**Supplementary**

**Table S1** Methodological quality of included 7 CCTs

| Study        | Definition adequate | Representativeness | Selection of controls | Definition of controls | Important factor | Additional factor | Ascertainment of exposure | Same method of ascertainment | Non-response rate | Total score |
|--------------|---------------------|--------------------|-----------------------|------------------------|------------------|----------------------|---------------------------|--------------------------|-----------------|-------------|
| Holland, 2006 | ★                   | ★                  | ★                     | ★                      | ★                | ★                    | ★                         | ★                        | ★               | 6           |
| Tugcu, 2006  | ★                   | ★                  | ★                     | ★                      | ★                | ★                    | ★                         | ★                        | ★               | 6           |
| philippou, 2013| ★                  | ★                  | ★                     | ★                      | ★                | ★                    | ★                         | ★                        | ★               | 6           |
| Yürük, 2014  | ★                   | ★                  | ★                     | ★                      | ★                | ★                    | ★                         | ★                        | ★               | 7           |
| Kilinc, 2015 | ★                   | ★                  | ★                     | ★                      | ★                | ★                    | ★                         | ★                        | ★               | 6           |
| Selmi, 2018  | ★                   | ★                  | ★                     | ★                      | ★                | ★                    | ★                         | ★                        | ★               | 6           |
| Irer, 2019   | ★                   | ★                  | ★                     | ★                      | ★                | ★                    | ★                         | ★                        | ★               | 8           |

**Table S2** Result of risk of bias (RoB) assessment of studies*

| Sources        | Bias due to confounding | Bias in the selection of participants in the study | Bias in the classification of interventions | Bias due to deviations from intended interventions | Bias due to missing data | Bias in measurement of outcomes | Bias in selection of reported result | Overall RoB Judgement of the Result |
|----------------|-------------------------|---------------------------------------------------|---------------------------------------------|----------------------------------------------------|--------------------------|----------------------------------|-------------------------------------|----------------------------------|
| Holland, 2006  | Moderate                | Moderate                                           | Low                                         | No Information                                     | Serious                  | Low                              | Low                                 | Serious                           |
| Tugcu, 2006    | Moderate                | Moderate                                           | Low                                         | No Information                                     | Serious                  | No information                   | Moderate                            | Serious                           |
| philippou, 2013| Moderate                | Moderate                                           | Low                                         | Low                                                | No information           | Low                              | Low                                 | Moderate                          |
| Yürük, 2014    | Moderate                | Moderate                                           | Low                                         | No Information                                     | Low                      | Low                              | Low                                 | Moderate                          |
| Kilinc, 2015   | Moderate                | Moderate                                           | Low                                         | Low                                                | Low                      | Low                              | Low                                 | Moderate                          |
| Selmi, 2018    | Moderate                | Moderate                                           | Low                                         | Moderate                                            | Low                      | Low                              | Low                                 | Moderate                          |
| Irer, 2019     | Moderate                | Moderate                                           | Low                                         | Low                                                | Low                      | Low                              | Low                                 | Moderate                          |

*, based on assessment using ROBINS-I tool by Sterne et al.

**Figure S1** Funnel plot evaluating the publication bias.