1 **SUPPLEMENT S1**

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3 **SEARCH STRINGS**

4 **PUBMED**

5 ("Coronavirus"[Mesh:NoExp] OR "Betacoronavirus"[Mesh:NoExp] OR "Coronavirus
6 Infections"[Mesh:NoExp] OR "COVID-19"[MeSH] OR "coronavirinae"[tiab] OR nCoV[tiab] OR
7 2019nCoV[tiab] OR COVID[tiab] OR COVID19[tiab] OR "severe acute respiratory syndrome 2"[tiab]
8 OR nCoV[ad] OR 2019nCoV[ad] OR COVID[ad] OR COVID19[ad] OR "SARS-Cov-2"[MeSH] OR "severe
9 acute respiratory syndrome 2"[ad] OR SARS2[ad] OR "cov 2"[ad] OR cov2[ad] OR coronavirus*[ad] OR
10 betacoronavirus*[ad] OR "corona virus*"[ad] OR SARS2[tiab] OR "cov 2"[tiab] OR cov2[tiab] OR
11 coronavirus*[tiab] OR betacoronavirus*[tiab] OR "corona virus*"[tiab] OR "Wuhan virus"[tiab] OR
12 ((wuhan[tiab] OR novel[tiab] OR new[tiab] OR 19[tiab] OR 2019[tiab] OR epidem*[tiab] OR
13 pandem*[tiab] OR outbreak[tiab] OR wuhan[ad] OR novel[ad] OR new[ad] OR 19[ad] OR 2019[ad] OR
14 epidemy[ad] OR epidemic*[ad] OR pandem*[ad] OR outbreak[ad]) AND ("pneumonia virus*"[tiab]
15 OR cov[tiab] OR hcov[tiab]))) AND ("Schizophrenia Spectrum and Other Psychotic Disorders"[Mesh]
16 OR "Bipolar and Related Disorders"[Mesh] OR "Mood Disorders"[Mesh] OR "severe mental
17 illness*"[tiab] OR "severe mental disorder*"[tiab] OR "major psychiatric disorder*"[tiab] OR "major
18 psychiatric illness*"[tiab] OR "schizophreni*"[tiab] OR "schizoaffective*"[tiab] OR "schizo-
19 affective*"[tiab] OR "delusional disorder*"[tiab] OR "paranoid disorder*"[tiab] OR "schizotypal
20 disorder*"[tiab] OR "psychotic disorder*"[tiab] OR "psychosis"[tiab] OR "catatoni*"[tiab] OR "bipolar
21 and related disorder*"[tiab] OR "bipolar disorder*"[tiab] OR "bipolar I disorder*"[tiab] OR "bipolar
22 type I disorder*"[tiab] OR "bipolar II disorder*"[tiab] OR "bipolar type II disorder*"[tiab] OR
23 "cyclothymi*"[tiab] OR "manic depressi*"[tiab] OR "manic episode*"[tiab] OR "mania"[tiab] OR
24 "affective disorder*"[tiab] OR "bipolar illness"[tiab] OR "mood disorder*"[tiab] OR "depressive
25 disorder*"[tiab] OR "major depression"[tiab] OR "MDD"[tiab] OR "agitated depression"[tiab] OR
26 "reactive depression"[tiab] OR "vital depression"[tiab] OR "disruptive mood dysregulation
27 disorder*"[tiab] OR "dysthymi*"[tiab] OR "disthymi*"[tiab] OR "dysthimi*"[tiab] OR "premenstrual
28 dysphoric disorder*"[tiab]) AND ("Mortality"[Mesh] OR "Death"[Mesh:NoExp] OR "Odds
29 Ratio"[Mesh] OR "mortalit*"[tiab] OR "death*"[tiab] OR "fatal*"[tiab] OR "lethal*"[tiab] OR
30 "SMR*"[tiab] OR "risk ratio*"[tiab] OR "odds ratio*"[tiab] OR "hazard ratio*"[tiab])

31 **EMBASE**

32 ('Coronavirinae'/de OR 'Betacoronavirus'/de OR 'Coronavirus infection'/de OR 'coronavirus
33 disease 2019'/exp OR 'nCoV':ti,ab,kw,ff OR '2019nCoV':ti,ab,kw,ff OR 'COVID':ti,ab,kw,ff OR
34 'COVID19':ti,ab,kw,ff OR 'Severe acute respiratory syndrome coronavirus 2'/exp OR 'severe
35 acute respiratory syndrome 2':ti,ab,kw,ff OR 'SARS2':ti,ab,kw,ff OR 'cov 2':ti,ab,kw,ff OR
36 'cov2':ti,ab,kw,ff OR 'coronavirus*':ti,ab,kw,ff OR 'betacoronavirus*':ti,ab,kw,ff OR
37 'coronavirinae':ti,ab,kw OR 'corona virus*':ti,ab,kw,ff OR 'Wuhan virus':ti,ab,kw OR
38 (('wuhan':ti,ab,kw,ff OR 'novel':ti,ab,kw,ff OR 'new':ti,ab,kw,ff OR '19':ti,ab,kw,ff OR
39 '2019':ti,ab,kw,ff OR 'epidem*':ti,ab,kw OR 'pandem*':ti,ab,kw,ff OR 'outbreak':ti,ab,kw,ff
40 OR 'epidemy':ff OR 'epidemic*':ff) AND ('pneumonia virus*':ti,ab,kw OR 'cov':ti,ab,kw OR
41 'hcov':ti,ab,kw))) AND ('psychosis'/exp OR 'schizophrenia spectrum disorder'/exp OR 'mood
42 disorder'/exp OR 'disruptive mood dysregulation disorder'/exp OR 'severe mental
43 illness'/exp OR 'severe mental disorder'/exp OR 'severe mental illness*':ti,ab,kw OR 'severe

