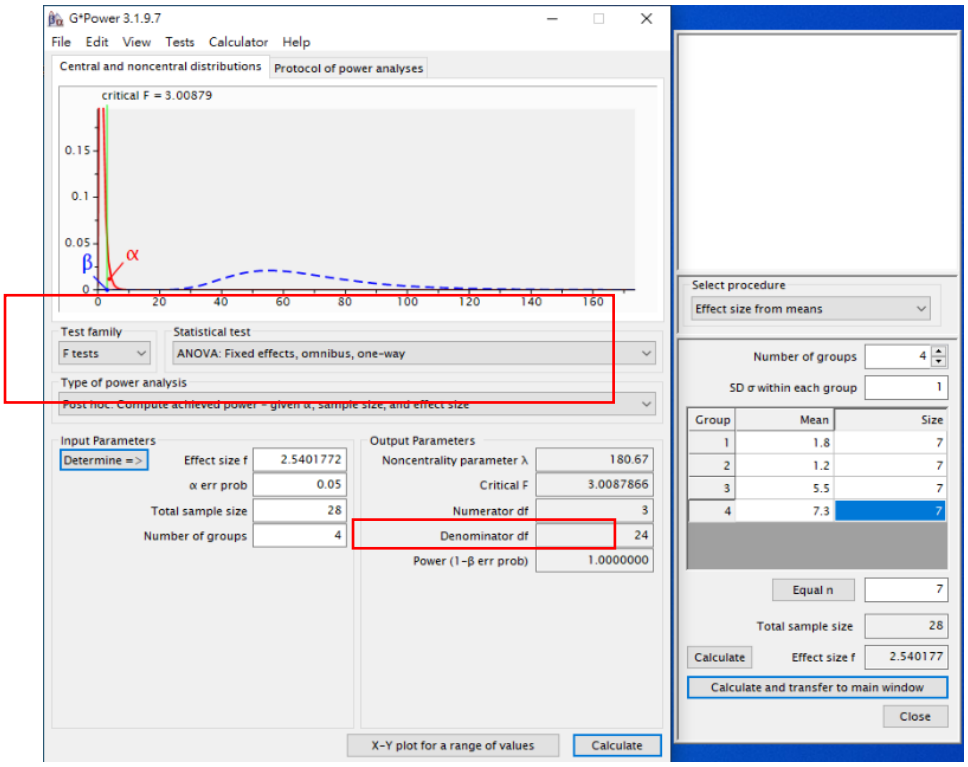
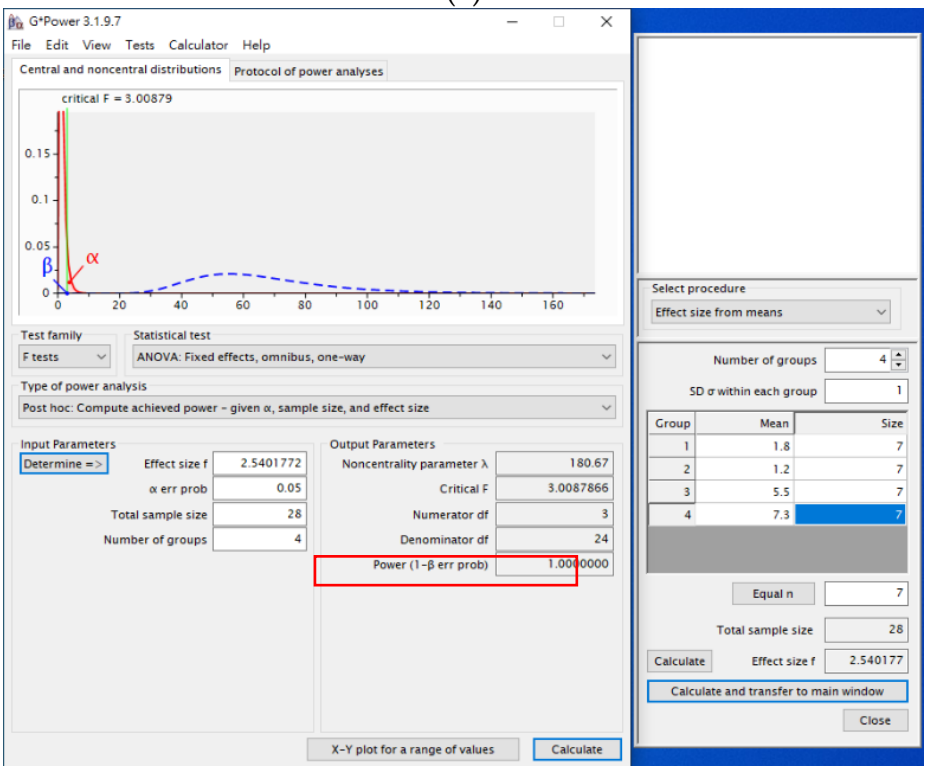
Supplementary material

