

Appendices

Appendix A. Search Strategy

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Appendix A. Search Strategy

MEDLINE via PubMed

```
(((((depress*[Text Word] OR "mental distress"[Text Word] OR "psychological distress"[Text Word] OR "depression"[MeSH]) AND (("COVID-19" OR "COVID-19"[MeSH Terms] OR covid OR "covid 19"[All Fields] OR "covid 19"[MeSH Terms] OR covid-19 OR "sars cov 2"[All Fields] OR "sars cov 2"[MeSH Terms] OR "severe acute respiratory syndrome coronavirus 2"[All Fields] OR "ncov"[All Fields] OR "2019 ncov"[All Fields] OR "coronavirus"[MeSH Terms] OR "coronavirus"[All Fields] OR "cov"[All Fields] OR "SARS-CoV-2"[All Fields] OR "2019-nCoV"[All Fields]))) AND (humans[Filter])) AND (english[Filter])) NOT (("canada"[MeSH Terms] OR "mexico"[MeSH Terms] OR "caribbean region"[MeSH Terms] OR "central america"[MeSH Terms] OR "latin america"[MeSH Terms] OR "south america"[MeSH Terms] OR "africa"[MeSH Terms] OR "asia"[MeSH Terms] OR "australia"[MeSH Terms] OR "europe"[MeSH Terms] OR "oceania"[MeSH Terms] OR "pacific islands"[MeSH Terms]) NOT (Hawaii OR "indian ocean islands"[MeSH Terms] NOT "United States"[MeSH]))
```

Filters: from 2019 - 2022

Embase search:

```
#1 'depression'/exp OR depression  
#2 depression OR depressive OR 'psychological distress' OR depress* OR 'common mood disorder' OR 'psychiatric diagnosis'  
#3 #1 OR #2  
#4 'coronavirus disease 2019'  
#5 'severe acute respiratory syndrome coronavirus 2'  
#6 2019 AND ncov  
#7 covid  
#8 #4 OR #5 OR #6 OR #7  
#9 #3 AND #8  
#10 #3 AND #8 AND ([article]/lim OR [article in press]/lim) AND [humans]/lim AND [english]/lim  
#11 'united states'/exp OR 'united states'  
#12 #10 AND #11
```

Combined

Cochrane library

```
#1 MeSH descriptor: [Depression] explode all trees  
#2 depress* OR "psychological distress" OR "mental distress"  
#3 #1 or #2  
#4 MeSH descriptor: [COVID-19] explode all trees
```

#5 covid OR "covid 19" OR "sars cov 2" OR "severe acute respiratory syndrome coronavirus 2" OR "ncov" OR "2019 ncov" OR "coronavirus" OR "cov" OR "SARS-CoV-2" OR "2019-nCoV"

#6 #4 OR #5

#7 #3 AND #6

Selected the trials tab

APA PsycInfo

TX (Depression OR depressive OR psychological distress OR depress* OR mental distress)
AND TX (covid OR "covid 19" OR "sars cov 2" OR "severe acute respiratory syndrome coronavirus 2" OR "ncov" OR "2019 ncov" OR "coronavirus" OR "cov" OR "SARS-CoV-2" OR "2019 nCoV")

Filters: Published within Jan 2019 – May 2022; Peer reviewed; Human population; English-speaking; adulthood (18 yrs & older)

Appendix B. Technical details for data extraction and synthesis

Manual calculations

For studies that did not report the prevalence of depression among all U.S. adults but that reported enough data for us to manually calculate it, we calculated the prevalence of depression. For studies that provided mild, moderate, and severe depression separately, we combined the moderate and severe prevalence numbers, weighted by sample size. A summary of the manual calculations is provided below.

Appendix B Table 1. Details for synchronizing severity levels

Author (Year)	Description
Breslau et al. (2022, 2021)	Combined the prevalence of moderate distress with the prevalence of severe distress
Kantor and Kantor (2020)	Combined the prevalence of moderate distress with the prevalence of severe distress
Matzopoulos et al. (2022)	Combined prevalence of depression for psychedelic and non-psychedelic users
Park et al. (2022)	Divided the number of respondents who met the cutoff for depression over the total number of respondents
Thomeer et al. (2022)	Extracted participants who screened positive for depression from a combined prevalence of depression and anxiety
Twenge et al. (2021)	Combined sample size from different data collection periods that were aggregated into seasonal waves
Wilson et al. (2021)	Combined the prevalence of moderate depressive symptoms with the prevalence of moderately severe and severe depressive symptoms
Zhang et al. (2021)	Combined the prevalence of depression in women with the prevalence of depression in men
Zhou et al. (2020)	Combined the prevalence of moderate depressive symptoms with the prevalence of severe and extremely severe depressive symptoms

Note: *Same data point reported in two articles

Details on data extraction

In cases when articles did not state the last date of data collection, but when they stated the last month, we entered in the last day of the month (Breslau et al., 2021; Lee et al., 2021; Lueck, 2021; Matzopoulos et al., 2022; Shi et al., 2022). For depression instrument cutoffs, Zhou et al did not note their cutoff so we assumed a standard cutoff score of 14 or greater for the DASS-21 (Antony et al., 1998). For Lee et al., we reported a standard cutoff of three on the PHQ-1 (the second question of PHQ-2) based on information provided by authors.

Details on depression instruments used in articles included in review

PHQ: The PHQ (Patient Health Questionnaire) was the most frequently used depression instrument and was used in 73.4% of studies in the literature reviewed (n=36). Within the broad categorization of PHQ, studies used different versions of the screening tool: the PHQ-2, PHQ-4, PHQ-8, PHQ-9, and the PHQ-1 (using a single item, the second question of the PHQ-9).

- **PHQ-9 (n=5):** The PHQ-9 is the 9-item depression screening instrument from the full PHQ. The PHQ-9 has been clinically validated and can be used to screen for major depressive disorder with varying severities: total scores of 5, 10, 15, and 20 represent cut points for mild, moderate, moderately severe, and severe depression respectively (Kroenke et al., 2001). Of the 5 studies that used the PHQ-9, 4 used a cutoff score of 10, indicating moderate depressive symptoms or above (Ettman et al., 2021, 2020; Kantor and Kantor, 2020; Matzopoulos et al., 2022). One study, by Bryan et al., used a cutoff score of 14, indicating severe depressive symptoms or above ("greater than or equal to 14") (Bryan et al., 2020).
- **PHQ-8 (n=4):** The PHQ-8 includes the same questions as the PHQ-9 (excluding the 9th item on self-harm). The PHQ-8 also uses the same cutoff points as the PHQ-9: total scores of 5, 10, 15, and 20 represent cut points for mild, moderate, moderately severe, and severe depression respectively (Kroenke et al., 2009). All 4 studies that used the PHQ-8 used the same severity cutoff (cutoff score ≥ 10), reporting on moderate depressive symptoms or above (MacDonald et al., 2022; McKnight-Eily et al., 2021; Warren et al., 2021; Wilson et al., 2021).
- **PHQ-4 (n=5):** The PHQ-4 is a validated screening tool for depression *and* anxiety (combining the PHQ-2 and GAD-2) (Kroenke et al., 2009, 2003). A score of ≥ 3 represents a cutoff for identifying potential cases of depression. There was considerable heterogeneity in the manner that authors reported their results when using the PHQ-4. For our analysis, we categorized the literature into two categories. First, studies that did report the usage of the PHQ-2 and GAD-2 (but not PHQ-4 specifically) were grouped as PHQ-4 studies for consistency. The three studies that fit these criteria do not report disaggregated results for depression or anxiety; however, use a depression screener cutoff of " ≥ 3 on either the GAD-2 or PHQ-2," assessing symptoms that are mild and above (Cai et al., 2021; Czeisler et al., 2021b; Nagata et al., 2022). Studies conducted by Kampfen et al. and Riehm et al. specify their usage of the PHQ-4 in particular - and use the associated screener cutoff (≥ 3 on the PHQ-4) (Kämpfen et al., 2020; Riehm et al., 2021). Anxiety and depression were not disaggregated in these studies. Broadly, when a study did not report disaggregation between results for depression and anxiety, specifically for the PHQ category, we categorized them as PHQ-4.
- **PHQ-2 (n=21):** The PHQ-2 consists of the first 2 questions of the PHQ-9, and a cutoff score of ≥ 3 indicates that "major depressive disorder is likely" (Kroenke et al., 2003). Of the 21 studies that used the PHQ-2, 20 used this definition (Chen et al., 2022; Czeisler, 2020; Czeisler et al., 2021a; Daly et al., 2021; Donnelly and Farina, 2021; Holingue et

al., 2020; Kim, 2021; Lee et al., 2021; Martinez et al., 2022; Nguyen et al., 2022; Park et al., 2022; Park and Kim, 2021; Samuels et al., 2021; Shen et al., 2022; Sundermeir et al., 2021; Thomeer et al., 2022; Twenge et al., 2021; Twenge and Joiner, 2020b; Vahratian, 2021; Zhang et al., 2021). Shen et. al did not state the cutoff score used in their analysis of depressive symptoms (hence, marked "Did not state") (Shen et al., 2022).

