Insomnia NMA

Prepared by Virginia Chiocchia on 28th July, refers to a single outcome analysis (Sleep Quality) in a frequentist setting

## Description of the network

This network formed by studies examining the outcome Sleep Quality is composed by two sub-networks. The following treatments were excluded as they were disconnected to the two main sub-networks:

* MAT
* LAT
* MAT+LAT
* therapeutic touch
* control/no intervention
* mimic therapeutic touch
* Mindfulness Based Stress Reduction Program
* waitlist
* sleep hygiene
* lormetazepam + sleep hygiene
* BBT I
* self-monitoring control
* auricular acupuncture
* control?
* acupressure
* sham acupressure
* artificial juice
* tart cherry juice

### Sub-network 1

Below is a description for the sub-network including the following interventions

## [1] "acetaminophen"   
## [2] "diphenhydramine"   
## [3] "doxepin"   
## [4] "esmirtazapine"   
## [5] "eszopiclone"   
## [6] "food supplement (melatonin, magnesium, zinc)"  
## [7] "melatonin"   
## [8] "pbo"   
## [9] "propiomazine"   
## [10] "temazepam"   
## [11] "zaleplon"   
## [12] "zolpidem"

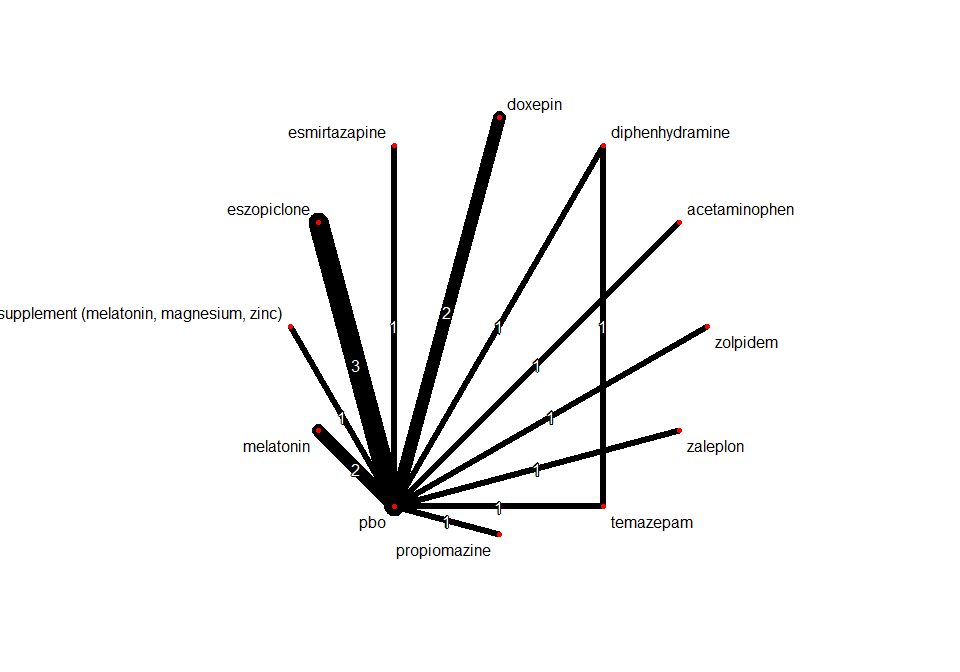
Number of included interventions:

## [1] 12

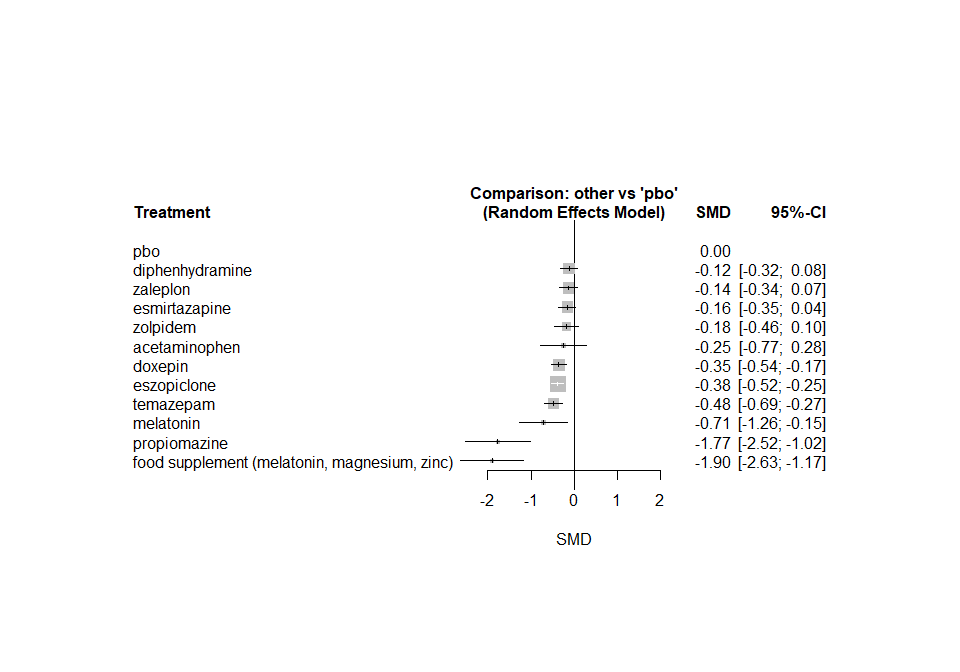
Number of included studies:

## [1] 14

The plot below shows the available data



Below are the relative treatment effects from the NMA model.