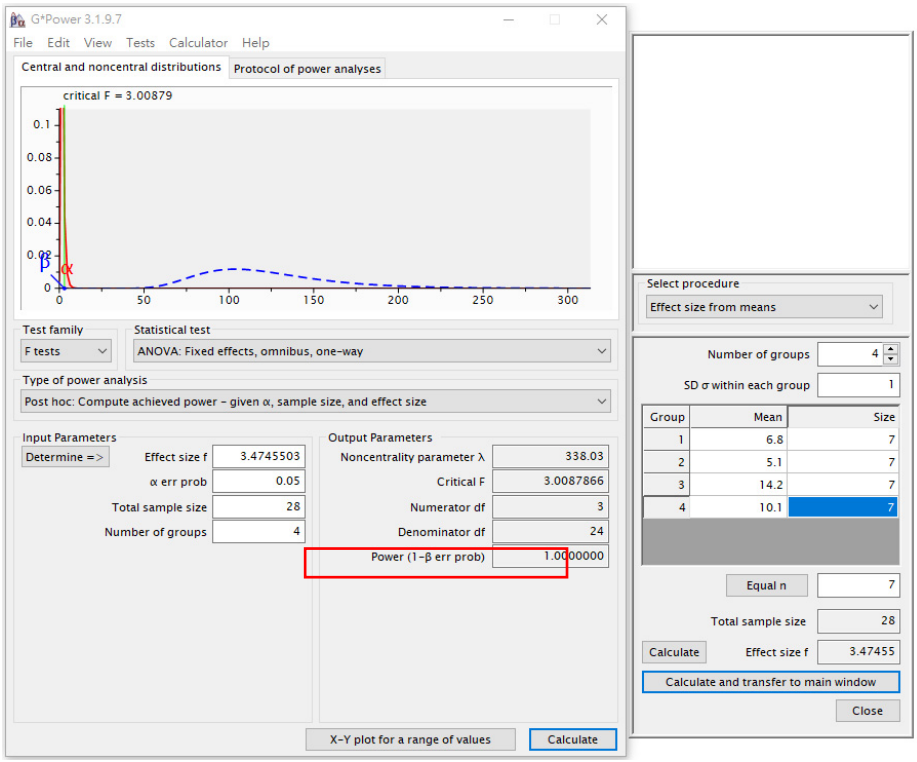


(a)

