Appendix 1

Section 1

PubMed:

Search strategy: ("curvature" OR "bent penis" OR "penile curvature") AND ("erectile dysfunction" OR "impotence") AND ("penile length" OR "penile size") AND ("penile traction therapy" OR "penile stretching" OR "penile extender" OR "penile traction device") AND ("Peyronie's disease" OR "penile fibrosis" OR "penile plaque")

Google Scholar:

Search strategy: curvature AND erectile dysfunction AND penile length AND penile traction therapy AND Peyronie's disease

Science Direct:

Search strategy: ("curvature" OR "bent penis") AND ("erectile dysfunction") AND ("penile length" OR "penile size") AND ("penile traction therapy" OR "penile stretching" OR "penile traction device") AND ("Peyronie's disease")

Clinicaltrials.gov:

Search strategy: Searched each keyword separately in the "Search" field of Clinicaltrials.gov. "curvature," "erectile dysfunction," "penile length," "penile traction therapy," and "Peyronie's disease" individually.

Cochrane Library:

Search strategy: ("curvature" OR "bent penis" OR "penile curvature") AND ("erectile dysfunction" OR "impotence") AND ("penile length" OR "penile size") AND ("penile traction therapy" OR "penile stretching" OR "penile extender" OR "penile traction device") AND ("Peyronie's disease" OR "penile fibrosis" OR "penile plaque")

Section 2

Model Fit:

The log-likelihood value is 0.0576, indicating the model's goodness of fit.

The deviance value is -0.1152, which measures the discrepancy between the model and the observed data.

The AIC (Akaike Information Criterion) value is 3.8848, while the BIC (Bayesian Information Criterion) is 2.6574. These values are used for model selection, with lower values indicating a better fit.

The AICc (corrected AIC) value is 15.8848, a modification of AIC for small sample sizes.

Heterogeneity:

The estimated amount of total heterogeneity (tau^2) is 0, suggesting no heterogeneity among the effect sizes, with a standard error (SE) of 0.1067.

The square root of the estimated tau^2 value is 0 (tau), indicating no variation in effect sizes across studies.

The I^2 value is 0.00%, implying no heterogeneity among the effect sizes.

The H^2 value is 1.00, indicating that all variability in effect sizes is due to sampling variability.

Test for Heterogeneity:

The test for heterogeneity is performed using the Q-statistic with a chi-squared distribution.

The Q-value is 0.0730, with 4 degrees of freedom (df), resulting in a p-value of 0.9993.

Since the p-value (0.9993) is much greater than the significance level (e.g., 0.05), we do not have significant evidence to reject the null hypothesis of homogeneity. This suggests that there is no significant heterogeneity among the effect sizes.

Model Results:

The overall effect size (estimate) is -0.1056, with a standard error (se) of 0.1738.

The z-value is -0.6074, the estimate divided by its standard error.

The p-value is 0.5436, indicating a lack of statistical significance for the effect size.

The effect size's confidence interval (CI) ranges from -0.4462 to 0.2351.

Section 3

Model Fit:
The log-likelihood value is -0.0773, indicating the model's goodness of fit.
The deviance value is 0.1547, which measures the discrepancy between the model and the observed data.
The AIC (Akaike Information Criterion) value is 4.1547, while the BIC (Bayesian Information Criterion) is 2.9273. These values are used for model selection, with lower values indicating a better fit.
The AICc (corrected AIC) value is 16.1547, a modification of AIC for small sample sizes.

Heterogeneity:
The estimated total heterogeneity (tau^2) is 0, suggesting no heterogeneity among the effect sizes, with a standard error (SE) of 0.1119.
The square root of the estimated tau^2 value is 0 (tau), indicating no variation in effect sizes across studies.
The I^2 value is 0.00%, implying no heterogeneity among the effect sizes.
The H^2 value is 1.00, indicating that all variability in effect sizes is due to sampling variability.