## League table (random effects model):  
##   
## acetaminophen .  
## -0.1256 [-0.6889; 0.4378] diphenhydramine  
## 0.1086 [-0.4481; 0.6654] 0.2342 [-0.0379; 0.5063]  
## -0.0891 [-0.6509; 0.4727] 0.0365 [-0.2458; 0.3189]  
## 0.1365 [-0.4065; 0.6794] 0.2620 [ 0.0193; 0.5048]  
## 1.6528 [ 0.7520; 2.5536] 1.7784 [ 1.0198; 2.5370]  
## 0.4599 [-0.3035; 1.2233] 0.5855 [-0.0035; 1.1744]  
## -0.2458 [-0.7718; 0.2801] -0.1202 [-0.3221; 0.0816]  
## 1.5238 [ 0.6048; 2.4428] 1.6494 [ 0.8692; 2.4295]  
## 0.2352 [-0.3320; 0.8024] 0.3607 [ 0.1532; 0.5683]  
## -0.1099 [-0.6745; 0.4547] 0.0157 [-0.2722; 0.3036]  
## -0.0678 [-0.6634; 0.5278] 0.0577 [-0.2870; 0.4025]  
##   
## . .  
## . .  
## doxepin .  
## -0.1977 [-0.4666; 0.0712] esmirtazapine  
## 0.0278 [-0.1991; 0.2548] 0.2255 [-0.0136; 0.4646]  
## 1.5442 [ 0.7904; 2.2979] 1.7419 [ 0.9844; 2.4994]  
## 0.3512 [-0.2313; 0.9338] 0.5490 [-0.0385; 1.1364]  
## -0.3545 [-0.5370; -0.1719] -0.1568 [-0.3542; 0.0407]  
## 1.4152 [ 0.6398; 2.1905] 1.6129 [ 0.8338; 2.3919]  
## 0.1265 [-0.1535; 0.4066] 0.3242 [ 0.0342; 0.6142]  
## -0.2185 [-0.4932; 0.0562] -0.0208 [-0.3057; 0.2640]  
## -0.1765 [-0.5103; 0.1573] 0.0212 [-0.3210; 0.3634]  
##   
## . .  
## . .  
## . .  
## . .  
## eszopiclone .  
## 1.5163 [ 0.7727; 2.2600] food supplement (melatonin, magnesium, zinc)  
## 0.3234 [-0.2460; 0.8929] -1.1929 [-2.1099; -0.2759]  
## -0.3823 [-0.5171; -0.2475] -1.8986 [-2.6299; -1.1673]  
## 1.3873 [ 0.6218; 2.1529] -0.1290 [-1.1791; 0.9211]  
## 0.0987 [-0.1529; 0.3503] -1.4176 [-2.1792; -0.6561]  
## -0.2464 [-0.4920; -0.0007] -1.7627 [-2.5223; -1.0031]  
## -0.2043 [-0.5146; 0.1060] -1.7206 [-2.5035; -0.9378]  
##   
## . -0.2458 [-0.7718; 0.2801]  
## . -0.1202 [-0.3221; 0.0816]  
## . -0.3545 [-0.5370; -0.1719]  
## . -0.1568 [-0.3542; 0.0407]  
## . -0.3823 [-0.5171; -0.2475]  
## . -1.8986 [-2.6299; -1.1673]  
## melatonin -0.7057 [-1.2590; -0.1525]  
## -0.7057 [-1.2590; -0.1525] pbo  
## 1.0639 [ 0.1290; 1.9988] 1.7696 [ 1.0160; 2.5232]  
## -0.2247 [-0.8174; 0.3679] 0.4810 [ 0.2686; 0.6934]  
## -0.5698 [-1.1599; 0.0204] 0.1359 [-0.0694; 0.3412]  
## -0.5277 [-1.1476; 0.0921] 0.1780 [-0.1015; 0.4575]  
##   
## . .  
## . 0.3607 [ 0.1532; 0.5683]  
## . .  
## . .  
## . .  
## . .  
## . .  
## 1.7696 [ 1.0160; 2.5232] 0.4810 [ 0.2686; 0.6934]  
## propiomazine .  
## -1.2886 [-2.0716; -0.5057] temazepam  
## -1.6337 [-2.4147; -0.8526] -0.3451 [-0.6405; -0.0496]  
## -1.5916 [-2.3954; -0.7879] -0.3030 [-0.6540; 0.0480]  
##   
## . .  
## . .  
## . .  
## . .  
## . .  
## . .  
## . .  
## 0.1359 [-0.0694; 0.3412] 0.1780 [-0.1015; 0.4575]  
## . .  
## . .  
## zaleplon .  
## 0.0420 [-0.3047; 0.3888] zolpidem