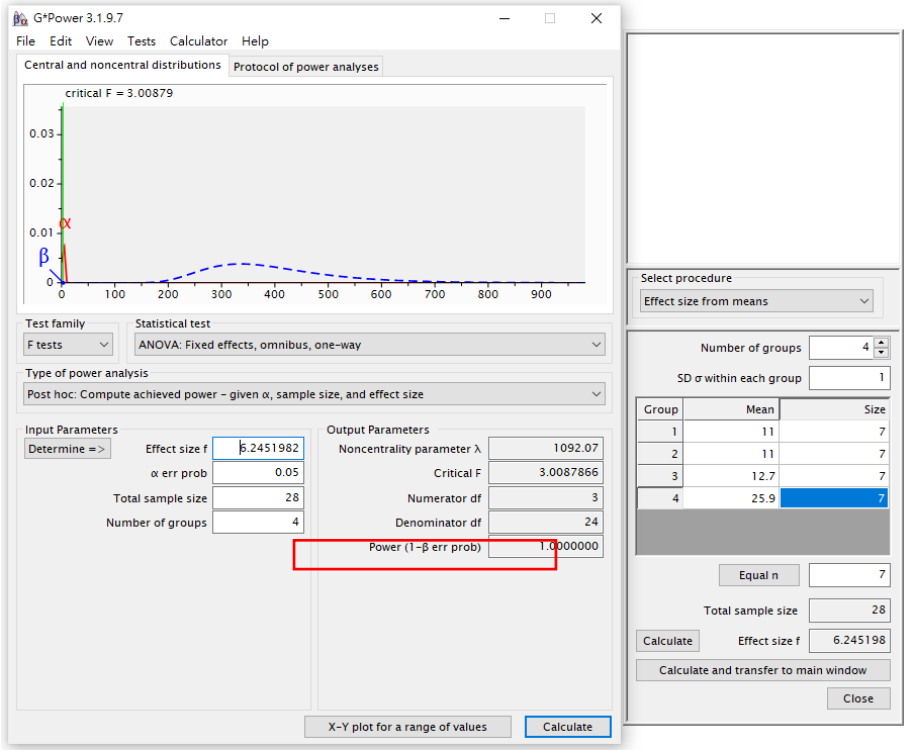


(b)

Figure S1. The examination of statistical power from the data shown in Table 1. (**a**) The value of Power is 1 for the data along the ML direction (**b**) The value of Power is 1 for the data along the AP direction.

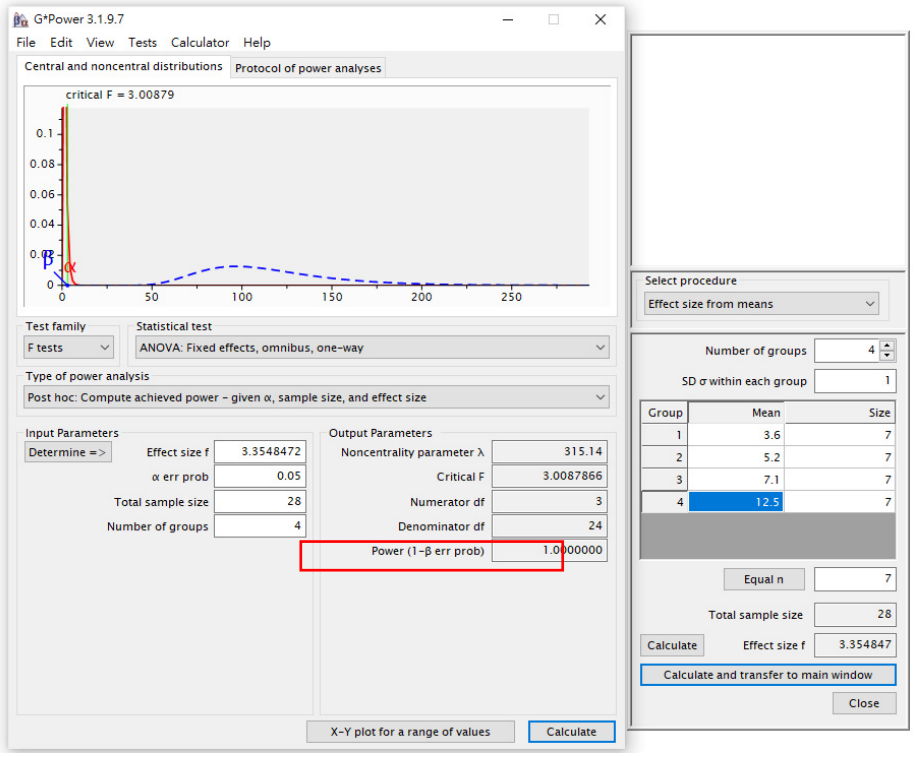


(a)

