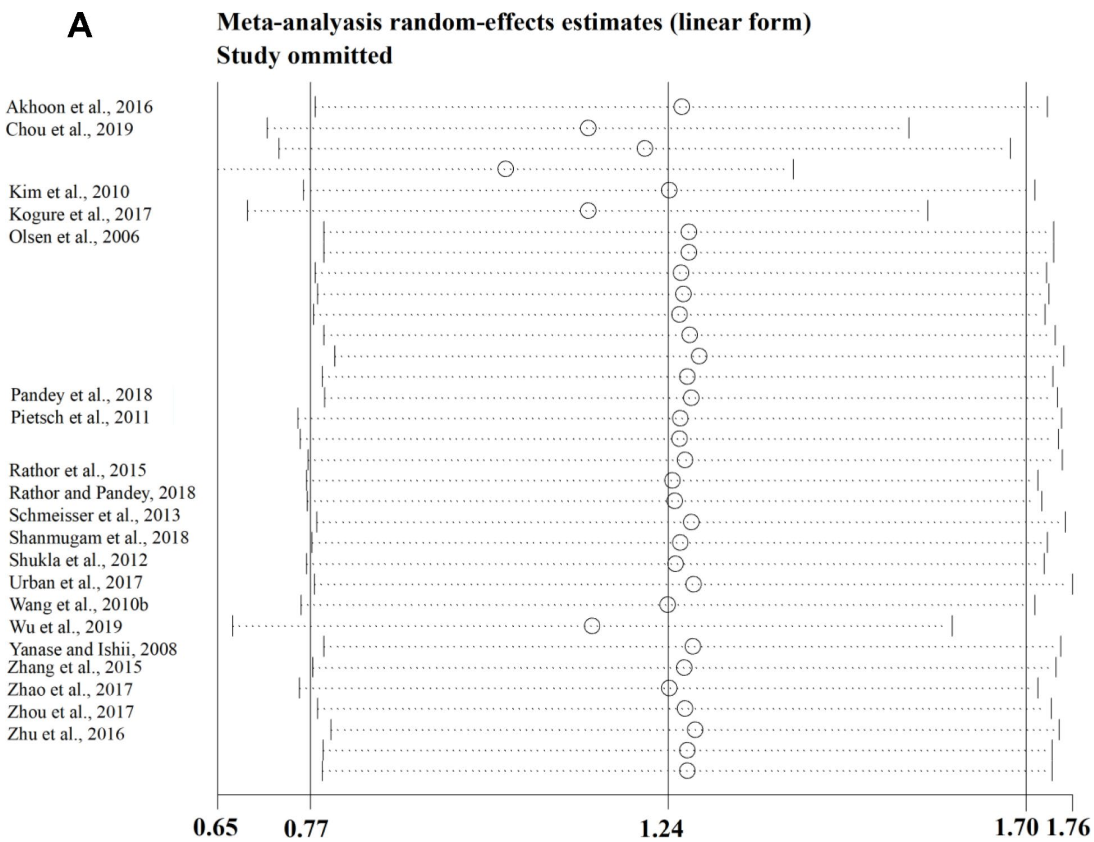
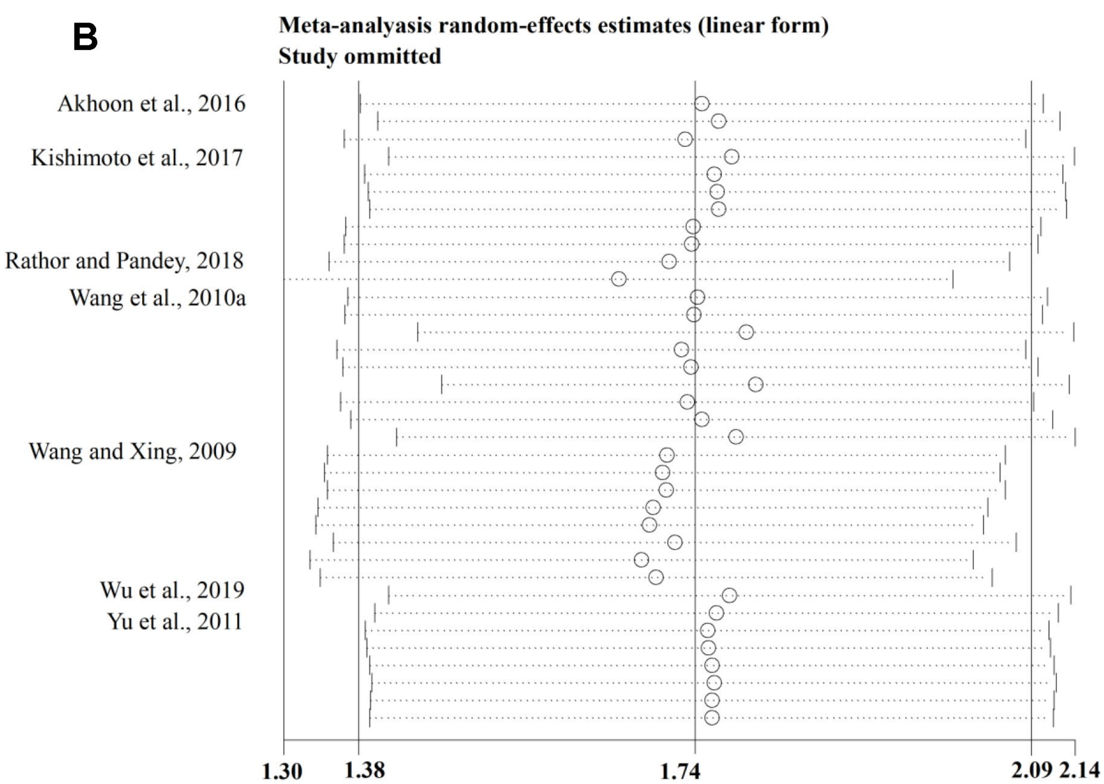
SUPPLEMENTARY FIGURES WITH REFERENCES