- **PHQ-1 (n=1):** One study used only the second question of the PHQ-2 as a depression screening instrument, which we called the PHQ-1. The PHQ-1 is a modified version of the PHQ-9 to assess serious depression if the participant selected showing symptoms "nearly every day". Only one study, Lee et al., used this depression screener, and the prevalence, on average, was lower using this instrument than instruments with more items (Lee and Singh, 2021).

CESD: The CES-D (Center for Epidemiological Studies - Depression) is a 20-item self-report screening instrument for depression. In our systematic review, 3 studies used versions of the CESD to ascertain depression levels (n=3).

There are two versions of the CESD that were used in the assessed literature: the CES-D-8 and the CES-D-10.

- **CES-D-8 (n=1):** The CES-D-8 is an 8-item screening tool developed to screen depressive symptoms. Scores range from 0-24, where higher scores indicate a higher frequency of depressive complaints. Only one study, Birditt et. al, used this depression screener, using a score of ≥ 16 as a benchmark of "poor psychological well-being" (Birditt et al., 2021).
- **CES-D-10 (n=2):** The CES-D-10 is a 10-item self-report measure of depression, where on a scale of 0-30, a score of ≥ 10 is considered "depressed". Two included studies used this instrument, Rosenberg et al. and Weaver et al.: using this definition as an indicator of the presence of "significant depressive symptoms"(Rosenberg et al., 2021; Weaver et al., 2021).

Kessler: The Kessler Psychological Distress Scale is a questionnaire intended to measure non-specific psychological distress, based on questions about depression and anxiety symptoms (n=8). The studies in this systematic review all used the Kessler-6: a 6-item self-report measure of psychological distress. On a scale from 0-24, moderate distress is identified as a score of 8-12, and serious distress ≥ 13 . All studies except one used a cutoff score of ≥ 13 , while Linton et al. used a score of ≥ 5 to quantify "severe to moderate psychological distress" (Linton et al., 2021). All 8 studies that used the Kessler-6 reported on broad "psychological distress" as outcomes (Breslau et al., 2022, 2021; Linton et al., 2021; McGinty et al., 2022, 2020a, 2020b; Shi et al., 2022; Twenge and Joiner, 2020a).

DASS: The Depression Anxiety Stress Scale is a self-report instrument designed to measure related emotional states of depression, anxiety, and tension/stress. The DASS is the least-reported measure of depression used in this systematic review (n=1).

The study in this systematic review used the DASS-21: a shorter 21-item version of the original 42-item instrument.

- **DASS-21:** The DASS-21 is a shortened 21-item version of the original instrument (the 42-item DASS) that measures severity of symptoms common to both depression and anxiety. Each measured item (depression, anxiety, and stress) is scored separately, and each score is multiplied by 2, using the traditional DASS measurement criteria. For depression, severity ratings range from 0-9, 10-13, 14-20, 21-27, and ≥ 28 for normal, mild, moderate, severe, and extremely severe depression, respectively. The study that used this depression screener, Zhou et. al, analyzes “depression” and disaggregates by severity level by wave. We manually calculated prevalences for this study by summing moderate, severe, and extremely severe depressive symptoms prevalence for each wave. We analyzed only the depression data, not anxiety or stress (Zhou et al., 2020).

Original (n=1): We had one study that used modified or original criteria to identify depression and other associated outcomes. Tham et. al reported on “mental distress” using participant’s responses to the following questions: “In the past 7 days, how often have you: 1) felt nervous, anxious, or on edge; 2) felt depressed; 3) felt lonely; 4) felt hopeless about the future; 5) had physical reactions such as sweating, trouble breathing, nausea or a pounding heart when thinking about your experience with the coronavirus pandemic?” (Tham et al., 2021).

Combination (n=1): When a study reported on more constructs than depression and anxiety, we categorized it as a “combination” study. Birditt et al. reported on “poor psychological well-being” using three scales: the CES-D-1 (Center for Epidemiologic Studies Depression Scale, Beck-1 (Beck Anxiety Inventory), and the Kircanski rumination scale (Birditt et al., 2021). Using a combination of these three instruments, a higher score (≥ 16 on a 0-24 scale) indicated a greater likelihood of poor psychological well-being (depression, anxiety, and rumination).

Appendix B Table 2. Poor mental health severity by screening instrument used and construct measured

Screening instrument	Mild and above	Moderate and above	Severe and above	Did not state	Total	Construct measured by screeners
PHQ	7	48	15	1	71	Depressive symptoms
Kessler		1	9		10	Psychological distress
DASS		3			3	Negative emotional states of depression, anxiety, and tension/stress
CESD	2				2	Depressive symptoms
Combination	1				1	Depressive symptoms and poor psychological well-being combined
Original		1			1	Common mental disorders
Total	10	53	24	1	88	

Appendix C. Supplemental tables and figures

Supplemental Figure 1. Frequency of prevalence points collected by month of data collection and month of article publication (n=88)

Supplemental Figure 2. Frequency of prevalence points reported across time by depression screening tool core

Supplemental Figure 3. Frequency of prevalence points reported across time by depression screener and cutoff

Supplemental Figure 4. Prevalence of depression over time by study source with more than three prevalence points

Supplemental Figure 5. Prevalence of depression over time by survey sampling technique

Supplemental Figure 6. Prevalence of depression over time by constructs including and excluding anxiety

Supplemental Figure 7. Prevalence of depression over time by constructs including and excluding psychological distress

Supplemental Figure 8. Prevalence of depression over time by severity unweighted and weighted by study size

Supplemental Figure 9. Prevalence of depression across time

Supplemental Table 1. Depression term used by authors across papers (n=49)

Supplemental Table 2. Comparison of depression screener groups by construct, number of articles, and sample size

Supplemental Table 3. Average prevalence of depression, prevalence points reported, sample size, minimum, and maximum estimates by mild, moderate, and severe depression

Supplemental Table 4. Average monthly prevalence of depression over time by severity, weighted and unweighted by sample size