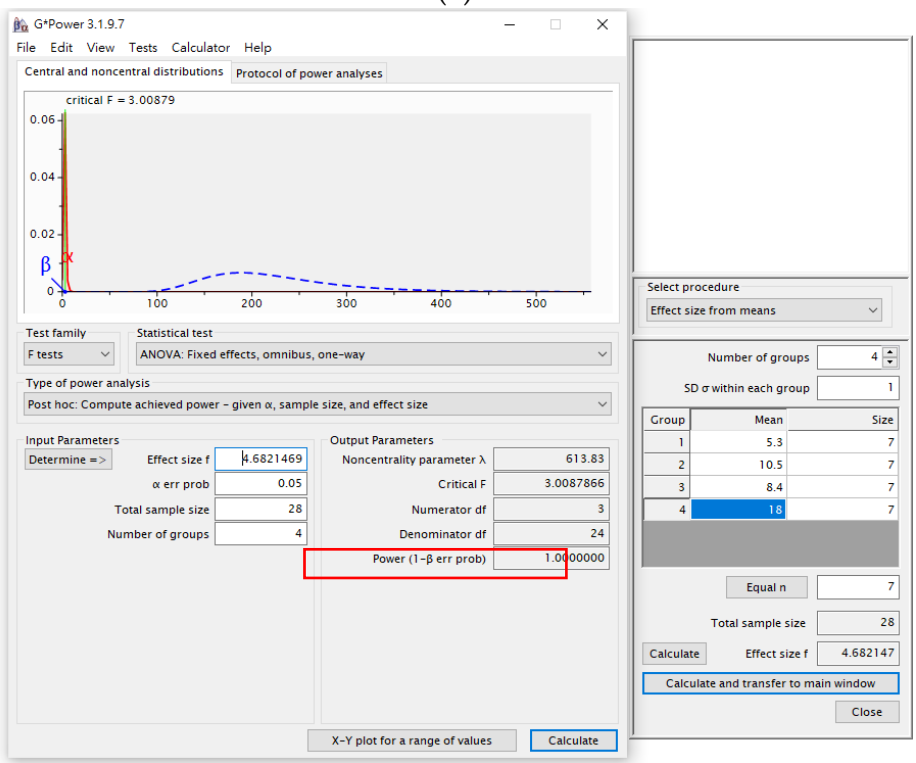


(b)

Figure S2. The examination of statistical power from the data shown in Table 2. (**a**) The value of Power is 1 for the data along the ML direction (**b**) The value of Power is 1 for the data along the AP direction.

