.1. Literature search

Fig. 1 shows the PRISMA flow chart of study identification and selection process in academic research databases. The literature searches generated a total of 239 results after removal of duplicates, of which 172 were excluded at the title/abstract screening stage. After screening 22 full-text articles, eight studies were included in the review. No further relevant data could be identified from

backwashing via reference lists. Hits included through Google searches are described below.

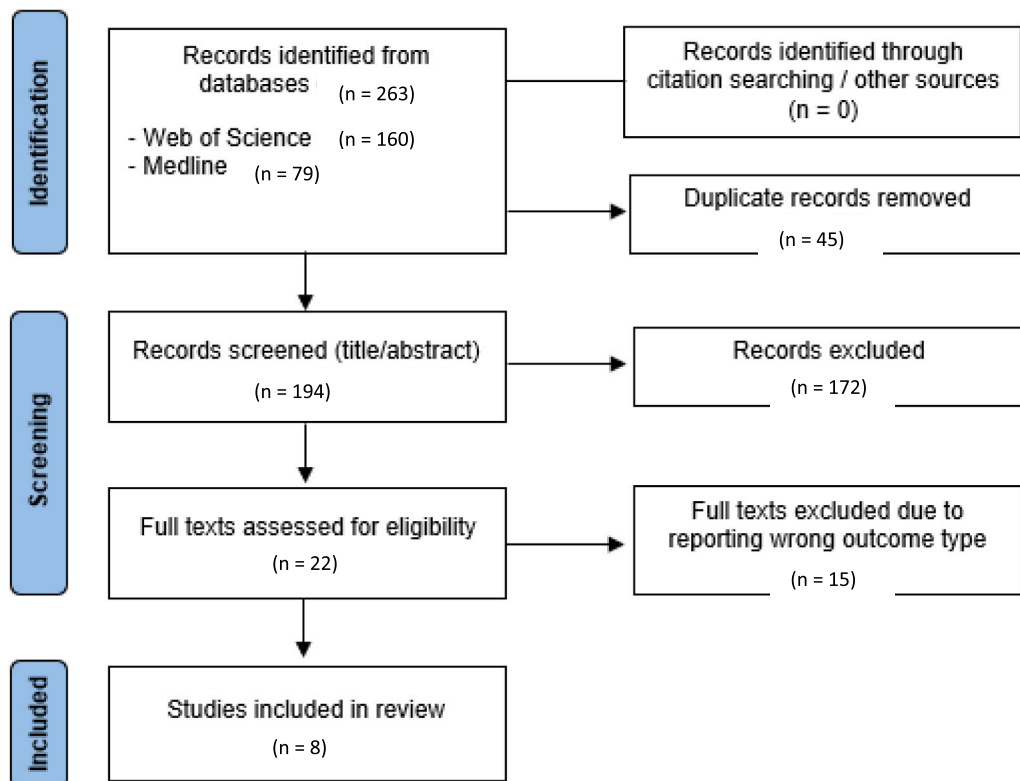
The eight studies included through the systematic review of academic research databases, their duration and population sizes are displayed in the first part of [Table 1](#) together with the three included studies through Google searches and the three included reports (see below). In total, 14 studies/analyses were included. All studies/analyses cover the entirety of the administrative data in the jurisdiction(s) under scrutiny and are collected from government-run child protective services with the exception of the study by [Metcalf et al. \(2022\)](#) that covers administrative data of a legally-mandated NGO (for a conceptual differentiation of terms, see [Trocmé et al., 2016](#)). In general, the administrative data cover children from birth until reaching the age of majority at their 18th birthday. Note, however, that information on potential outliers like pre-birth reports or individuals followed-up into their early adulthood is largely lacking. Moreover, information on gender distribution within administrative data is not available in most articles under scrutiny and is thus not reported in [Table 1](#). All but one article cover US data with population sized above 10,000 reports until a max. of more than 2 million reports. Several reports may cover the same child and one report might cover several children of the same family, so the number of reports does not necessarily approximate the number of children covered by the reports individually. While many articles report on the intense period of the first lockdowns, usually between March 2020 and May/June 2020, several add the period of ‘reopening’ in the summer of 2020, others continue to add periods of re-intensification of safety measures and additional re-openings. Periods of comparison either include 2019 or several other years back to 2013.