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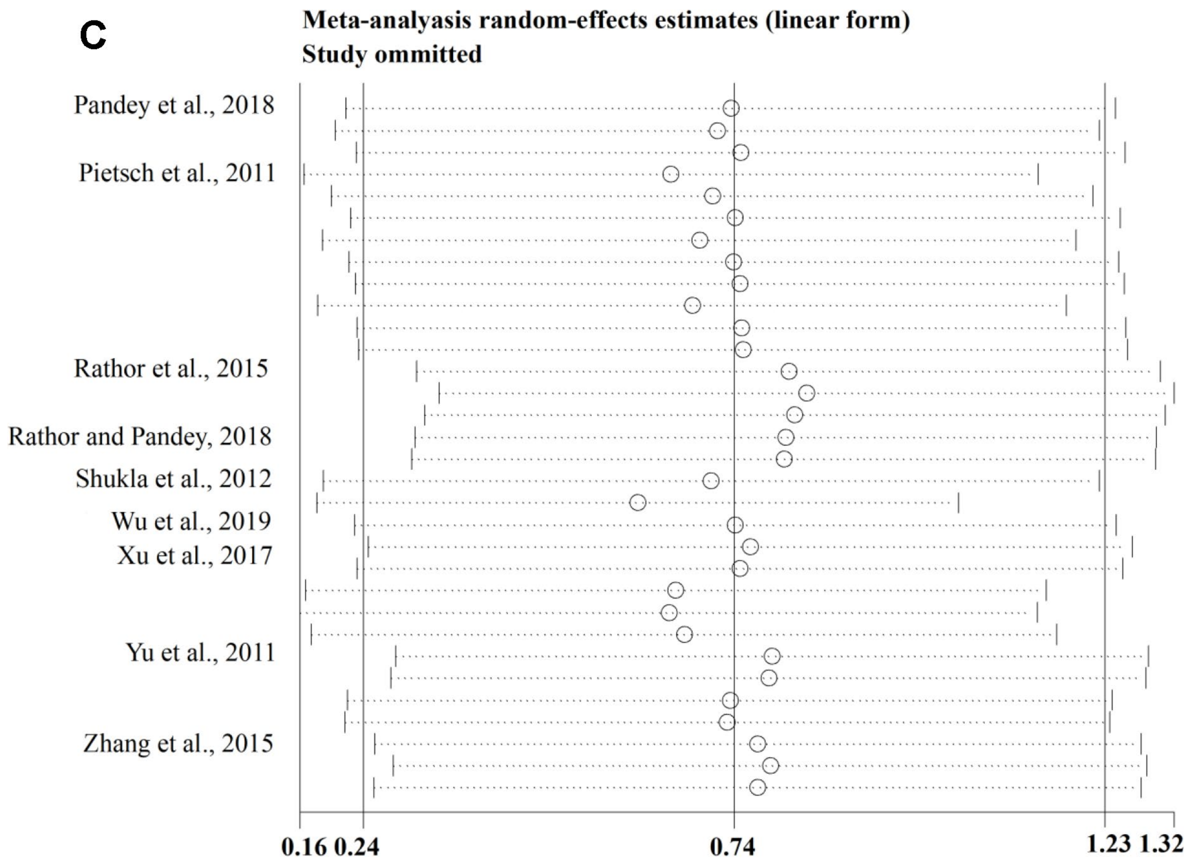
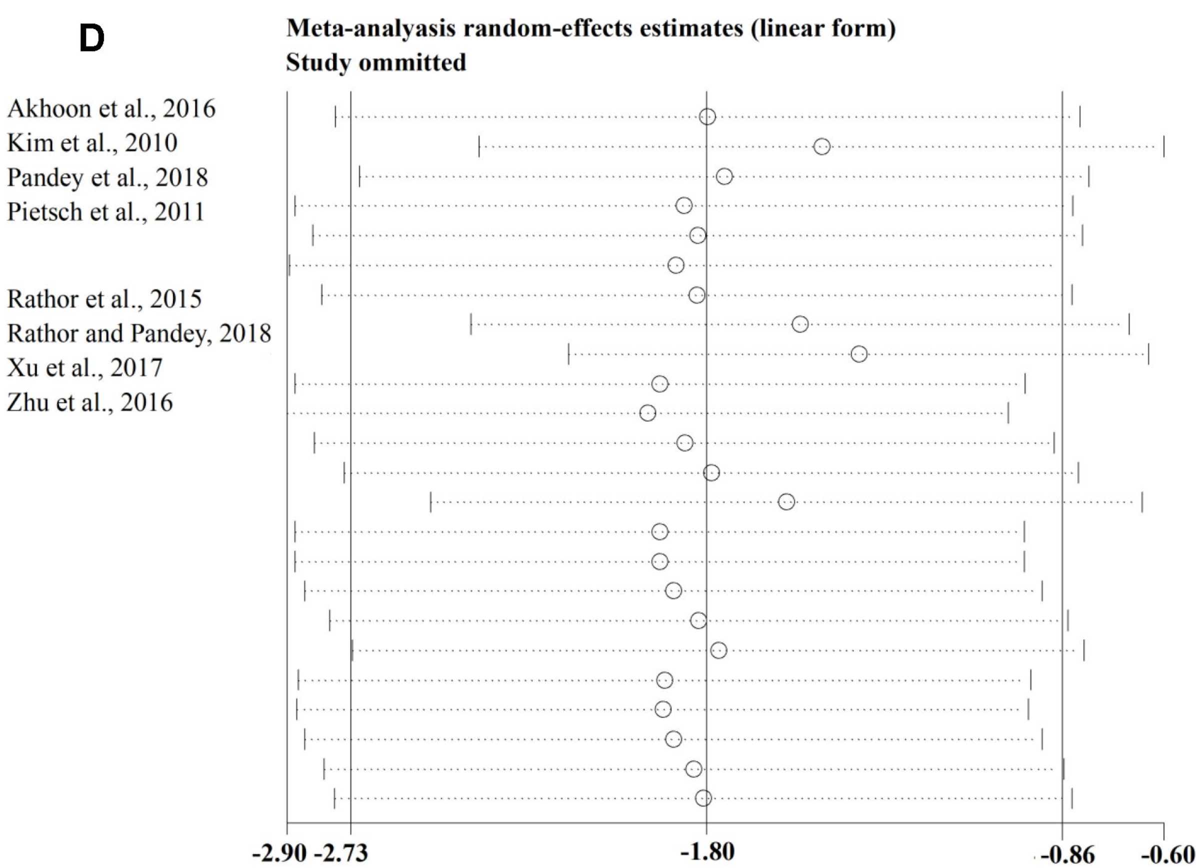

Meta-analaysis random-effects estimates (linear form)
Study ommitted
Pandey et al., 2018
Pietsch et al., 2011
Rathor et al., 2015
Rathor and Pandey, 2018
Shukla et al., 2012
Wu et al., 2019
Xu et al., 2017
Yu et al., 2011
Zhang et al., 2015
0.16 0.24
0.74
1.23 1.32