Test for Heterogeneity:
The test for heterogeneity is performed using the Q-statistic with a chi-squared distribution.
The Q-value is 0.0965, with 4 degrees of freedom (df), resulting in a p-value of 0.9989.
Since the p-value (0.9989) is much greater than the significance level (e.g., 0.05), we do not have significant evidence to reject the null hypothesis of homogeneity. This suggests that there is no significant heterogeneity among the effect sizes.

Model Results:
The overall effect size (estimate) is -0.1115, with a standard error (SE) of 0.1782.
The z-value is -0.6258, the estimate divided by its standard error.
The p-value is 0.5315, indicating a lack of statistical significance for the effect size.
The effect size's confidence interval ranges from -0.4608 to 0.2377.

Section 4

Model Fit:
The log-likelihood value is -0.7946, indicating the model's goodness of fit.
The deviance value is 1.5891, which measures the discrepancy between the model and the observed data.
The AIC (Akaike Information Criterion) value is 5.5891, while the BIC (Bayesian Information Criterion) is 3.7864. These values are used for model selection, with lower values indicating a better fit.
The AICc (corrected AIC) value is 17.5891, a modification of AIC for small sample sizes.

Heterogeneity:
The estimated total heterogeneity (tau^2) amount is 0.0134, with a standard error (SE) of 0.0565.
The square root of the estimated tau^2 value is 0.1159 (tau), representing the typical standard deviation of true effect sizes.
The I^2 value is 18.73%, indicating that 18.73% of the total variability in effect sizes can be attributed to heterogeneity.
The H^2 value is 1.23, suggesting that 1.23 times more variability is due to total variability rather than sampling variability.

Test for Heterogeneity:
The test for heterogeneity is performed using the Q-statistic with a chi-squared distribution.
The Q-value is 4.3048, with 3 degrees of freedom (df), resulting in a p-value of 0.2304.
Since the p-value (0.2304) is greater than the significance level (e.g., 0.05), we do not have strong evidence to reject the null hypothesis of homogeneity. This indicates that there is no significant heterogeneity among the effect sizes.

Model Results:
The overall effect size (estimate) is 0.2752, with a standard error (se) of 0.1321.
The z-value is 2.0829, the estimate divided by its standard error.
The p-value is 0.0373, suggesting a statistically significant effect.
The confidence interval (CI) for the effect size ranges from 0.0162 to 0.5341.

Section 5

Model Fit:

The log-likelihood value is -0.1870, indicating the model's goodness of fit.

The deviance value is 0.3741, which measures the discrepancy between the model and the observed data.

The AIC (Akaike Information Criterion) value is 4.3741, while the BIC (Bayesian Information Criterion) is 2.5713. These values are used for model selection, with lower values indicating a better fit.

The AICc (corrected AIC) value is 16.3741, a modification of AIC for small sample sizes.

Heterogeneity:

The estimated total heterogeneity (tau^2) is 0, suggesting no heterogeneity among the effect sizes, with a standard error (SE) of 0.0629.

The square root of the estimated tau^2 value is 0 (tau), indicating no variation in effect sizes across studies.

The I^2 value is 0.00%, implying no heterogeneity among the effect sizes.

The H^2 value is 1.00, indicating that all variability in effect sizes is due to sampling variability.

Test for Heterogeneity:

The test for heterogeneity is performed using the Q-statistic with a chi-squared distribution.

The Q-value is 2.4873, with 3 degrees of freedom (df), resulting in a p-value of 0.4776.Since the p-value (0.4776) is greater than the significance level (e.g., 0.05), we do not have significant evidence to reject the null hypothesis of homogeneity. This suggests that there is no significant heterogeneity among the effect sizes.

Model Results:

The overall effect size (estimate) is -0.2276, with a standard error (SE) of 0.1388.

The z-value is -1.6399, the estimate divided by its standard error.

The p-value is 0.1010, indicating a lack of statistical significance for the effect size.

The confidence interval (CI) for the effect size ranges from -0.4997 to 0.0444.