1 mental disorder*':ti,ab,kw OR 'major psychiatric disorder*':ti,ab,kw OR 'major psychiatric

2 illness*':ti,ab,kw OR 'psychosis':ti,ab,kw OR 'schizophreni*':ti,ab,kw OR

3 'schizoaffective*':ti,ab,kw OR 'schizo-affective*':ti,ab,kw OR 'delusional disorder*':ti,ab,kw

4 OR 'paranoid disorder*':ti,ab,kw OR 'schizotypal disorder*':ti,ab,kw OR 'psychotic

5 disorder*':ti,ab,kw OR 'catatoni*':ti,ab,kw OR 'mania':ti,ab,kw OR 'bipolar disorder*':ti,ab,kw

6 OR 'bipolar and related disorder*':ti,ab,kw OR 'bipolar I disorder*':ti,ab,kw OR 'bipolar type I

7 disorder*':ti,ab,kw OR 'bipolar II disorder*':ti,ab,kw OR 'bipolar type II disorder*':ti,ab,kw OR

8 'cyclothymi*':ti,ab,kw OR 'manic depressi*':ti,ab,kw OR 'manic episode*':ti,ab,kw OR

9 'affective disorder*':ti,ab,kw OR 'bipolar illness':ti,ab,kw OR 'mood disorder*':ti,ab,kw OR

10 'depressive disorder*':ti,ab,kw OR 'major depression':ti,ab,kw OR 'MDD':ti,ab,kw OR

11 'agitated depression':ti,ab,kw OR 'reactive depression':ti,ab,kw OR 'vital depression':ti,ab,kw

12 OR 'disruptive mood dysregulation disorder*':ti,ab,kw OR 'dysthymi*':ti,ab,kw OR

13 'disthymi*':ti,ab,kw OR 'dysthimi*':ti,ab,kw OR 'premenstrual dysphoric disorder*':ti,ab,kw)

14 AND ('mortality'/de OR 'mortalit*':ti,ab,kw OR 'hospital mortality'/exp OR 'mortality

15 rate'/exp OR 'premature mortality'/exp OR 'standardized mortality ratio'/exp OR 'odds

16 ratio'/exp OR 'hazard ratio'/exp OR 'risk ratio'/exp OR 'death*':ti,ab,kw OR 'fatal*':ti,ab,kw OR

17 'SMR*':ti,ab,kw OR 'risk ratio*':ti,ab,kw OR 'hazard ratio*':ti,ab,kw OR 'odds ratio*':ti,ab,kw

18 OR 'death'/de OR 'fatality'/exp OR 'lethality'/exp OR 'lethal*':ti,ab,kw)

19 **WEB OF SCIENCE**

20 (TS=("coronavirus*" OR "betacoronavirus*" OR "COVID-19" OR "coronavirinae" OR "nCoV"

21 OR "2019nCoV" OR "COVID" OR "COVID19" OR "severe acute respiratory syndrome 2" OR

22 "SARS2" OR "cov 2" OR "cov2" OR "corona virus*" OR "Wuhan virus" OR (("wuhan" OR

23 "novel" OR "new" OR "19" OR "2019" OR epidem* OR pandem* OR "outbreak") AND

24 ("pneumonia virus*" OR "cov" OR "hcov"))) OR AD=("nCoV" OR "2019nCoV" OR "COVID" OR

25 "COVID19" OR "SARS2" OR "cov 2" OR "cov2" OR "coronavirus*" OR "betacoronavirus*" OR

26 "corona virus*" OR "severe acute respiratory syndrome 2") OR (AD=("wuhan" OR "novel" OR

27 "new" OR "19" OR "2019" OR "epidemy" OR "epidemic*" OR "pandem*" OR "outbreak")

28 AND TS=("pneumonia virus*" OR "cov" OR "hcov"))) AND TS=("severe mental illness*" OR

29 "severe mental disorder*" OR "major psychiatric illness*" OR "major psychiatric disorder*"

30 OR schizophreni* OR schizoaffective* OR "schizo-affective*" OR "delusional disorder*" OR

31 "paranoid disorder*" OR "schizotypal disorder*" OR "psychotic disorder*" OR "psychosis"

32 OR catatoni* OR "bipolar and related disorder*" OR "bipolar disorder*" OR "bipolar I

33 disorder*" OR "bipolar type I disorder*" OR "bipolar II disorder*" OR "bipolar type II

