**Identification of studies**

Records removed *before screening*:

Duplicate records removed (n = 12)

Records identified from:

PubMed: (propensity score[Title/Abstract]) AND ((COVID[Title/Abstract]) OR (coronavirus[Title/Abstract]))

**Identification**

Records screened

(n = 373)

Records excluded\*

(n = 14)

Reports sought for retrieval

(n = 360)

Reports not retrieved

(n = 4)

**Screening**

Reports excluded:

Language is not English (n = 1)

Studies that the outcome of interests is not a COVID-related severity outcomes in a COVID-positive population ┼ (n = 127)

No access to the supplementary materials (n = 1)

Studies didn’t use propensity score matching as one of the analysis methods ♢ (n = 55)

Reports assessed for eligibility

(n = 356)

Studies included in review

(n = 171)

**Included**

Fig 1. PRISMA flow diagram of the searching strategy and selection process

*\* Studies that were methodology research, review or (and) meta-analysis, research letter/editorial, and conference abstract*

*┼ Studies that didn’t meet the first inclusion criterion: The purpose of the study was to assess the therapeutic or harmful effect of a treatment/intervention/exposure in a COVID-19 positive population and use one of the following COVID-severity-related outcomes as a primary outcome: hospitalization, ventilation, ICU admission, and death, or a severity index calculated based on those four outcomes.*

*♢ Studies that didn’t meet the second inclusion criterion: Propensity score matching was used as one of the methods to adjust possible confounders*