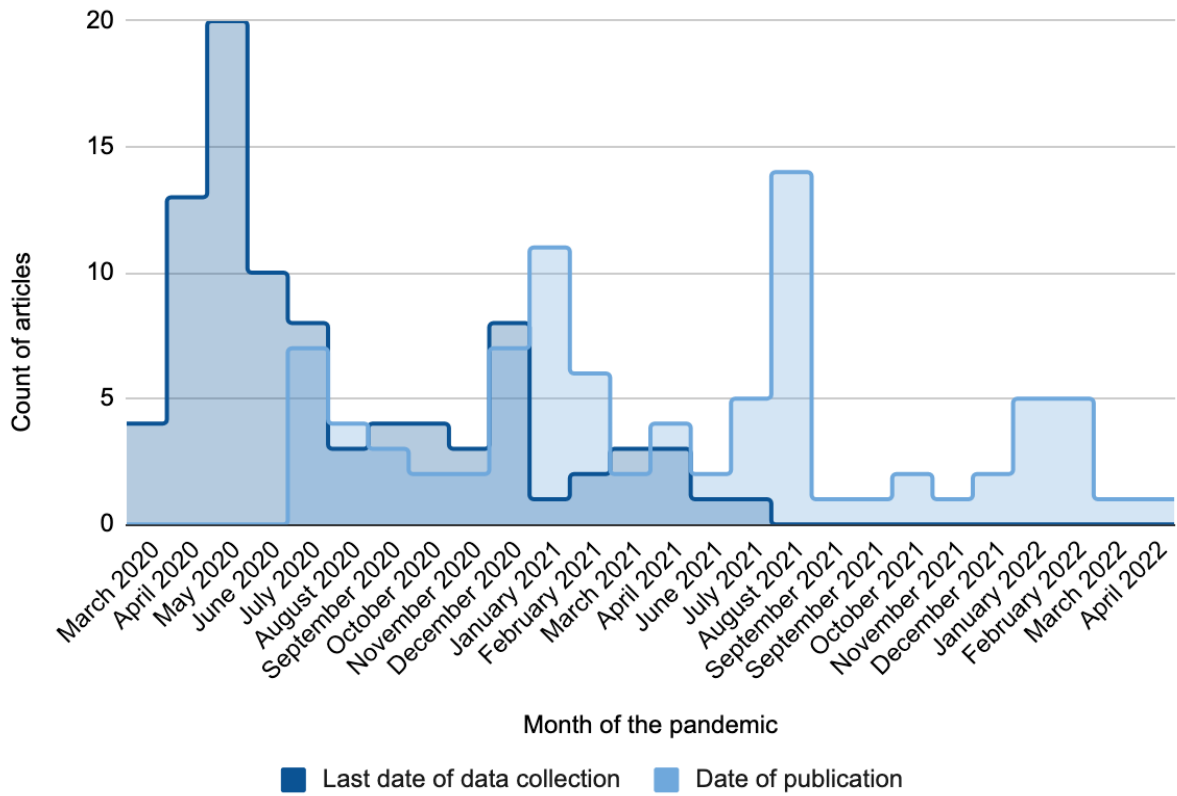
Supplemental Table 5. Average monthly prevalence of depression over time by severity, comparing total sample (non-probability and probability-based studies) and samples with only probability-based samples

Supplemental Table 6. Average monthly prevalence of depression over time by severity, comparing total sample (depression and depression or anxiety) and only studies reporting depression

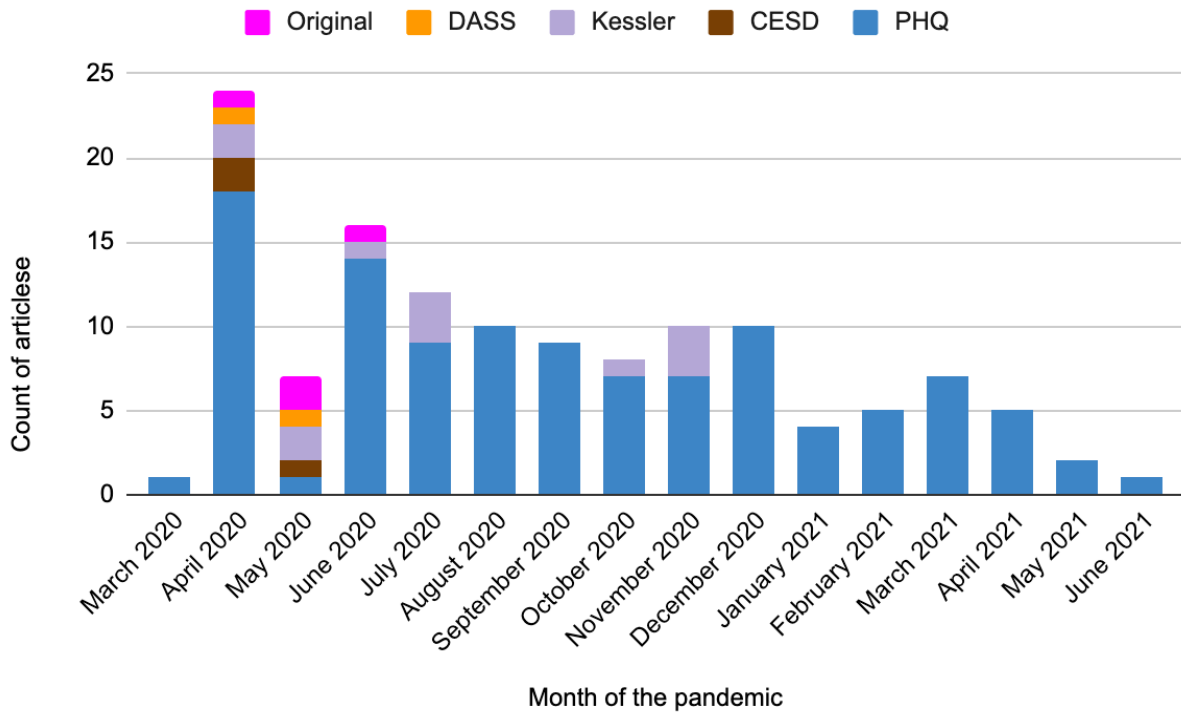
Supplemental Table 7. Average monthly prevalence of depression over time by severity, comparing constructs including and excluding psychological distress

Supplemental Table 8. Charted Review (n=49)

Supplemental Figure 1. Frequency of prevalence points collected by month of data collection and month of article publication (n=88)

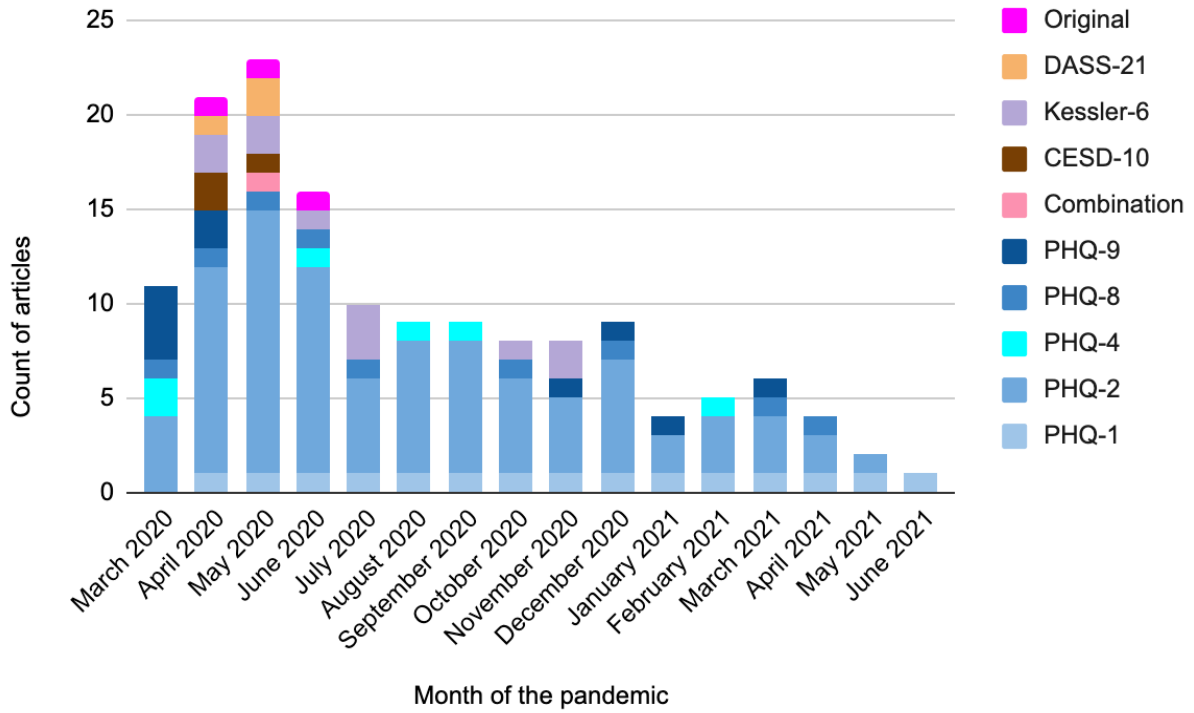


Supplemental Figure 2. Frequency of prevalence points reported across time by depression screening tool core.