D


Meta-analaysis random-effects estimates (linear form)
Study ommitted
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Kim et al., 2010
Pandey et al., 2018
Pietsch et al., 2011
Rathor et al., 2015
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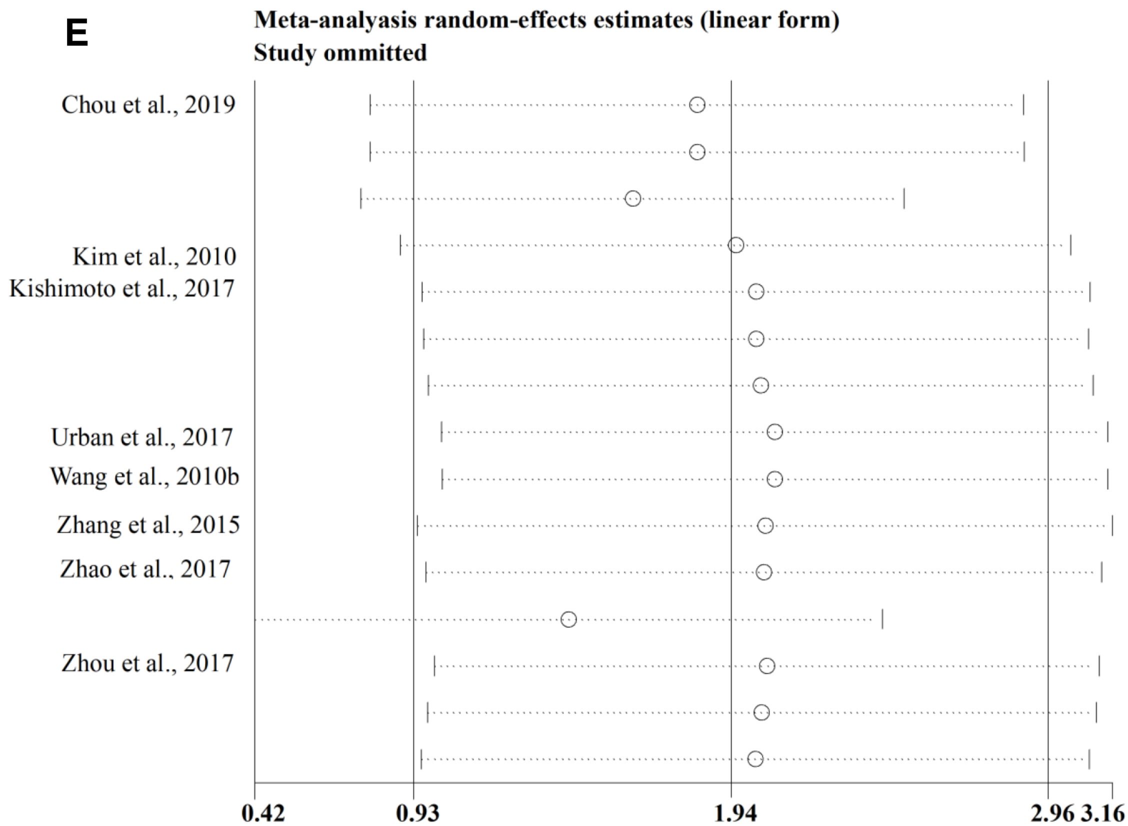
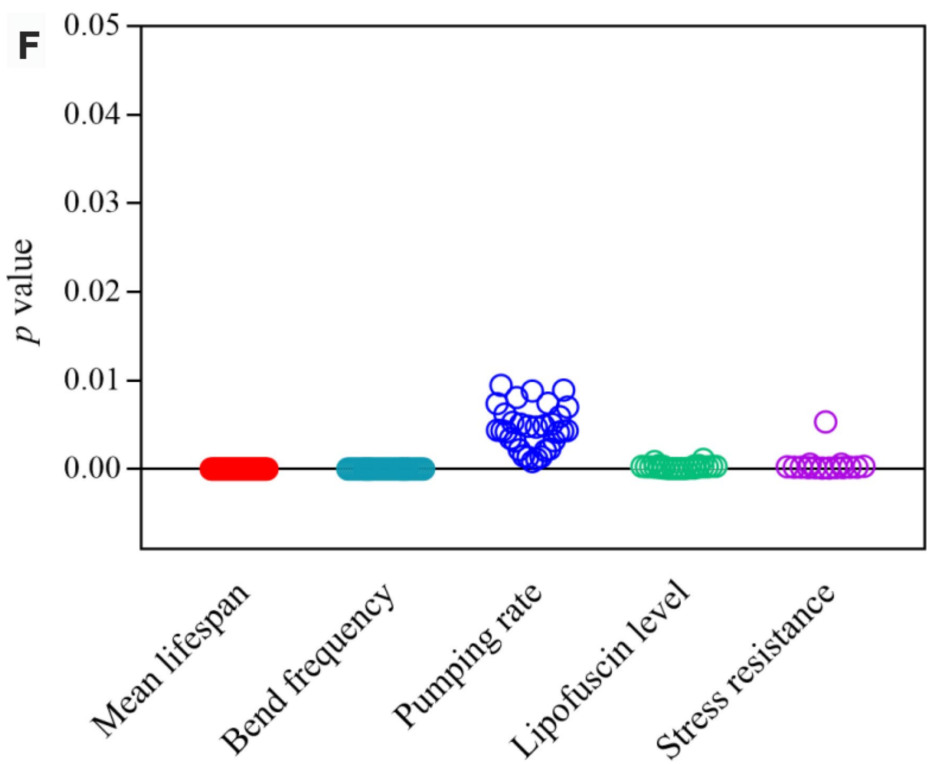
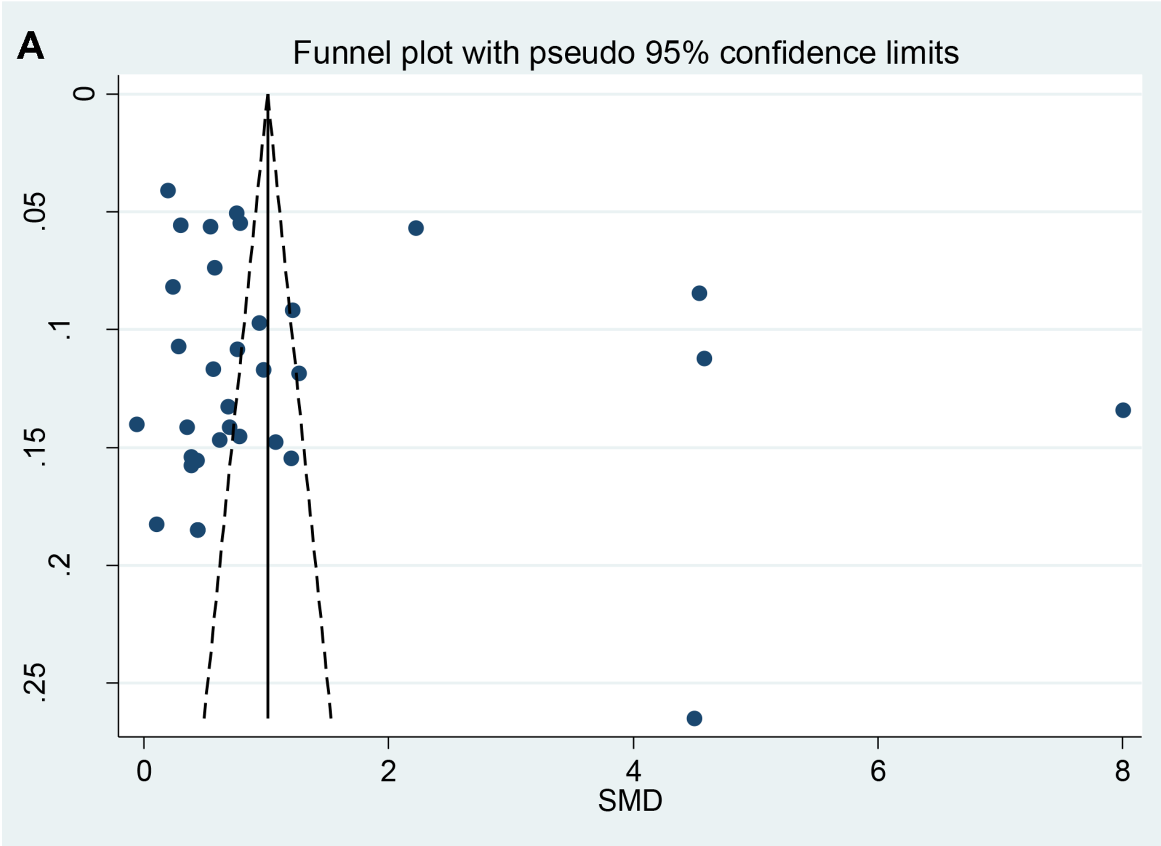
Xu et al., 2017
Zhu et al., 2016
-2.90 -2.73
-1.80
-0.86
-0.60