### 3.2. Searches on national data published by governmental entities

Based on grey literature searches, three reports with monthly breakdowns of reports during the pandemic, from Australia, Germany, and Scotland, are included (see [Table 1](#)). Unfortunately, the Scottish report ([Scottish Government, 2022](#)) does not provide a monthly breakdown for the months prior to August 2019 and thus lacks an adequate comparison for the first months since the beginning of the COVID-19 pandemic.

### 3.3. Development of reported incidents of child maltreatment over time

Even though we focused on CPS administrative data on the development of reported incidents over time, a meta-analysis was not



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71.

Fig. 1. PRISMA flow diagram of the literature search and study selection process in academic research databases.

**Table 1**  
Studies and reports included in the review.

Study (row 1–7) / Report (row 8/9) (1st author, year)	Country	Jurisdictional level of data provision	N total reports or case openings	Time period covered during the pandemic <sup>1</sup>	Time period covered pre-pandemic
Baron et al., 2020	USA	province/state	n.a.	March–April 2020	January 2004–February 2020
Brown et al., 2022	USA	province/state	115,336	March–July 2020	January – March 2020; matching weeks in 2019 <sup>2</sup>
Metcalfe et al., 2022	USA	County	253,146	March–December 2020	matching weeks in 2019
Levandowski et al., 2021	Brazil	province/state	7718	March–April 2020	matching months in 2015–2019
Nguyen, 2021	USA	province/state	2,745,090	March–December 2020	full calendar years 2013 to February 2020
Nunez et al., 2023	USA	national	n.a.	Weeks 2–262,020	matching weeks in 2019
Park et al., 2024	USA	County	18,771	March–September 2020	June 2019–February 2020
Rapoport et al., 2021	USA	province/state	n.a.	March–May 2020	full calendar years 2015 to February 2020 <sup>2</sup>
Rebbe et al., 2022	USA	province/state	1,828,135	March–July 2020	full calendar years 2016 to February 2020
Shusterman et al., 2022	USA <sup>3</sup>	National	2,032,437 <sup>3</sup>	March–June 2020	matching weeks in 2017, 2018, 2019
Whaling et al., 2023	USA	province/state	n.a.	March–June 2020	Matching weeks in 2014 to 2019 <sup>4</sup>
Australian Institute of Health and Welfare (AIHW), 2021	Australia	National	n.a.	March–Sept 2020	January to September 2019, January/February 2020
Erdmann & Mühlmann, 2021	Germany	National	261,609 <sup>5</sup>	May 2020–March 2021	full calendar years 2017 to 2019
Scottish Government, 2022	Scotland	National	n.a.	March 2020–July 2021	August 2019–February 2020 <sup>6</sup>

Notes: n.a = not available; <sup>1</sup> for an overview, the periods have been rounded to months, even though many studies looked at the weeks of lockdowns; <sup>2</sup> the pre-pandemic period prior to March 2019 was used to generate predicted averages for March 2019 to May 2020; <sup>3</sup> the study not only covered a matching period of the 2020 lockdown in previous year(s), authors also analyzed a pre-lockdown period of January–February in 2020 and the matching period in previous years; <sup>4</sup> screened-in reports; <sup>5</sup> approximated based on Table 1 in the reports chapter 4.3; <sup>6</sup> annualized country data are available until 2000 for periods of August to July.

conducted for several reasons of heterogeneity: i) the periods covered differ, only few studies move beyond August 2020. In addition, ii) different foci of the analyses restrict the comparability of analyzing the same outcome; some studies document screened-in reports as responses, others focus on substantiated reports, medical evaluations, or child register entries as responses. From the perspective of a statistical analysis, we were facing the problem that studies overlap in the US data with no possibility to de-duplicate cases for analyses without access to the raw data. Table 2 thus summarizes important developments over time in reported CM incidents.