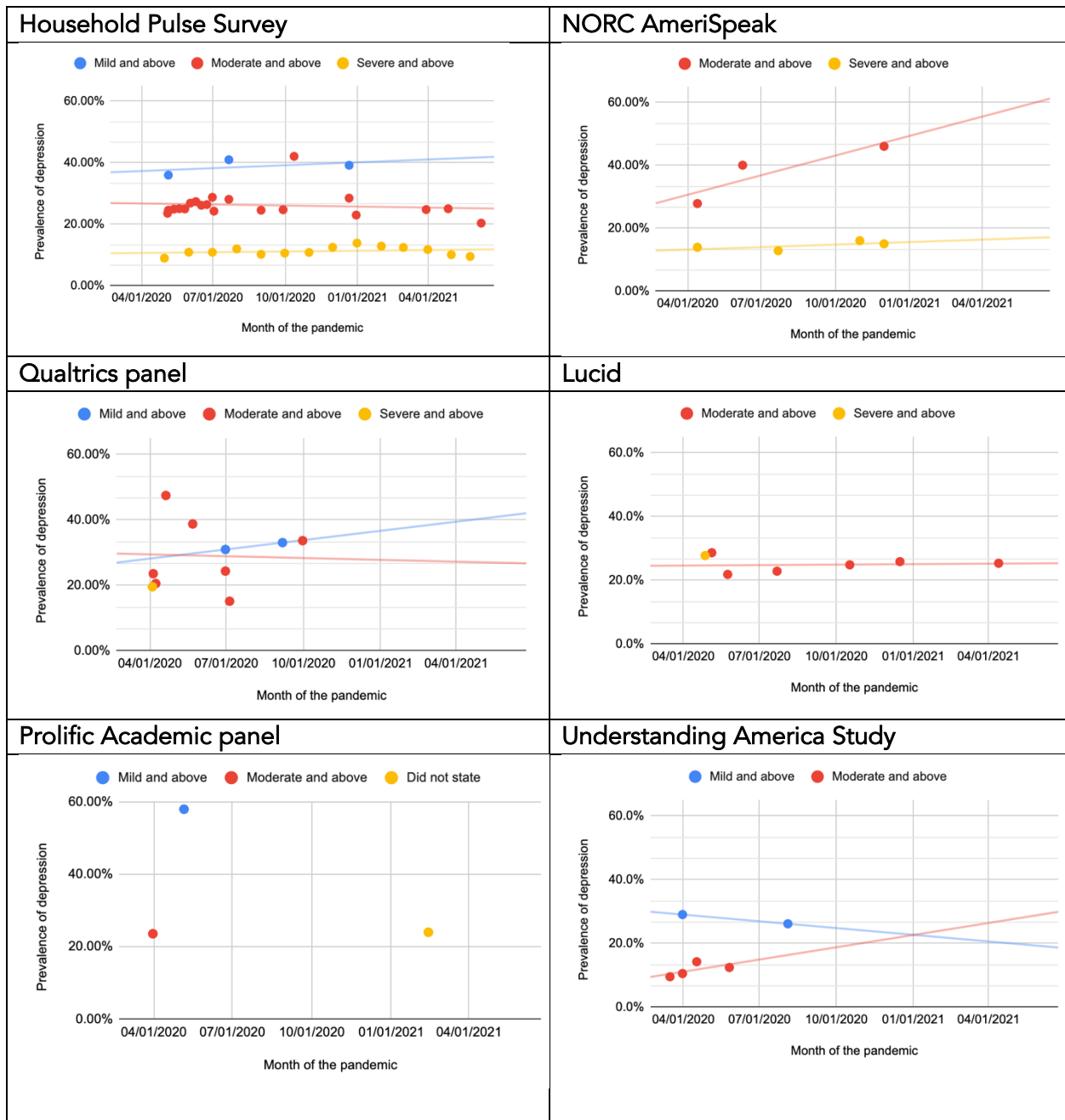
Note: Some studies reported pooled prevalence estimates collected across multiple months; numbers add up to more than 88. Not shown: one study used a combination of depression screeners in May 2020.

Supplemental Figure 3. Frequency of prevalence points reported across time by depression screener and cutoff.



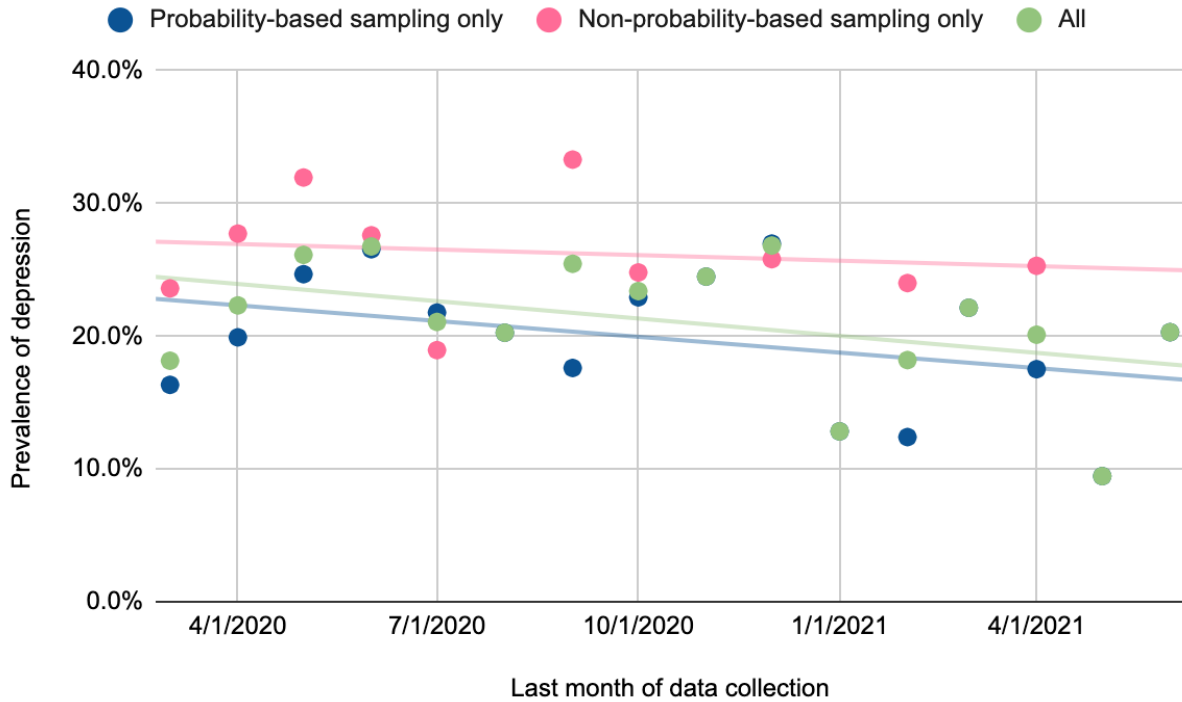
Note: Some studies reported pooled prevalence estimates collected across multiple months; numbers add up to more than 88.