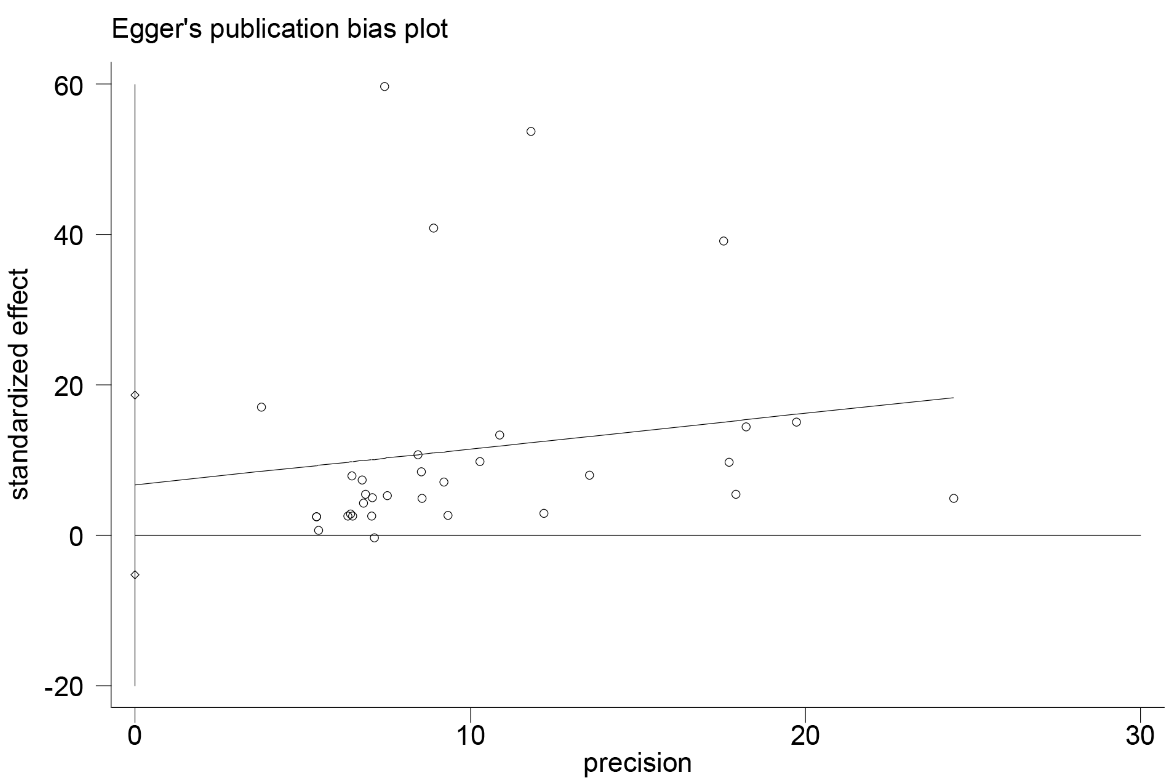




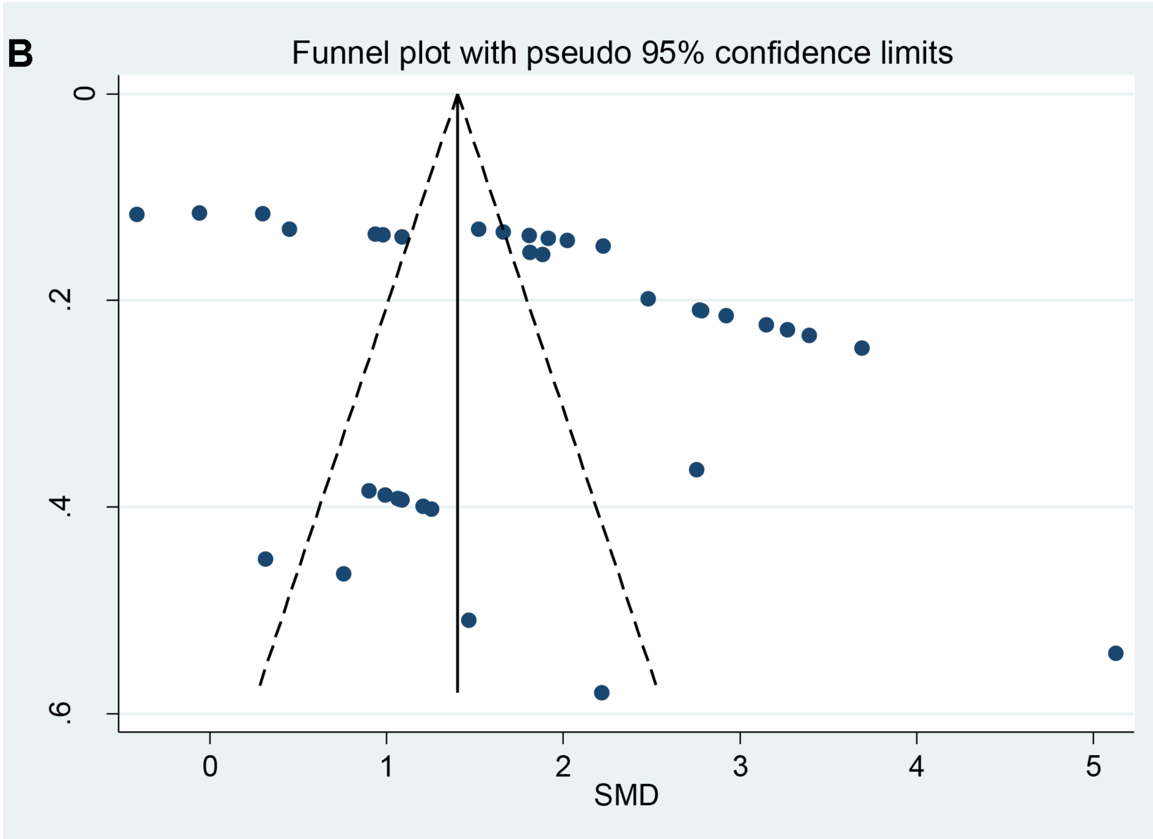
Supplementary Figure 1. "Leave-one-out" sensitivity analyses. (**A**–**E**) denoted the "leave-one-out" sensitivity analyses of mean lifespan, bend frequency, pumping rate, lipofuscin level and stress resistance, respectively. (**F**) was the summary of the significant re-test after omitting one study. As shown in (**F**), the meta-analytic results of all indicators were stable.