Notably, overall, the level of reported incidents has decreased compared to the years before the COVID-19 pandemic – with the exception of the Australian report (Australian Institute of Health and Welfare (AIHW), 2021). Studies either report a decrease of referrals by all sources or those of professional and permanent caregivers in daycare and schools that had no onsite access to children during the lockdowns. On the other hand, some studies note an increase in referrals from medical personnel and/or private (and, in the US, non-mandated) reporters. Overall, no clear and reliable picture emerges in developments by different types of reporters.

If the number of reports decreases overall, consequently, the overall number or responses to reports does. Some studies, however, report an altered proportion of responses that increased, like the proportion of medical evaluations reported by Metcalfe et al. (2022), the proportion of screened-in reports compared to weekly referrals (Brown et al., 2022), or the proportion of substantiated reports as documented by Shusterman et al. (2022). Rebbe et al. (2022) report a sharp increase in domestic violence allegations.

All studies who report data starting from March 2020 report a precipitous decrease in reports to or responses by child protective services at the beginning of the first lockdowns in March 2020. While only a few studies provide findings beyond the summer of 2020, those who do show a development that re-approaches the numbers of the previous year(s) during the summer and continue to increase in fall – albeit still at generally lower level and not as swiftly as in previous years (Metcalfe et al., 2022; Nguyen, 2021). The German report and the Australian report are exceptions from the pattern: If the unique phenomenon of the first total lockdown in 2020 is excluded, the reported incidents follow an increasing and even slightly accelerated trend of reported incidents from previous years. In congruence with all other studies, also the Australian reports decreased sharply during the first lockdown (Australian Institute of Health and Welfare (AIHW), 2021). However, the numbers re-increased thereafter to a higher level compared to pre-pandemic 2019 data. The Scottish governmental data markedly differ. On top of the information reported in Table 1 it is noteworthy to mention that the total number of children currently on the registry – the delta between registrations and de-registrations – has decreased substantially in the period covered during the pandemic (Scottish Government, 2022).

#### 4. Discussion

This is the first systematic review focusing on official reports in CM during the COVID-19 pandemic from administrative data on

**Table 2**

Descriptive analysis of the development of rates of reported incidents of child maltreatment during the COVID-19 pandemic compared to pre-pandemic data.

Study (1st author, year)	Country	Time period covered during the pandemic <sup>1</sup>	Reports		Responses		Reports/Response trends over time <sup>1</sup> (absolute/overall) <sup>2</sup>	Development by subtypes
			Level of reports	Level by type of reporter	Type of response	Level of responses		
Baron et al., 2020	USA	March–April 2020	Decreased	n.a.	n.a.	n.a.	<b>LD Spring 2020</b> sharp decline, increased compared to decline earlier periods of school closures	n.a.
Brown et al., 2022	USA	March–July 2020	Decreased	<b>Decreased</b> gov. workers, medical personnel, educators, family/relatives <b>increased</b> neighbors/friends	Screened-in reports	Decreased	<b>LD Spring 2020</b> sharp decline/reversed peak	decreased for all subtypes
Levandowski et al., 2021	Brazil	March–April 2020	Decreased	n.a.	n.a.	n.a.	<b>LD Spring 2020</b> sharp decline	<b>Decreased</b> for neglect, sexual and physical abuse
Metcalf et al., 2022	USA	March–December 2020	Decreased	<b>Decreased</b> daycare, school <b>increased</b> neighbors/friends, medical personnel, gov. workers	Medical evaluations	LAC increased OC decreased	<b>LD Spring 2020</b> sharp decline/reversed peak <b>Fall 2020</b> re-increases on a lower level	No significant differences by subtype between 2019 and 2020 for both counties
Nguyen, 2021	USA	March–December 2020	n.a.	n.a.	Screened-in reports	Decreased	<b>Responses: LD Spring 2020</b> sharp decline/reversed peak <b>Fall 2020</b> re-increases	n.a.