The heterogeneity standard deviation is estimated at

## tau= 0

and I-square (total) is

## I2= 0 %

### Sub-network 2

Below is a description for the sub-network including the following interventions

## [1] "chlormethiazole" "loprazolam" "nitrazepam" "triazolam"   
## [5] "zopiclone"

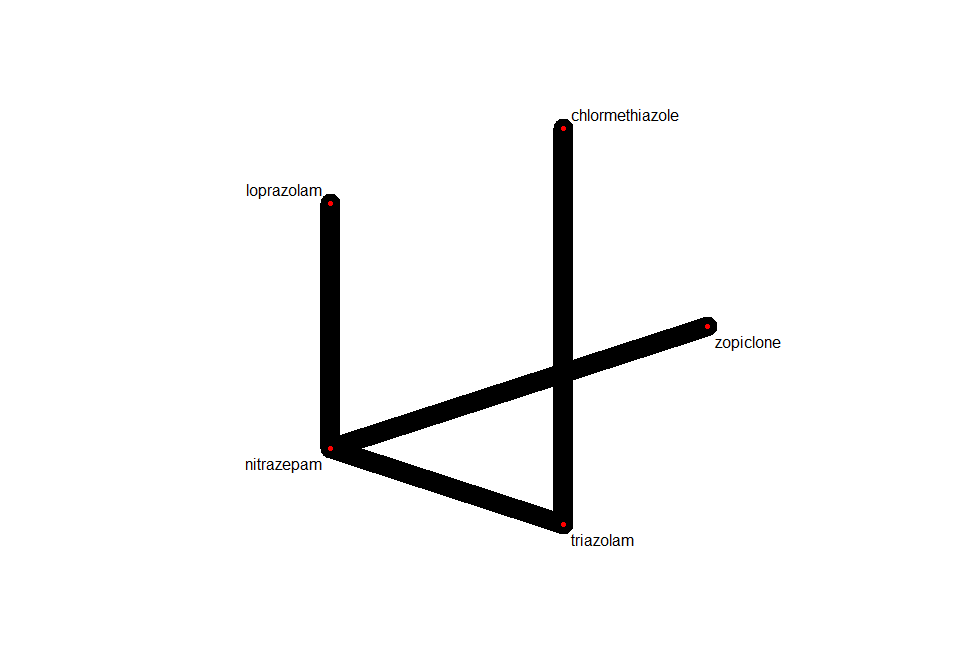
Number of included interventions:

## [1] 5

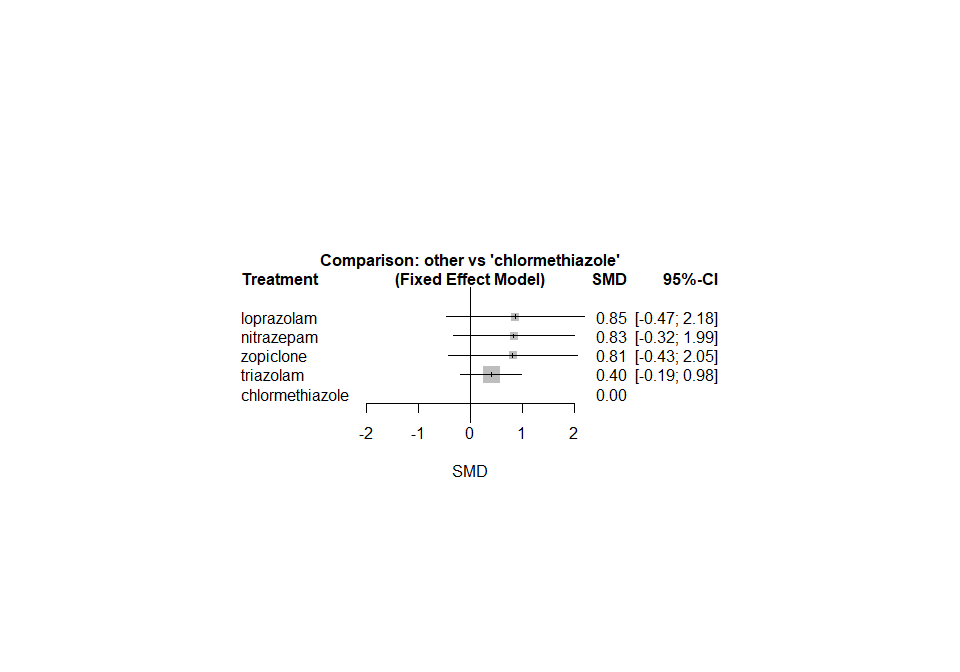
Number of included studies:

## [1] 4

The plot below shows the available data



Below are the relative treatment effects from the NMA model.



### Sensitivity analyses and meta-regressions

We run a sensitivity analyses on the first sub-network excluding the crossover studies.