Supplemental Figure 4. Prevalence of depression over time by study source with more than three prevalence points

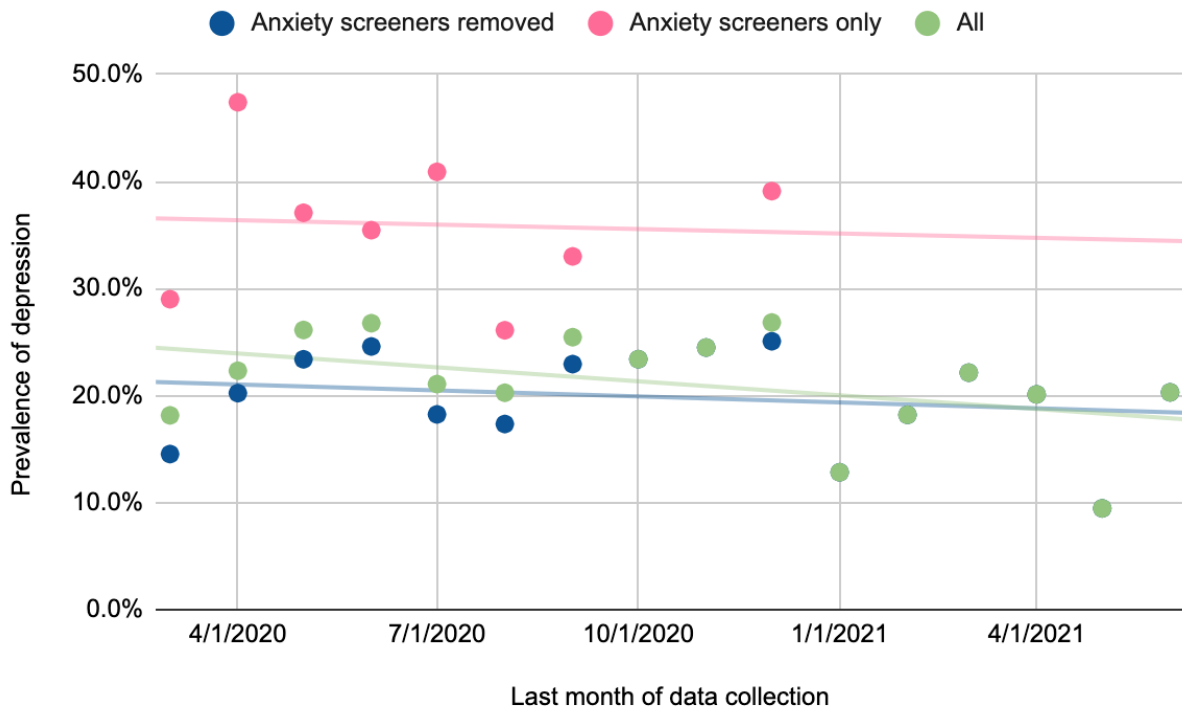


Note: Studies with only one prevalence point recorded not shown. Prevalence points are averaged by month.

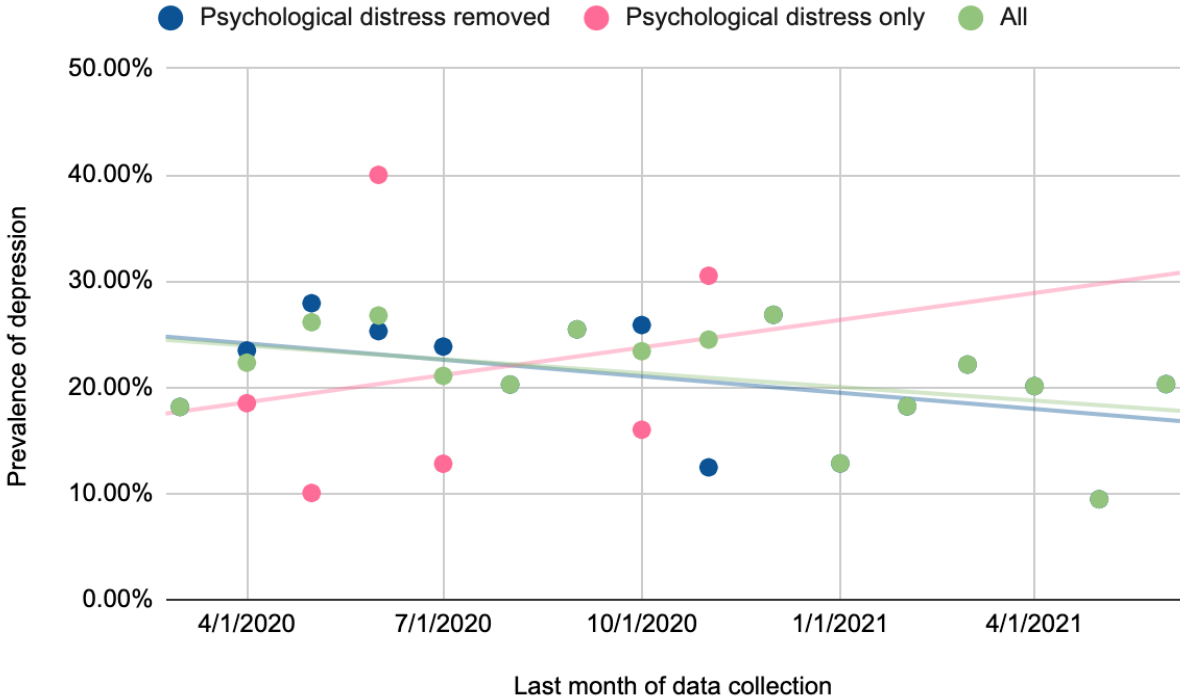
Supplemental Figure 5. Prevalence of depression over time by survey sampling technique



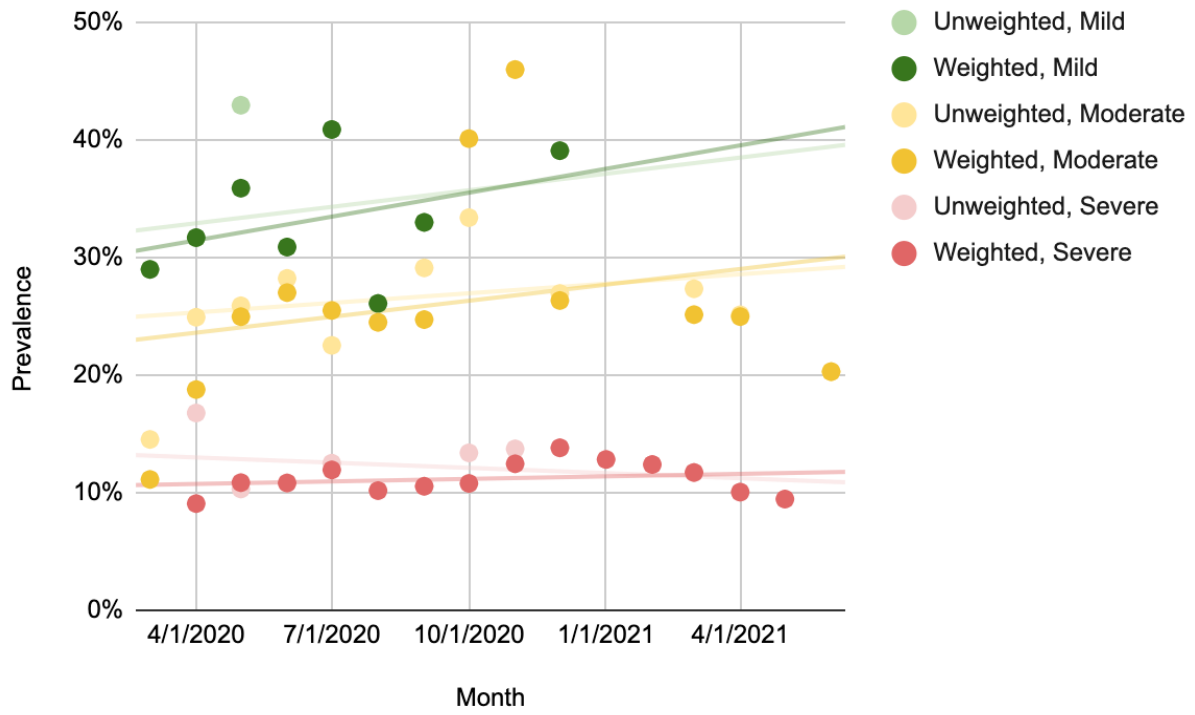
Supplemental Figure 6. Prevalence of depression over time by constructs including and excluding anxiety