A
Funnel plot with pseudo 95% confidence limits
0
.05
.1
.15
.2
.25
0
2
4
6
8
SMD

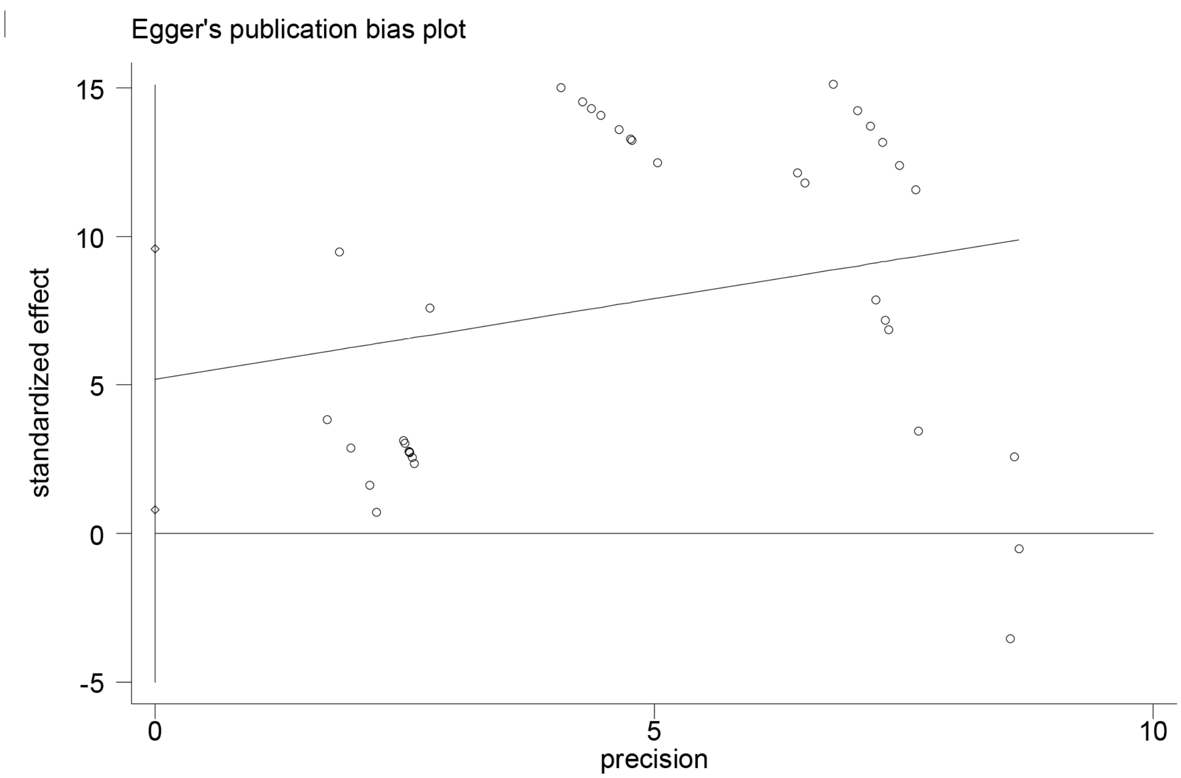
I


Egger's publication bias plot
60
40
20
0
-20
standardized effect
0
10
20
30
precision