Study (1st author, year)	Country	Time period covered during the pandemic <sup>1</sup>	Reports		Responses		Reports/Response trends over time <sup>1</sup>	Development by subtypes
			Level of reports	Level by type of reporter	Type of response	Level of responses		
Nunez et al., 2023	USA	Weeks 2–262,020	Decreased	n.a.	n.a.	n.a.	<b>LD spring 2020</b> sharp decline/reversed peak at week 11	Decreased
Park et al., 2024	USA	March–September 2020	Decreased	<b>Decreased</b> school, social service agency; <b>increased</b> medical personnel, friend or neighbor	Substantiated reports	Decreased	<b>LD Spring 2020</b> sharp decline/reversed peak in spring 2020; re-increase in summer 2020 at a higher level compared to 2019	<b>Decreased</b> physical and medical neglect

(continued on next page)

Table 2 (continued)

Study (1st author, year)	Country	Time period covered during the pandemic <sup>1</sup>	Reports		Responses		Reports/Response trends over time <sup>1</sup>	Development by subtypes
			Level of reports	Level by type of reporter	Type of response	Level of responses		
Rapoport et al., 2021 <sup>3</sup>	USA	March–May 2020	Decreased	<b>Decreased</b> all	n.a.	n.a.	<b>LD Spring 2020</b> sharp decline/ reversed peak	n.a.
Rebbe et al., 2022	USA	March–July 2020	Decreased	<b>Decreased</b> social services, educators <b>steady non-</b> mandated, gov. workers, medical personnel	n.a.	n.a.	<b>LD Spring 2020</b> sharp decline/ reversed peak in spring; re-increase in summer at a lower level	Sharp increase in DV allegations (in proportion)
Shusterman et al., 2022	USA	March–June 2020	n.a.	<b>Decreased</b> educators, providers <b>increased</b> non-mandated, gov. workers, medical personnel	Screened in	Decreased	<b>LD Spring 2020</b> sharp decline/ reversed peak	n.a.
Whaling et al., 2023	USA	March–June 2020	n.a.	n.a.	Preventive case openings	Decreased	<b>LD Spring 2020</b> sharp decline/ reversed peak	n.a.
Study (1st author, year)	Country	Time period covered during the pandemic <sup>1</sup>	Level of reports	Level by type of reporter	Type of response	Level of responses	Reports/Response Trends over time <sup>1</sup>	Development by subtypes
Australian Institute of Health and Welfare (AIHW), 2021	Australia	March–September 2020	Increased	n.a.	Substantiated reports	Stable	<b>LD Spring 2020</b> sharp decline/ reversed peak in spring 2020; re-increase in summer 2020 at a higher level compared to 2019	Increased
Erdmann & Mühlmann, 2021	Germany	May 2020–March 2021	n.a.	<b>Increased</b> non-professionals <b>increased</b> professionals	Screened-in reports	Increased	continuous overall increase of pre-pandemic years continues with increased monthly variability	n.a.
Scottish Government, 2022	Scotland	March 2020–July 2021	n.a.	n.a.	Child protection registrations	Decreased	– <i>inconclusive</i> - <sup>4</sup>	n.a.

Notes: <sup>1</sup> LD = Lockdown; <sup>2</sup> where available, the proportional trends of reports/responses are described in-text; <sup>3</sup> Table reports findings based on predicted values; <sup>4</sup> missing information in the figure on monthly breakdown does not allow to conclude a trend.

reports to child protective services. Regrettably, the number of studies or national reports on the impact of the COVID-19 pandemic on reported CM incidents that goes beyond rough annualized breakdowns of numbers is still limited. This review was only able to include fourteen publications with a monthly breakdown of numbers; only five of them report numbers beyond the first summer of the pandemic; only four publications report numbers from outside of the United States. The decrease in the level of reports and a precipitous decline of reported CM incidents starting in parallel to the first lockdowns in March 2020 emerge as main findings. Some findings hint at an increased severity of reported incidents.