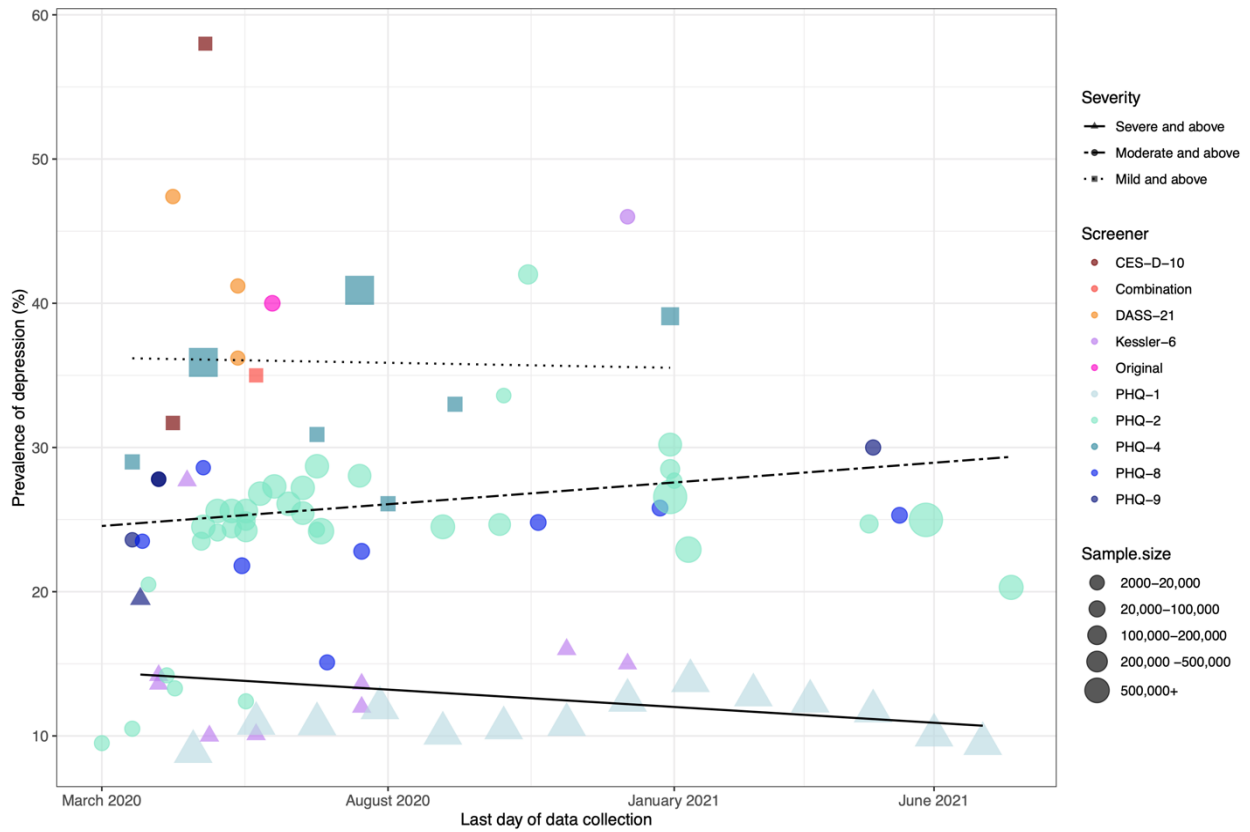
Supplemental Figure 7. Prevalence of depression over time by constructs including and excluding psychological distress



Supplemental Figure 8. Average prevalence of depression by month and by severity level, unweighted and weighted by study sample size



Supplemental Figure 9. Prevalence of depression across time



Note: Each symbol on the graph represents a prevalence point reported by papers, with different symbols showing the severity of depression reported: mild, moderate, severe. Best fit lines regressed against time by prevalence point stratified by severity. Larger symbols represent larger sample sizes for each prevalence point reported. Colors show depression instruments used.

Supplemental Table 1. Depression term used by authors across papers (n=49)

Depression terms used	n (%)
Current depression	1 (2%)
Depression	10 (20%)
Depression and anxiety symptoms	1 (2%)
Depression or anxiety	2 (4%)
Depression symptoms	3 (6%)
Depression/depressive disorder	1 (2%)
Depressive and anxiety symptoms	1 (2%)
Depressive disorder	1 (2%)
Depressive disorder symptoms	1 (2%)
Depressive symptoms	9 (18%)
Depressive/anxiety symptoms	1 (2%)
Major Depression Disorder (MDD)	1 (2%)
Major depressive disorder symptoms	1 (2%)
Mental distress	4 (8%)
Poor psychological well-being	1 (2%)
Probable depression	3 (6%)
Psychological distress	7 (14%)
Serious depression	1 (2%)

Supplemental Table 2. Comparison of depression screener groups by construct, number of articles, and sample size

Depression screener (cutoff score)	Severity level	Number of articles	Total sample size
PHQ-9, (≥ 10)	Moderate depressive symptoms or above	4	11,026
PHQ-9, (≥ 14)	Severe depressive symptoms or above	1	10,625
PHQ-8 (≥ 10)	Moderate depressive symptoms or above	4	81,215
PHQ-4 (≥ 3 out of 12)	Depressive/anxiety symptoms	2	13,786
PHQ-4 (≥ 3 on PHQ-2 OR ≥ 3 on GAD-2)	Positive screening for depression or anxiety	3	1,069,579
PHQ-2 (≥ 3)	Major depressive disorder is likely	20	9,966,822
PHQ-2 (Did not state)	Did not state	1	503
PHQ 1 (≥ 3)	Probable serious depression	1	986,692
Kessler-6 (≥ 5)	Moderate to severe psychological distress	1	
Kessler-6 (≥ 13)	Psychological distress	7	15438
CES-D-10 (≥ 10)	Significant depressive symptoms	2	1372
DASS-21 (≥ 14)	Depressive symptoms	1	2096
Combination	"Higher score indicates higher likelihood of poor psychological well-being (depression, anxiety, or rumination"	1	645
Original	Moderate mental distress	1	11480

Supplemental Table 3. Average prevalence of depression, prevalence points reported, sample size, minimum, and maximum estimates by mild, moderate, and severe depression

Severity	Total number of prevalence points	Total sample size	Min	Max	Average
Mild	10	2,073,731	26.1%	58.0%	36.0%
Moderate	53	11,383,806	9.5%	47.4%	26.0%
Severe	24	13,838,529	8.9%	27.7%	12.9%
Did not state	1	503	24.0%	24.0%	24.0%
Total	88	27,296,569	8.9%	58.0%	23.5%

Supplemental Table 4. Average monthly prevalence of depression over time by severity, weighted and unweighted by sample size

Month	Prevalence points	Mild		Moderate		Severe	
		Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
3/1/20	4	29%	29%	15%	11%		
4/1/20	13	32%	32%	25%	19%	17%	9%
5/1/20	20	43%	36%	26%	25%	10%	11%
6/1/20	10	31%	31%	28%	27%	11%	11%
7/1/20	8	41%	41%	23%	26%	13%	12%
8/1/20	3	26%	26%	25%	25%	10%	10%
9/1/20	4	33%	33%	29%	25%	11%	11%
10/1/20	4			33%	40%	13%	11%
11/1/20	3			46%	46%	14%	12%
12/1/20	8	39%	39%	27%	26%	14%	14%
1/1/21	1					13%	13%
2/1/21	2					12%	12%
3/1/21	3			27%	25%	12%	12%
4/1/21	3			25%	25%	10%	10%
5/1/21	1					9%	9%
6/1/21	1			20%	20%		
Total	88	34%	33%	26%	26%	12%	11%

Supplemental Table 5. Average monthly prevalence of depression over time by severity, comparing total sample (non-probability and probability-based studies) and samples with only probability-based samples