34 disorder*" OR cyclothymi* OR "manic depressi*" OR "manic episode*" OR mania OR

35 "affective disorder*" OR "bipolar illness" OR "mood disorder*" OR "depressive disorder*"

36 OR "major depression" OR "MDD" OR "agitated depression" OR "reactive depression" OR

37 "vital depression" OR "disruptive mood dysregulation disorder*" OR dysthymi* OR disthymi*

38 OR dysthimi* OR "premenstrual dysphoric disorder*") AND TS=("mortalit*" OR "death*" OR

39 "fatal*" OR "lethal*" OR "SMR*" OR "risk ratio*" OR "odds ratio*" OR "hazard ratio*")

40 **SCOPUS**

41 (TITLE-ABS(coronavirus* OR betacoronavirus* OR coronavirinae OR nCoV OR 2019nCoV OR

42 COVID OR COVID19 OR "severe acute respiratory syndrome 2" OR SARS2 OR "cov 2" OR cov2

1 OR "corona virus*" OR "Wuhan virus") OR AFFIL(nCoV OR 2019nCoV OR COVID OR COVID19

2 OR "severe acute respiratory syndrome 2" OR SARS2 OR "cov 2" OR cov2 OR "coronavirus*"

3 OR betacoronavirus* OR "corona virus*") OR ((TITLE-ABS(wuhan OR novel OR new OR 19 OR

4 2019 OR epidem* OR pandem* OR outbreak) OR AFFIL(wuhan OR novel OR new OR 19 OR

5 2019 OR epidemy OR epidemic* OR pandem* OR outbreak)) AND TITLE-ABS("pneumonia

6 virus*" OR cov OR hcov))) AND (TITLE-ABS(schizophreni* OR schizoaffective* OR schizo-

7 affective* OR "delusional disorder*" OR "paranoid disorder*" OR "schizotypal disorder*" OR

8 "psychotic disorder*" OR psychosis OR catatoni* OR "bipolar and related disorder*" OR

9 "bipolar disorder*" OR "bipolar I disorder*" OR "bipolar type I disorder*" OR "bipolar II

10 disorder*" OR "bipolar type II disorder*" OR cyclothymi* OR "manic depressi*" OR "manic

11 episode*" OR mania OR "affective disorder*" OR "bipolar illness" OR "mood disorder*" OR

12 "depressive disorder*" OR "major depression" OR MDD OR "agitated depression" OR

13 "reactive depression" OR "vital depression" OR "disruptive mood dysregulation disorder*"

14 OR dysthymi* OR disthymi* OR dysthimi* OR "premenstrual dysphoric disorder*") AND

15 TITLE-ABS("mortalit*" OR "death*" OR "fatal*" OR "lethal*" OR "SMR*" OR "risk ratio*" OR

16 "odds ratio*" OR "hazard ratio*"))

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1 **SUPPLEMENT S2**

2 **Table 2A: Quality assessment of the included cohort studies using the Newcastle-Ottawa Scale (NOS)**

Study	Representativeness of the exposed cohort	Selection of the non-exposed cohort	Ascertainment of exposure	Comparability of cohorts on the basis of the design or analysis	Outcome assessment	Psychiatric diagnoses occurred prior to COVID-19 diagnoses	Total	Evaluation
Barcella et al. (2021)	*	*	*	*	*	*	6/7	High
Nemani et al., (2021)	*	*	*	**	*	*	7/7	High
Tzur Bitan et al. (2021)	*	*	*	*	*	*	6/7	High
Jeon et al. (2021)	*	*	*	*	*	*	6/7	High
Fond et al. (2021b)	*	*	*	**	*	*	7/7	High
Reilev et al. (2020)	*	*	*	*	*	*	6/7	High
Poblador-Plou et al. (2020)	*	*	*	*	*	*	6/7	High
Yang et al. (2020)	*	*	*	**	*	*	7/7	High
Castro et al. (2021)		*	*	*	*	*	5/7	Moderate
Diez-Quevedo et al. (2021)		*	*	*	*	*	5/7	Moderate

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4 **Table 2B: Quality assessment of the included case-control studies using the Newcastle-Ottawa Scale (NOS)**

Study	Adequate case definition	Representativeness of the cases	Selection of controls	Definition of controls	Comparability of cases and controls on the basis of the design or analysis	Ascertainment of exposure	Same method of ascertainment for cases and controls	SMI diagnoses prior to COVID-19 diagnoses	Total	Evaluation
Fond et al. (2021d)	*	*	*	*	**	*	*	*	9/9	High
Wang et al. (2021)		*	*		*	*	*	*	6/9	Moderate

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1 **Table 2C: Quality assessment of the included cross-sectional studies using the Newcastle-Ottawa Scale (NOS)***

Study	Representativeness of the sample	Sample size justified and satisfactory	Adequate case d efinition	Comparability of subjects in different outcome groups	Ascertainment of exposure	Appropriate statistical testing	Total	Evaluation
Egede et al. (2021)	*		*	*	*	*	5/7	Moderate

2 *The NOS was adapted for cross-sectional data