While literature suggests a relevant increase of mental health issues and other problems with the arrival of the COVID-19 pandemic (Achterberg et al., 2021; Aguiar et al., 2021; Carroll et al., 2020; Elder, 2018; Elder & Conger, 2000; Fegert, Berthold, et al., 2020; Imperial College COVID-19 Response Team, 2020; Jansen et al., 2021; Penna et al., 2023; Taylor et al., 2021), these findings – so far – have (largely) no fallout in reported incidents of CM to child protective services. Studies included in this review describe, with two exemptions, an overall decrease in reported incidents to child protective services. Given the bulk of studies that report an increase of individual- and family-related problems (Achterberg et al., 2021; Aguiar et al., 2021; Carroll et al., 2020; Elder, 2018; Elder & Conger, 2000; Fegert, Berthold, et al., 2020; Imperial College COVID-19 Response Team, 2020; Jansen et al., 2021; Penna et al., 2023; Taylor et al., 2021) it is not plausible that child protective services have – with lowered activities – responded to a decreased need. More likely, the safety measures restricting contact have led to a decrease in the possibility to detect incidents of CM. The precipitous decline in reported incidents at the beginning of the first lockdowns supports this interpretation. Note, however, that some studies have underscored an increase in the proportion of substantiated cases (Brown et al., 2022; Shusterman et al., 2022). Shusterman et al. (2022) reflect that the “increased proportion of substantiated reports could have resulted from efficiencies in the investigation process due to the lower volume of reports and reduction in workload, allowing caseworkers to thoroughly investigate and substantiate cases that would have been overlooked in previous years.” Consequently, while some cases might have been under-detected, others might have been more readily identified. Future studies will have to explore the profiles of these cases.

Unfortunately, too few of the studies and reports follow-up the development of reported incidents over time during the pandemic to respond to the questions if those allegedly maltreated children missed during the first lockdowns in 2020 are detected at a later stage and consequently lead to an increase of reported incidents during the pandemic compared to monthly breakdowns of previous years. Those studies that do continue to follow-up reports to CPS until the end of 2020 (Metcalf et al., 2022; Nguyen, 2021) have no findings metaphorically resembling a bow wave: While precipitous declines with the first lockdowns in March 2020 resemble the dip of a bow wave, the trends later do not rise above the “sea level” of the same months in previous years to form the wave's bow that makes up for the allegedly missed cases during the precipitous decline with the first lockdowns. The trends of reported incidents largely re-start to resemble the trends of previous years in the weeks and months after the first lockdown – albeit still at a generally lower level thereby suggesting that those cases CPS potentially missed out on during the lockdown period have not (yet) been detected. While some authors (Rebbe et al., 2022; Shusterman et al., 2022) highlight that the decline during the first lockdown resembles declines in reported incidents during regular holiday school closures, it is important to highlight that the lockdown school closure is yet another school closure on top of the regular ones. As such, the remark, the similarity of pattern does not alter the interpretation of potentially missed cases during the first year of the COVID-19 pandemic. Globally, economies seem to slowly recover from the dip during the COVID-19 pandemic (OECD). Due to lowered tax revenues, public social budgets might still remain affected by the economic downturn in the early 2020ies. This is a challenge to watch how it potentially affects trends as researchers have previously highlighted how services' financial capacities might affect support for maltreated children (Stephens-Davidowitz, 2013, July 13).

The identified Australian (Australian Institute of Health and Welfare (AIHW), 2021) and German reports (Erdmann & Mühlmann, 2021) are exemptions of the findings described above. After the first lockdown had ended in May 2020 in the two countries, the average of reported incidents re-starts to resemble the trend of pre-pandemic years with an increase of reported incidents that even slightly surpasses the level of the previous years(s). In Germany, this trend, however, only continues within the period under scrutiny until spring 2021 (Erdmann & Mühlmann, 2021). The report by the national statistical office for the full year of 2021 (Erdmann & Mühlmann, 2021) highlights a comparable rate, even slightly decreased rate of reported CM incidents in 2021 that is thus far from continuing the upwards trends of previous years. The question thus remains if the children and adolescents that have suffered from the pandemic will eventually re-appear in CPS in later stages.

