

Wrangle

Does sleep spindle-slow oscillation coupling contribute to memory consolidation during sleep? A meta-analysis and methodological review

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2023-10-05

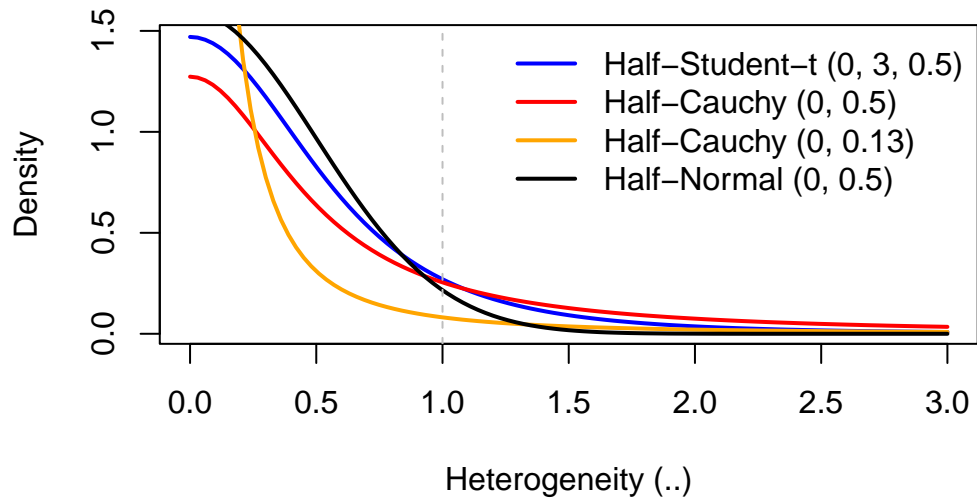
```
psycbul <- readxl::read_excel("/Users/thea/Downloads/jopd-5-33-s2.xlsx")
```

```
psycbul_r <- psycbul |>  
  filter(grepl("Pearson's r", Type_of_ES))
```

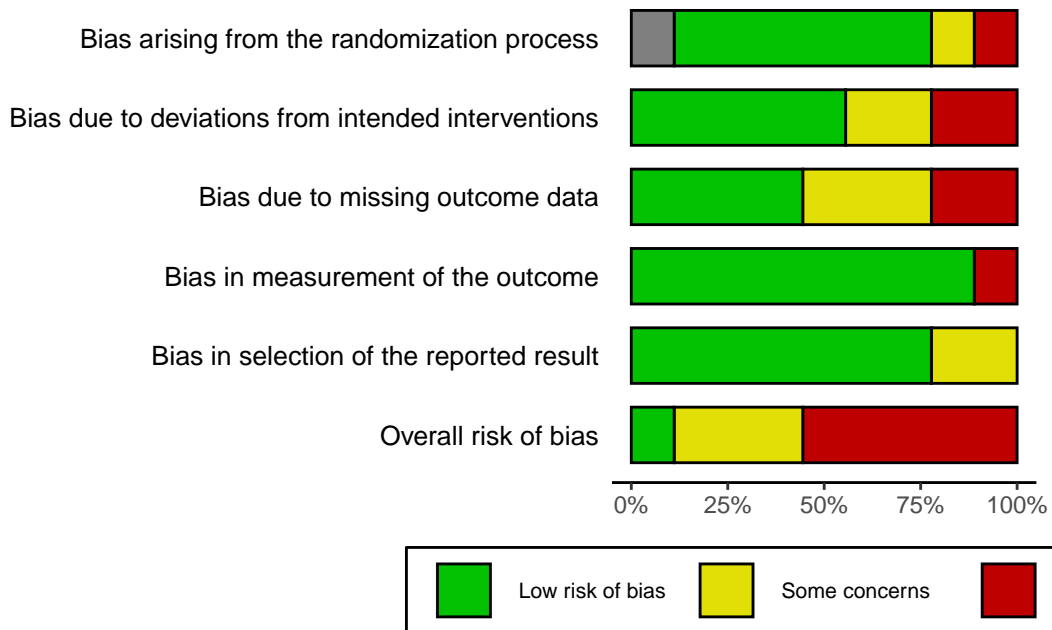
```
knitr::kable(favstats(psycbul_r$tau))
```

min	Q1	median	Q3	max	mean	sd	n	missing
0	0.05	0.12	0.18	0.52	0.1267	0.0968	498	42

```
library(extraDistr)  
curve(dht(x, 3, 0.5), 0, 3, col = "blue", ylab = "Density", xlab = "Heterogeneity (\u03c4)  
curve(dhcauchy(x, 0.5), 0, 3, col = "red", add = TRUE, lwd = 2)  
curve(dhcauchy(x, 0.13), 0, 3, col = "orange", add = TRUE, lwd = 2)  
curve(dhnorm(x, 0.5), 0, 3, col = "black", add = TRUE, lwd = 2)  
abline(v = 1, col = "gray", lty = 2)  
legend("topright", legend = c("Half-Student-t (0, 3, 0.5)", "Half-Cauchy (0, 0.5)", "Half-
```



```
library(robvis)
data_rob2 <- read.csv("~/Desktop/ROB2_example.csv")
rob_summary(data_rob2, tool = "ROB2", overall = "TRUE", weighted = "FALSE")
```



```
rob_traffic_light(data_rob2, tool = "ROB2", psize = 10)
```

Warning: Removed 12 rows containing missing values (`geom_point()`).

Removed 12 rows containing missing values (``geom_point()``).

		Risk of bias domains					
		D1	D2	D3	D4	D5	Overall
Study	Study 1	+	+	+	+	+	+
	Study 2		+	+	+	+	
	Study 3		+		+	+	
	Study 4	+	+	X	+		X
	Study 5	X	X	+	+		X
	Study 6	+	X		+	+	X
	Study 7	+			X	+	X
	Study 8	+		+	+	+	
	Study 9	+	X	X	+	+	X
Domains:							
D1: Bias due to randomisation.							
D2: Bias due to deviations from intended intervention.							
D3: Bias due to missing data.							
D4: Bias due to outcome measurement.							
D5: Bias due to selection of reported result.							
							Judgement
							X High
							+ Low

TMR Memory Retention Rate

$$MRR(\%) = \frac{\text{Corrected Rate}_{\text{post.sleep}}}{\text{Corrected Rate}_{\text{pre.sleep}}} \times 100\% \quad (4)$$

where

$$\text{Corrected Rate}(\%) = \frac{\text{Hit} - \text{False Alarm}}{\text{Hit}} \times 100\%$$