Month	Prevalence points (non-probability sampling removed)	Mild		Moderate		Severe	
		All	Probability sampling only	All	Probability sampling only	All	Probability sampling only
3/1/20	3	29.0%	29.0%	14.5%	10.0%		
4/1/20	9	31.7%	31.7%	24.9%	20.8%	16.8%	16.1%
5/1/20	16	43.0%	43%	25.9%	23.5%	10.3%	10.3%
6/1/20	8	30.9%		28.2%	28.8%	10.8%	10.8%
7/1/20	6	40.9%	40.9%	22.5%	26.1%	13.0%	13.0%
8/1/20	3	26.1%	26.1%	24.5%	24.5%	10.2%	10.2%
9/1/20	2	33.0%		29.1%	24.7%	10.6%	10.6%
10/1/20	3			33.4%	42.0%	13.0%	13.0%
11/1/20	3			46.0%	46%	14.0%	14.0%
12/1/20	7	39.1%	39.1%	27.0%	27.2%	13.8%	13.8%
1/1/21	1					12.8%	12.8%
2/1/21	1					12.4%	12.4%
3/1/21	3			27.4%	27.4%	11.7%	11.7%
4/1/21	2			25.1%	25.0%	10.0%	10.0%
5/1/21	1					9.5%	9.5%
6/1/21	1			20.3%	20.3%		
Total	69	36.0%	37.0%	26.0%	25.4%	12.9%	12.6%

Supplemental Table 6. Average monthly prevalence of depression over time by severity, comparing total sample (depression and depression or anxiety) and only studies reporting depression

Month	Prevalence points (anxiety removed)	Mild		Moderate		Severe	
		All	Anxiety screeners removed	All	Anxiety screeners removed	All	Anxiety screeners removed
3/1/20	3	29.0%		14.5%	14.5%		
4/1/20	12	31.7%	31.7%	24.9%	21.2%	16.8%	16.8%
5/1/20	16	43.0%	58.0%	25.9%	23.8%	10.3%	10.3%
6/1/20	8	30.9%		28.2%	26.6%	10.8%	10.8%
7/1/20	7	40.9%		22.5%	22.5%	13.0%	13.0%
8/1/20	2	26.1%		24.5%	24.5%	10.2%	10.2%
9/1/20	3	33.0%		29.1%	29.1%	10.6%	10.6%
10/1/20	4			33.4%	33.4%	13.0%	13.0%
11/1/20	3			46.0%	46.0%	14.0%	14.0%
12/1/20	7	39.1%		27%	27.0%	13.8%	13.8%
1/1/21	1					12.8%	12.8%
2/1/21	2					12.4%	12.4%
3/1/21	3			27.4%	27.4%	11.7%	11.7%
4/1/21	3			25.1%	25.1%	10.0%	10.0%
5/1/21	1					9.5%	9.5%
6/1/21	1			20.3%	20.3%		
Total	76	36.0%	44.9%	26.0%	24.8%	12.9%	12.9%

Supplemental Table 7. Average monthly prevalence of depression over time by severity, comparing constructs including and excluding psychological distress

Month	Prevalence points (psychological distress removed)	Mild		Moderate		Severe	
		All	Psychological distress screeners removed	All	Psychological distress screeners removed	All	Psychological distress screeners removed
3/1/20	4	29.0%	29.0%	14.5%	14.5%		
4/1/20	10	31.7%	31.7%	24.9%	24.9%	16.8%	14.2%
5/1/20	18	43.0%	43.0%	25.9%	25.9%	10.3%	10.9%
6/1/20	9	30.9%	30.9%	28.2%	26.6%	10.8%	10.8%
7/1/20	6	40.9%	40.9%	22.5%	22.5%	12.5%	12.0%
8/1/20	3	26.1%	26.1%	24.5%	24.5%	10.2%	10.2%
9/1/20	4	33.0%	33.0%	29.1%	29.1%	10.6%	10.6%
10/1/20	3			33.4%	33.4%	13.4%	10.8%
11/1/20	1			46.0%		13.7%	12.5%
12/1/20	8	39.1%	39.1%	27.0%	27.0%	13.8%	13.8%
1/1/21	1					12.8%	12.8%
2/1/21	2					12.4%	12.4%
3/1/21	3			27.4%	27.4%	11.7%	11.7%
4/1/21	3			25.1%	25.1%	10.0%	10.0%
5/1/21	1					9.5%	9.5%
6/1/21	1			20.3%	20.3%		
Total	77	36.0%	36.0%	26.0%	25.4%	12.9%	11.8%

Supplemental Table 8. Charted Review (n=49)

First author last name (Year)	Pandemic data source	Sample size	Depression term, as defined by articles	Depression screener (cutoff score)	Severity level	More than depression?	Days between last day of data collection and date published	Last date of data collection for paper	Prevalence of depression
(Berkowitz and Basu, 2021)	HPS	122,133 [◊]	Depressive symptoms	PHQ-2 (≥ 3)	Moderate and above	No	129	October 12, 2020 ^α	42.0%
(Birditt et al., 2021)	Survey of Consumers	645 [◊]	Poor psychological well-being	Combination (CESD-1, Beck-1, and Kircanski rumination scale)	Mild and above	Depression, anxiety, rumination	190	May 31, 2020 ^β	35%
(Breslau et al., 2021)	ALP	1,870 [◊]	Psychological distress	Kessler-6 (≥ 13)	Severe and above	No	214	May 31, 2020 ^α	10.1%
(Breslau et al., 2022)	ALP	1,957 [◊]	Psychological distress	Kessler-6 (≥ 13)	Severe and above	No	448	May 8, 2020 ^β	10%
(Bryan et al., 2020)	Qualtrics panel	10,625 [*]	Probable depression	PHQ-9 (≥ 14)	Severe and above	No	111	April 4, 2020 ^β	19.50% ^ε
(Cai et al., 2021)	HPS	988,349 [◊]	Depression or anxiety	PHQ-4 (≥ 3 on either the GAD-2 or PHQ-2)	Mild and above	Depression or anxiety	267	July 21, 2020 ^α	April/May 2020: 35.9% July 2020: 40.9%
(Chen et al., 2022)	HPS	453,167 [◊]	Depression	PHQ-2 (≥ 3)	Moderate and above	No	157	June 7, 2021 ^α	20.3%
(Czeisler, 2020)	Qualtrics panel	5,412 [*]	Depression/depressive disorder	PHQ-2 (≥ 3)	Moderate and above	No	45	June 30, 2020 ^β	24.3%

(Czeisler et al., 2021a)	Qualtrics panel	3,010*	Depressive disorder symptoms	PHQ-2 (≥ 3)	Moderate and above	No	341	April 8, 2020 ^β	20.5%
(Czeisler et al., 2021b)	Qualtrics panel	5,470*	Depression or anxiety	PHQ-4 (≥ 3 on either the GAD-2 or PHQ-2)	Mild and above	Depression or anxiety	166	September 6, 2020 ^χ	30.9%
(Daly et al., 2021)	UAS	6819 [◇]	Probable depression	PHQ-2 (≥ 3)	Moderate and above	No	168	March 31, 2020 ^χ	March 2020: 10.5% April 2020: 14.2%
(Donnelly and Farina, 2021)	HPS	582,440 [◇]	Depressive and anxiety symptoms	PHQ-2 (≥ 3)	Moderate and above	No	150	July 2, 2020 ^α	24.2%
(Ettman et al., 2020)	AmeriSpeak	1,441 [◇]	Depression symptoms	PHQ-9 (≥ 10)	Moderate and above	No	142	April 13, 2020 ^β	27.8%
(Ettman et al., 2021)**	AmeriSpeak	1,441 [◇]	Probable depression	PHQ-9 (≥ 10)	Moderate and above	No	235	April 13, 2020 ^β	27.8%
(Holingue et al., 2020)	UAS	5,065 [◇]	Mental distress	PHQ-2 (≥ 3)	Moderate and above	No	205	March 16, 2020 ^β	9.5%
(Kämpfen et al., 2020)	UAS	6,885 [◇]	Depressive/anxiety symptoms	PHQ-4 (≥ 3)	Mild and above	Depression or anxiety	225	March 31, 2020 ^β	29.0%
(Kantor and Kantor, 2020)	Prolific Academic panel	1,005*	Depression	PHQ-9 (≥ 10)	Moderate and above	No	253	March 31, 2020 ^β	23.6%