Some findings – like the increased proportion of medical evaluations reported by Metcalf et al. (2022) or the increased proportion of substantiated reports as documented by Shusterman et al. (2022) – may hint at an increased severity of reported incidents during the pandemic that might either have arisen from a proportional increase of reported incidents with increased severity or a decline in reporting less severe incidents to CPS. Other studies on trends explore differences in reporting by race/ethnicity (Levandowski et al., 2021; Park et al., 2024) or rural/urban settings (Nunez et al., 2023). Anyhow, the evidence is so far not sufficient to support conclusions beyond exploratory remarks.

While this study is the first to assemble an overview of evidence on monthly breakdowns of reported CM incidents to CPS, the overview comes with limitations. First, the timing is obviously too early to dive into the evidence on how the COVID-19 pandemic has altered reported incidents. Studies on the topic are not only lacking in general, those available also lack important information on demographics or subtypes of CM. Operationalizations, e.g., of type of reporters, do not always match and might thus lead to potentially contradicting findings. While we can assume that gender distribution should be roughly equal in CPS in a majority of jurisdictions, examples like the incidents from Orange County (CA) analyzed by Metcalf et al. (2022) with less than a quarter of the male population highlight the need to preferably report gender distribution in all future analyses. Even though we have added systematic Google searches with the support of translation software, we have to acknowledge that the inclusion of grey literature reports might have been biased: That a German report was among only three reports with monthly breakdowns, might have been due to the authors' German affiliations and expertise on the national system. The report was not issued by a national statistical office or a ministry, but a clearinghouse located at the University of Dortmund. We might have missed such reports in other countries and languages. Lastly, we have focused on incidents reported to and identified by CPS. As highlighted above, (substantiated) reports are not a measure of prevalence rates of child maltreatment in the population. Research on reported incidents aims at identifying on how well child protection systems work in protecting the vulnerable.



## 5. Conclusion

Everyone, researchers included, seems to be glad that the COVID-19 pandemic as a global health emergency is over. Scientific foundations might be slightly getting reluctant to invest in this used-to-be hot topic and have largely stopped to issue specific calls. The urge to move on to other relevant topics might be understandable but potentially too early. There is still a lot to be investigated and understood when it comes to the impact of the COVID-19 pandemic on CM. As the majority of the publications considered in this systematic review predominantly examine the period up to the end of 2020, which also reflects the primary phase of lockdown measures, it is not possible to draw comprehensive conclusions regarding the overall impact of the pandemic on reported incidents of CM from the findings of this review. For future research, it is essential to differentiate between the factors influenced by lockdowns, where some families may also have experienced relief (e.g., due to reduced scheduling commitments), quarantine and the long-lasting pandemic-related restrictions, which, however, are not sufficiently assessed by the presented here. Future studies might combine reported incidents with proxies of child maltreatment prevalence in the population to better assess how well the systems respond (see, e.g., Riddell et al., 2022, for an innovative approach).

If the assumption is true that we have missed out on an important part of maltreated children during the first months and year(s) of the pandemic and not responded adequately with the means of the child protection system, the situation of some of the children might have deteriorated since, an early or even preventive intervention is out of question. Consequently, the numbers of reported incidents might not only rise beyond averages of previous years, the children and their family might also need more intense support than in previous years. Policy-makers are called to not only invest into more research on the topic, but, first and foremost, to anticipate a surging need in improved responses to a vulnerable group.

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## CRedit authorship contribution statement

**A. Jud:** Visualization, Validation, Investigation, Formal analysis, Data curation, Conceptualization, Writing. **E. Orban:** Validation, Project administration, Methodology, Data curation. **A. Kaman:** Validation, Formal analysis, Data curation. **U. Ravens-Sieberer:** Validation, Funding acquisition. **M. Jarczok:** Validation, Methodology, Formal analysis, Data curation. **L.Y. Li:** Validation, Methodology, Data curation. **C. Laser:** Validation, Data curation. **B. Ondruschka:** Validation, Data curation. **J. Zwirner:** Validation, Data curation. **M. Hildebrand:** Methodology. **J. Ewert:** Validation. **C. Jung-Sievers:** Validation. **S. Wiegand-Grefe:** Validation. **V. Clemens:** Writing – review & editing, Validation, Data curation, Conceptualization.

## Data availability

Data are used from articles cited.

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