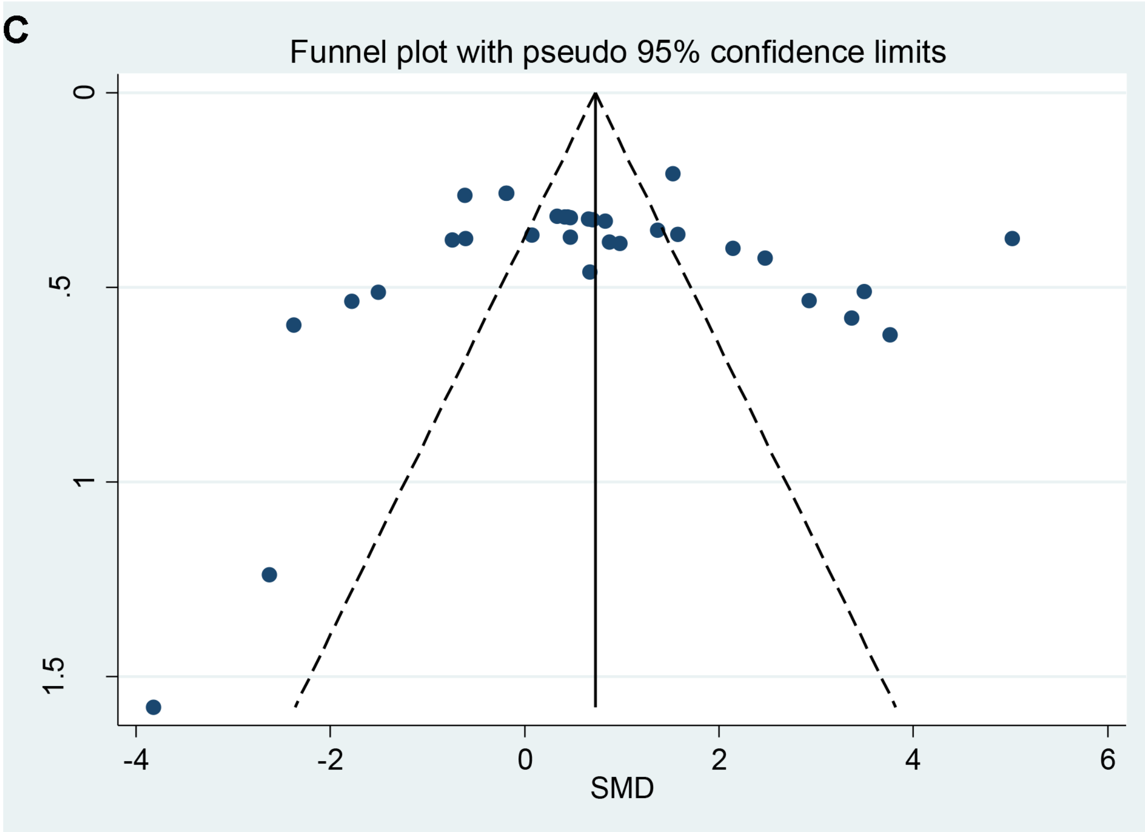
II


B
Funnel plot with pseudo 95% confidence limits
0
.2
.4
.6
0
1
2
3
4
5
SMD

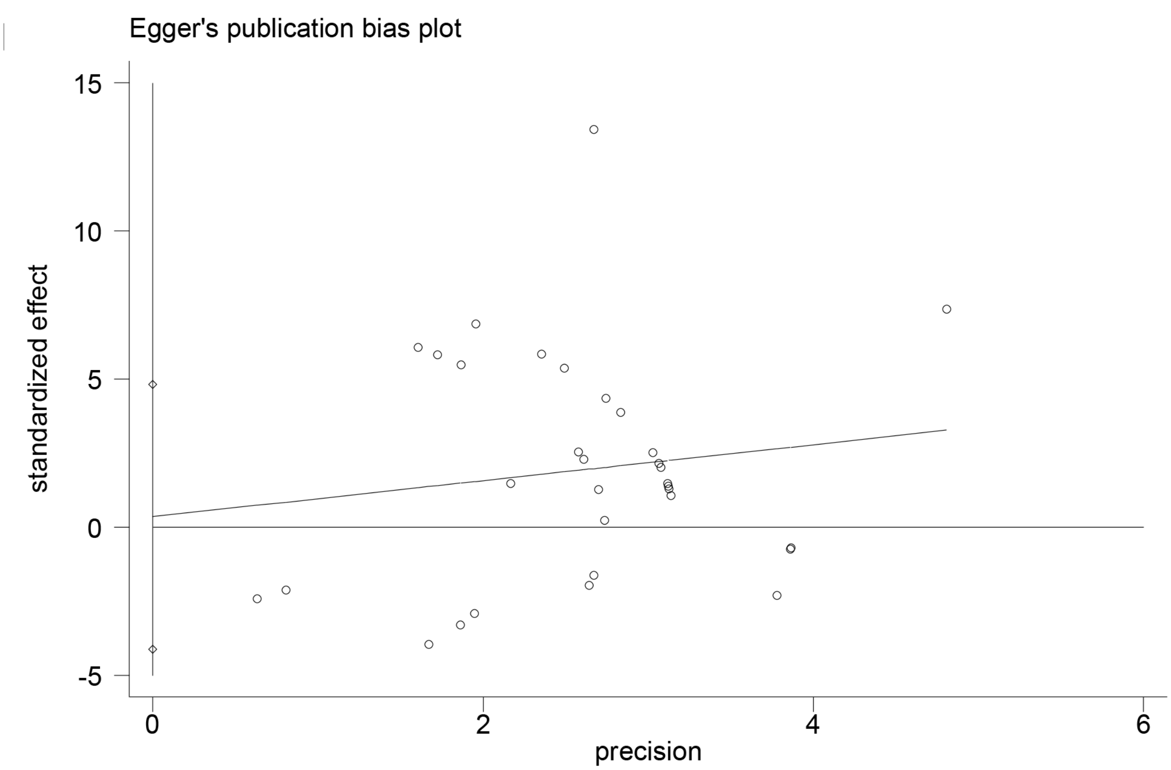
I


Egger's publication bias plot
15
10
5
0
-5
standardized effect
0
5
10
precision

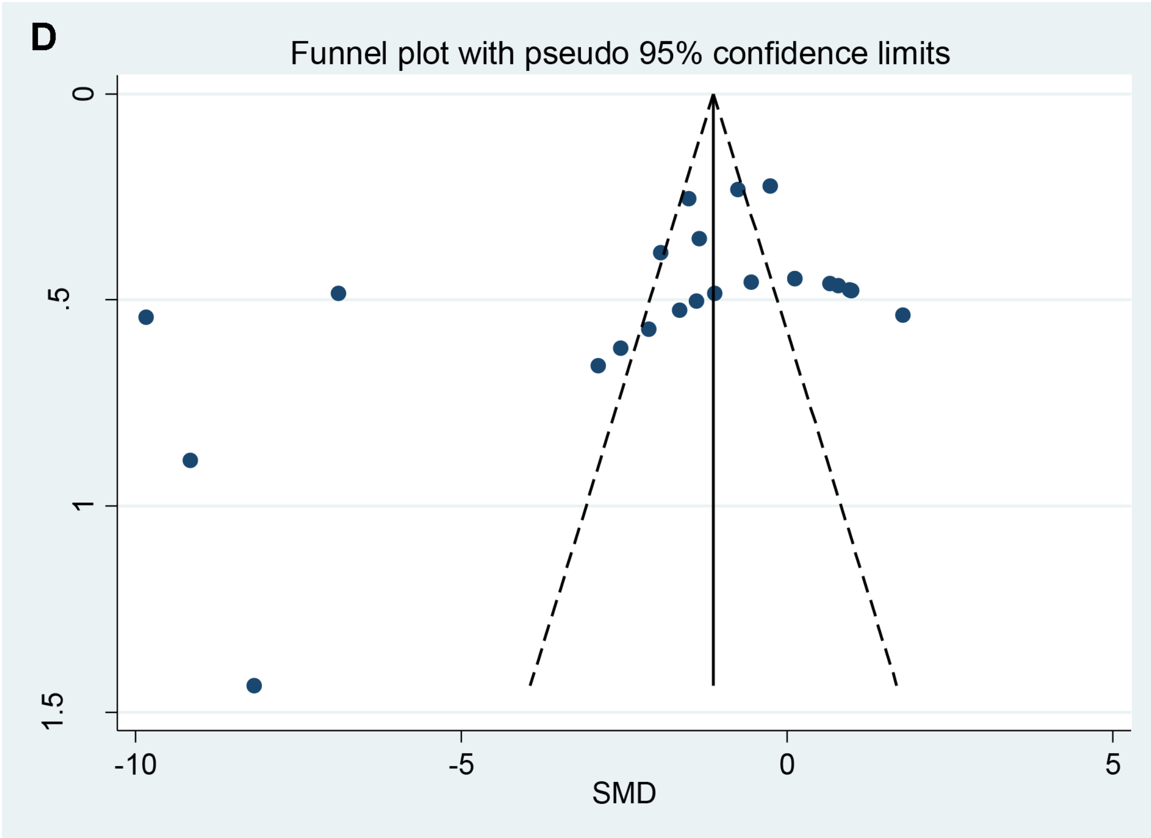
II


C
Funnel plot with pseudo 95% confidence limits
0
.5
1
1.5
-4
-2
0
2
4
6
SMD

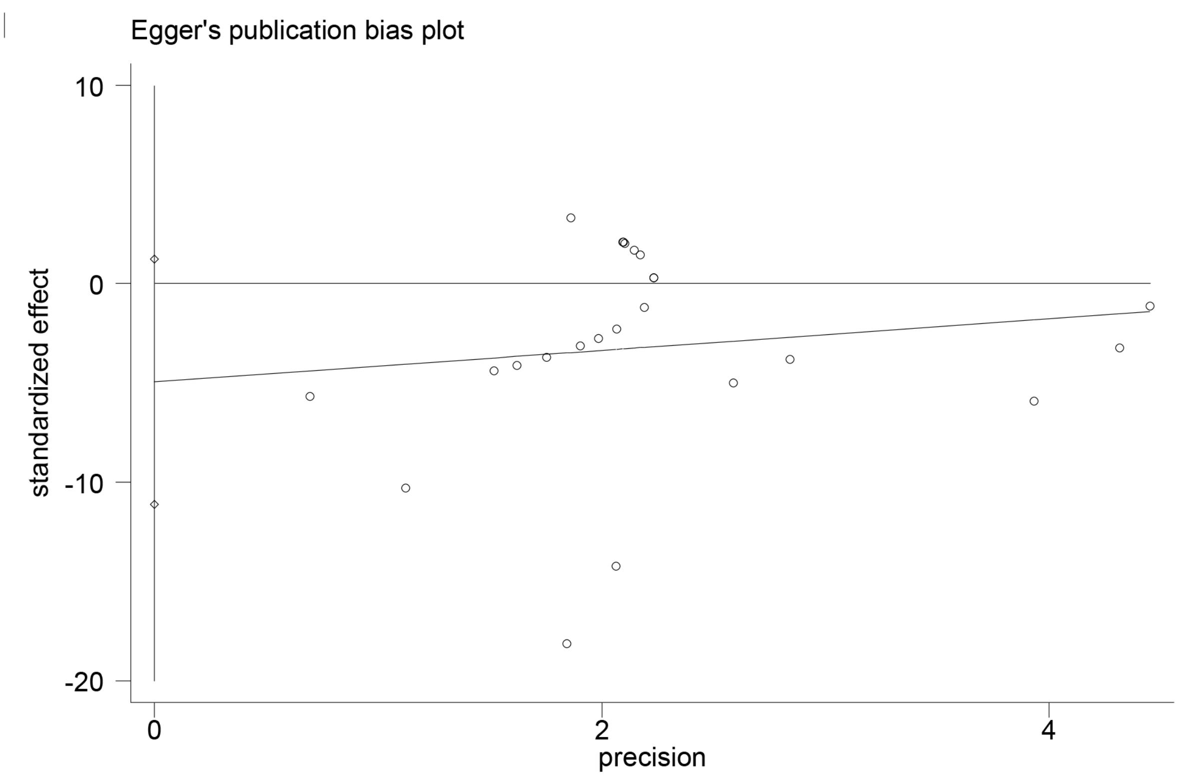
I


Egger's publication bias plot
15
10
5
0
-5
standardized effect
0
2
4
6
precision

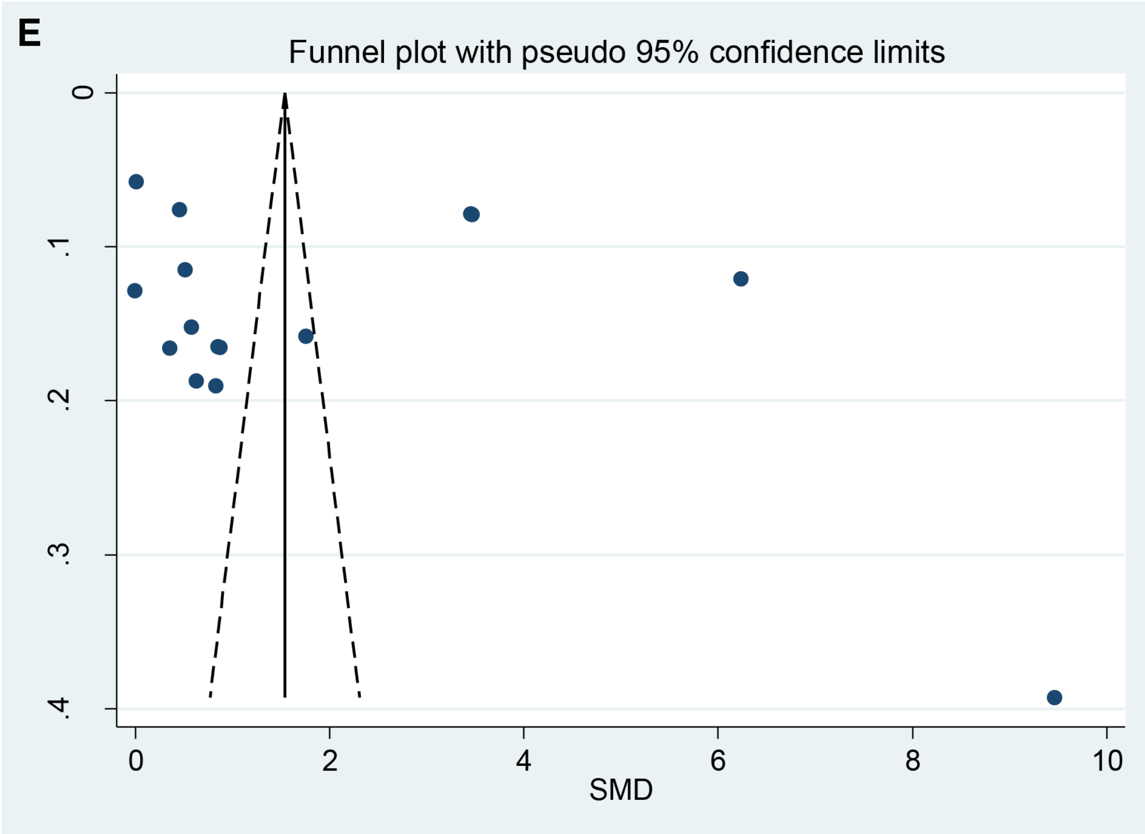
II


D
Funnel plot with pseudo 95% confidence limits
0
.5
1
1.5
-10
-5
0
