What is new?

Key findings

* An unneglectable number of studies that use the propensity score matching (PSM) analysis are case-control studies in COVID studies and the use of the PSM analysis in them is highly questionable.
* There is a lack of clarification about which type of treatment effect is estimated from the PSM analysis used in a study and this may be a result of the lack of understanding of the different types of treatment effects.

What this adds to what is known?

* The average treatment effect in treated (ATT) that arrived from the nearest neighbor matching (NNM), which is the most dominant matching algorithm, may not appropriately serve the purpose of a typical study from this field.

What is the implication and what should change now?

* In addition to a continuous effect in improving the reporting quality of the propensity score analysis, attention should also be given to whether the implementation of the PSM analysis appropriately fits a study design and the purpose of a study.