(Kim, 2021)	HPS	120,064 [◊]	Depression	PHQ-2 (≥ 3)	Moderate and above	No	190	December 21, 2020 ^α	28.5%
(Lee and Singh, 2021)	HPS	986,692 [◊]	Serious depression	PHQ-1 (≥ 3)	Severe and above	No	72	May 24, 2021 ^α	April 2020: 8.91%, May 2020: 10.86%, June 2020: 10.83%, Jul 2020: 11.94%, Aug 2020: 10.18%, Sept 2020: 10.55%, Oct 2020: 10.78%, Nov 2020: 12.46%, Dec 2020: 13.82%, Jan 2021: 12.83%, Feb 2021: 12.40%, Mar 2021: 11.72%, Apr 2021: 10.05%, May 2021: 9.46%
(Lee et al., 2021)	UAS	6,403 [◊]	Depression	PHQ-2 (≥ 3)	Moderate and above	No	500	May 26, 2020 ^β	12.40%
(Linton et al., 2021)	AmeriSpeak	1,222 [◊]	Psychological distress	Kessler-6 (≥ 5)	Moderate and above	No	304	November 30, 2020 ^β	46%

(MacDonald et al., 2022)	Lucid	14,636*	Depressive symptoms	PHQ-8 (≥ 10)	Moderate and above	No	303	April 13, 2021 ^α	May 2020: 21.8%, July 2020: 22.8%, October 2020: 24.8%, December 2020: 25.8%, March/April 2021: 25.3%, Overall: 24.1%
(Martinez et al., 2022)	NAS	7,233 [◇]	Depression and anxiety symptoms	PHQ-2 (≥ 3)	Moderate and above	No	634	April 21, 2020 ^β	13.3%
(Matzopoulos et al., 2022)	AHRI panel	7,139 [◇]	Depression	PHQ-9 (≥ 10)	Moderate and above	No	278	March 31, 2021 ^β	30.0%
(McGinty et al., 2020a)	AmeriSpeak	1,337 [◇]	Psychological distress	Kessler-6 (≥ 13)	Severe and above	No	153	July 22, 2020 ^χ	April 2020: 14.2%, July 2020: 13.6%
(McGinty et al., 2020b)	AmeriSpeak	1,468 [◇]	Psychological distress	Kessler-6 (≥ 13)	Severe and above	No	85	April 13, 2020 ^β	13.6%
(McGinty et al., 2022)	AmeriSpeak	1,068 [◇]	Psychological distress	Kessler-6 (≥ 13)	Severe and above	No	420	November 30, 2020 ^χ	July 2020: 12%, November 2020: 15%
(McKnight-Eily et al., 2021)	Lucid	1,004*	Current depression	PHQ-8 (≥ 10)	Moderate and above	No	276	May 5, 2020 ^β	28.6%
(Nagata et al., 2022)	HPS	69,944 [◇]	Depressive symptoms	PHQ-4 (≥ 3 on either the	Mild and above	Depression or anxiety	191	December 21, 2020 ^β	39.1%

				GAD-2 or PHQ-2)					
(Nguyen et al., 2022)	HPS	77,104 [◊]	Depression	PHQ-2 (≥3)	Moderate and above	No	247	March 29, 2021 ^β	24.7%
(Park and Kim, 2021)	HPS	398,413 [◊]	Depression symptoms	PHQ-2 (≥3)	Moderate and above	No	192	June 30, 2020 ^α	Late April/early May 5: 24.5%, early-mid May: 25.6%, mid-May: 25.6%, mid-late May: 25.6%, late May/early June: 26.8%, early June: 27.3%; early-mid June: 26.1%, mid-June: 27.2%, late June: 28.7% ^ϕ
(Park et al., 2022)	HPS	585,073 [◊]	Major Depression Disorder (MDD)	PHQ-2 (≥3)	Moderate and above	No	84	December 30, 2020 ^β	April 2020: 24.5%, June 2020: 28.7%
(Riehm et al., 2021)	UAS	6,901 [◊]	Mental distress	PHQ-4 (≥3)	Mild and above	Depression or anxiety	188	August 4, 2020 ^β	26.1%
(Rosenberg et al., 2021)	Ipsos Knowledge Panel	1,010 [◊]	Depression	CES-D-10 (≥10)	Mild and above	No	257	April 20, 2020 ^β	31.7%

(Samuels et al., 2021)	Qualtrics panel	2,117*	Depressive symptoms	PHQ-2 (≥ 3)	Moderate and above	No	387	September 30, 2020 ^β	33.6% ^φ
(Shen et al., 2022)	Prolific Academic panel	503 [⊗]	Depressive symptoms	Did not state	Did not state	No	340	February 13, 2021 ^β	24.0% ^φ
(Shi et al., 2022)	AmeriSpeak	2,079 [◇]	Psychological distress	Kessler-6 (≥ 13)	Severe and above	No	527	October 31, 2020 ^β	16.0%
(Sundermeir et al., 2021)	Dynata panel	8,355 [◇]	Depression	PHQ-2 (≥ 3)	Moderate and above	No	259	December 23, 2020 ^β	27.7%
(Tham et al., 2021)	AmeriSpeak	11,480 [◇]	Mental distress	Original, did not state	Moderate and above	Mental distress: depressed, anxious, hopeful, lonely, pounding heart, etc.	542	June 8, 2020 ^α	40.0%
(Thomeer et al., 2022)	HPS	1,677,238 [◇]	Depressive symptoms	PHQ-2 (≥ 3)	Moderate and above	No	317	April 26, 2021 ^α	25.0%
(Twenge and Joiner, 2020a)	Lucid	2,032 [◇]	Mental distress	Kessler-6 (≥ 13)	Severe and above	No	165	April 27, 2020 ^β	27.7%
(Twenge and Joiner, 2020b)	HPS	69,316 [◇]	Depressive symptoms	PHQ-2 (≥ 3)	Moderate and above	No	50	May 26, 2020 ^α	Late April/early May 2020: 23.5%, early-mid May 2020: 24.1%;

									mid May: 24.4% late May 2020: 24.9%
(Twenge et al., 2021)	HPS	317,086 ^o	Depressive symptoms	PHQ-2 (≥ 3)	Moderate and above	No	298	September 28, 2020 ^a	Spring 2020: 24.24%, early summer 2020: 25.45%, late summer 2020: 28.04%, fall 2020: 24.66%
(Vahratian, 2021)	HPS	431,656 ^o	Depressive disorder	PHQ-2 (≥ 3)	Moderate and above	No	102	December 21, 2020 ^a	August 2020: 24.5%, December 2020: 30.2%
(Warren et al., 2021)	Qualtrics panel	5,023 ^o	Major depressive disorder symptoms	PHQ-8 (≥ 10)	Moderate and above	No	227	July 5, 2020 ^b	15.1% ^c
(Weaver et al., 2021)	Prolific Academic panel	362 ^o	Depression symptoms	CES-D-10 (≥ 10)	Mild and above	No	240	May 6, 2020 ^b	58.0% ^c
(Wilson et al., 2021)	Qualtrics panel	848 ^o	Depressive symptoms	PHQ-8 (≥ 10)	Moderate and above	No	248	April 5, 2020 ^b	23.5% ^c
(Zhang et al., 2021)	HPS	1,653,180 ^o	Depression	PHQ-2 (≥ 3)	Moderate and above	No	214	December 21, 2020 ^a	26.57%
(Zhou et al., 2020)	Qualtrics panel	1021 ^o	Depression	DASS-21 (≥ 14)	Moderate and above	Depression, anxiety, and stress	101	May 22, 2020 ^a	April 2020: 47.4%; early May 2020: 41.2%; late

										May 2020: 36.2% [§]
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Note: Prevalence points weighted by article authors unless otherwise noted. HPS: Household Pulse Survey; UAS: Understanding America Study; NAS: U.S. National Alcohol Survey; AHRI Panel: Acumen Health Research Institute; CES-D-10: 10-item Centre for Epidemiological Studies Depression Scale; CES-D-8: 8-item Centre for Epidemiological Studies Depression Scale; DASS-21: The Depression, Anxiety and Stress Scale - 21 Items; PHQ-1: Patient Health Questionnaire 1, PHQ-2: Patient Health Questionnaire 2; PHQ-4: Patient Health Questionnaire 4; PHQ-8: Patient Health Questionnaire 8; PHQ-9: Patient Health Questionnaire 9.

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