SPSS
output close *. 
get file='c:\jason\spsswin\mvclass\anova.sav'.

means variables=w1cesd9 by w1sex.

oneway w1cesd9 by w1sex 
   /es=overall.
*note that GLM and ANOVA procedures can also be used but do not have effect size option.
*anova variable=w1cesd9 by w1sex(0,1).

regression vars=w1cesd9 w1sex 
   /descriptives=mean stdev n sig corr
   /statistics=anova r coeff ses cha
   /dependent=w1cesd9
   /method=enter w1sex.

Means

Oneway

Regression
#clear active frame from previous analyses
rm(d)

library(haven)
d = read_sav("c:/jason/spsswin/mvclass/anova.sav")

library(lessR)
#lessR function (brief version of ANOVA function output)
ANOVA(w1cesd9 ~ w1sex, brief=TRUE)
#equivalently: av_brief(w1cesd9 ~ w1sex)

#base R function
#model1 <- aov(w1cesd9 ~ w1sex, data=d)
#summary(model1)
#aov does not give eta-squared, so can use effectize package
#library(effectsize)
#eta_squared(model1, partial = FALSE)
#omega_squared(model1, partial = FALSE)

Data Frame: d
Response Variable: w1cesd9
Factor Variable: w1sex
Levels: 0 1
Number of cases (rows) of data: 916
Number of cases retained for analysis: 910

DESCRIPTIVE STATISTICS

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>mean</th>
<th>sd</th>
<th>min</th>
<th>max</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>347</td>
<td>4.6354981</td>
<td>4.5873245</td>
<td>0.0000000</td>
<td>25.0000000</td>
</tr>
<tr>
<td>1</td>
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<td>5.3921594</td>
<td>5.1994327</td>
<td>0.0000000</td>
<td>26.0000000</td>
</tr>
</tbody>
</table>

Grand Mean: 5.1036303

BASIC ANALYSIS

Summary Table

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Sum Sq</th>
<th>Mean Sq</th>
<th>F-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>w1sex</td>
<td>1</td>
<td>122.9134505</td>
<td>122.9134505</td>
<td>4.966</td>
<td>0.026</td>
</tr>
<tr>
<td>Residuals</td>
<td>908</td>
<td>22474.2312530</td>
<td>24.7513560</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Association and Effect Size

R Squared: 0.01
R Sq Adjusted: 0.00
Omega Squared: 0.00
Cohen's f: 0.07

BACKGROUND

Data Frame: d
Response Variable: w1cesd9
Predictor Variable: w1sex

Number of cases (rows) of data: 916
Number of cases retained for analysis: 910

#lessR function
Regression(w1cesd9 ~ w1sex, brief=TRUE)

BASIC ANALYSIS

Estimated Model

<table>
<thead>
<tr>
<th></th>
<th>Estimate</th>
<th>Std. Error</th>
<th>t value</th>
<th>p-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
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</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>4.6354981</td>
<td>0.2670759</td>
<td>17.356</td>
<td>0.000</td>
<td>4.1113402</td>
<td>5.1596561</td>
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<tr>
<td>w1sex</td>
<td>0.7566612</td>
<td>0.3395481</td>
<td>2.228</td>
<td>0.026</td>
<td>0.0902709</td>
<td>1.4230515</td>
</tr>
</tbody>
</table>

Model Fit

Standard deviation of residuals: 4.9750735 for 908 degrees of freedom

R-squared: 0.005  Adjusted R-squared: 0.004  PRESS R-squared: 0.001

Null hypothesis that all population slope coefficients are 0:
F-statistic: 4.966  df: 1 and 908  p-value: 0.026

Analysis of Variance

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>Sum Sq</th>
<th>Mean Sq</th>
<th>F value</th>
<th>p-value</th>
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</thead>
<tbody>
<tr>
<td>Model</td>
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<td>122.9134505</td>
<td>122.9134505</td>
<td>4.9659279</td>
<td>0.026</td>
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<tr>
<td>Residuals</td>
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<td>22474.2312530</td>
<td>24.7513560</td>
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<td></td>
</tr>
<tr>
<td>w1cesd9</td>
<td>909</td>
<td>22597.1447035</td>
<td>24.8593451</td>
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</tr>
</tbody>
</table>

Write-up

With binary predictors, write-up for regression analysis proceeds just as any other regression analysis (as illustrated previously), although the author may wish to emphasize the interpretation of the slope as a difference in means.