5
SMD

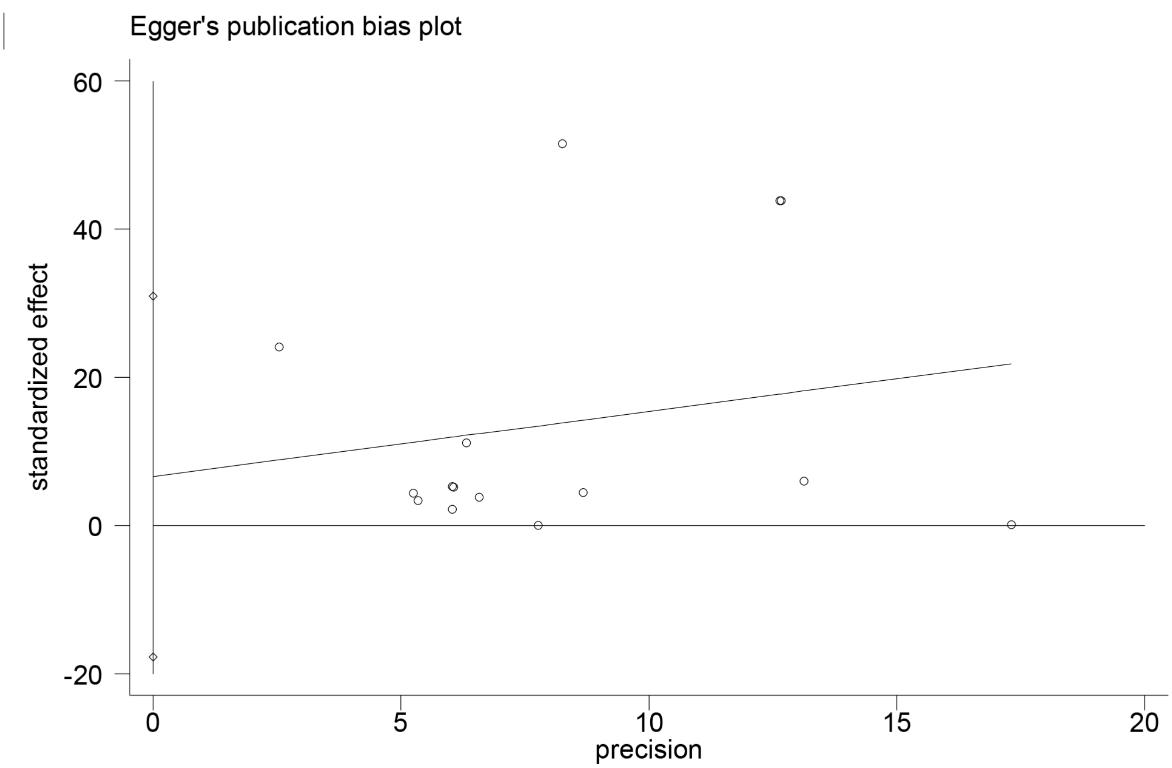
I


Egger's publication bias plot
10
0
-10
-20
standardized effect
0
2
4
precision

II


E
Funnel plot with pseudo 95% confidence limits
0
.1
.2
.3
.4
0
2
4
6
8
10
SMD

I


Egger's publication bias plot
60
40
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standardized effect
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15
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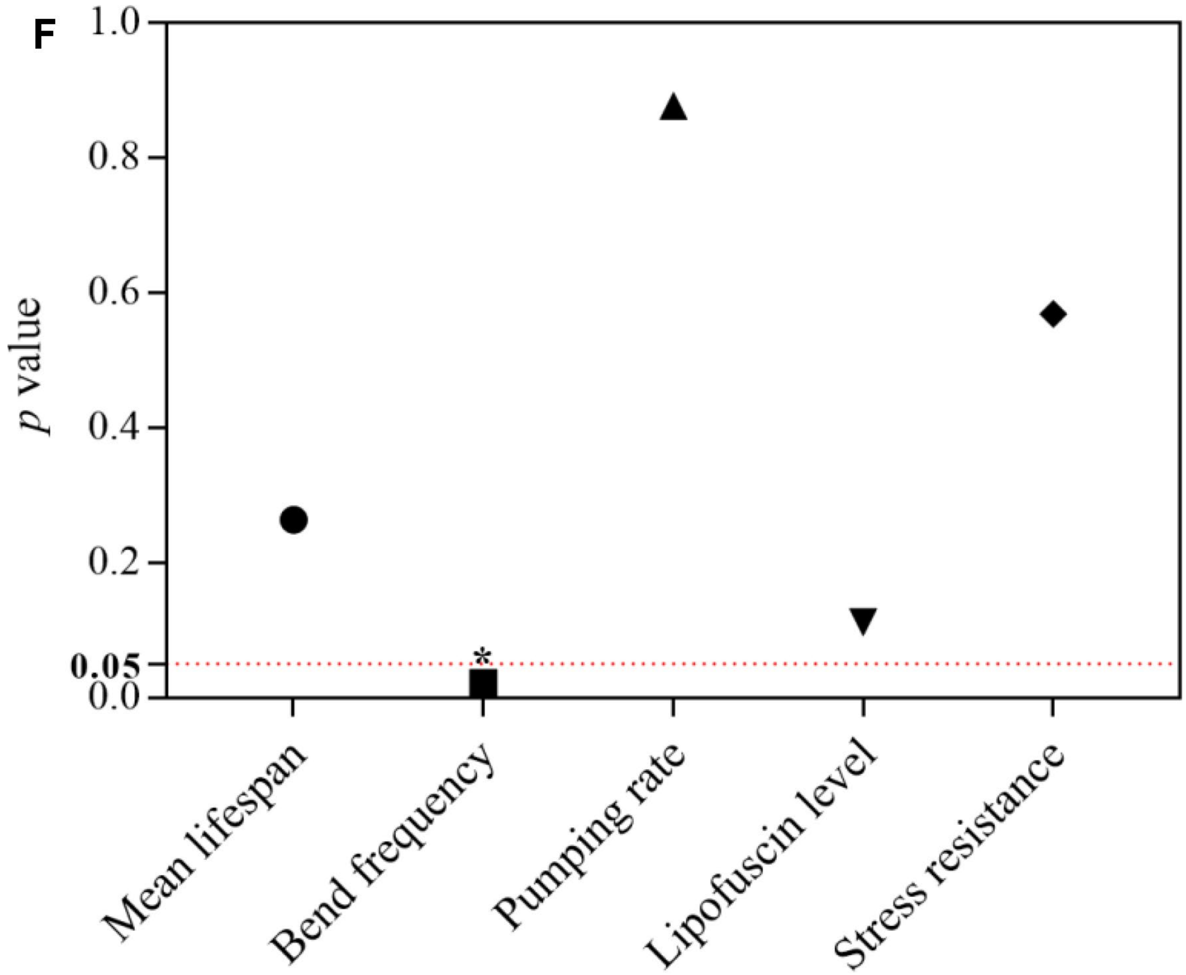
precision

II



Supplementary Figure 2. Publication bias assessments. (**A**–**E**) showed the publication bias assessments of mean lifespan, bend frequency, pumping rate, lipofuscin level and stress resistance, respectively, while (**F**) summarized the risk of publication bias of each indicator. The sub-graph (I) was the funnel plots that directly exhibited the risk of publication bias. The sub-group (II) was the Egger's test expressed by line form that could quantitatively evaluate the risk of publication bias. Statistically significant publication bias was considered when the value of *p* was less than 0.05. *represented the appearance of significant publication bias ($p < 0.05$).

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