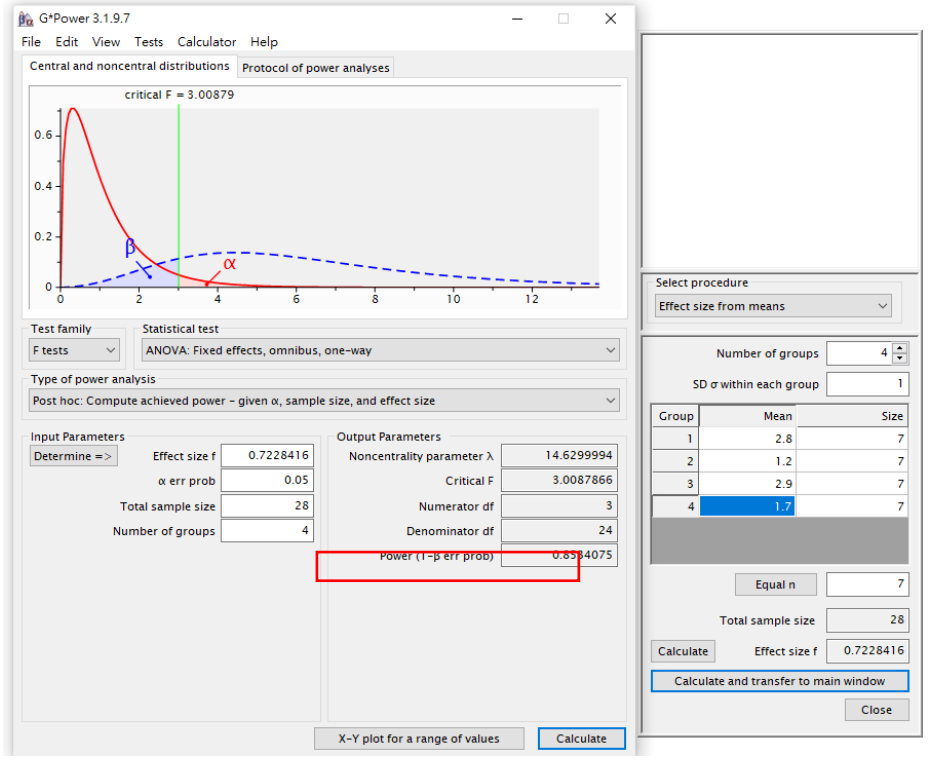


(a)

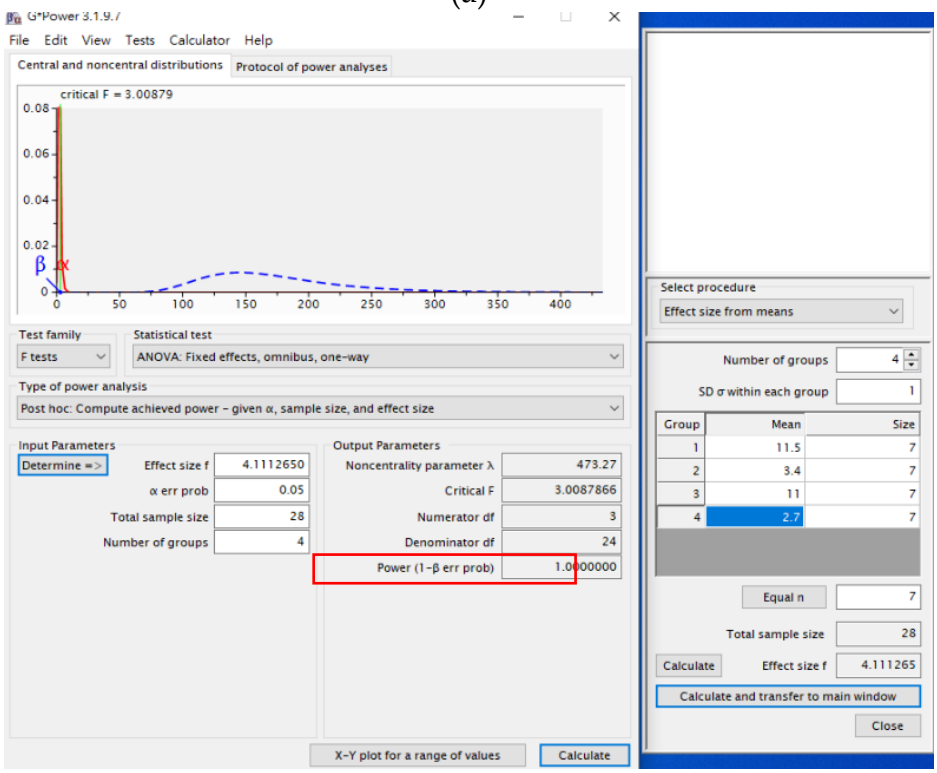


(b)

Figure S3. The examination of statistical power from the data shown in Table 3. (**a**) The value of Power is 1 for the data along the ML direction (**b**) The value of Power is 1 for the data along the AP direction.

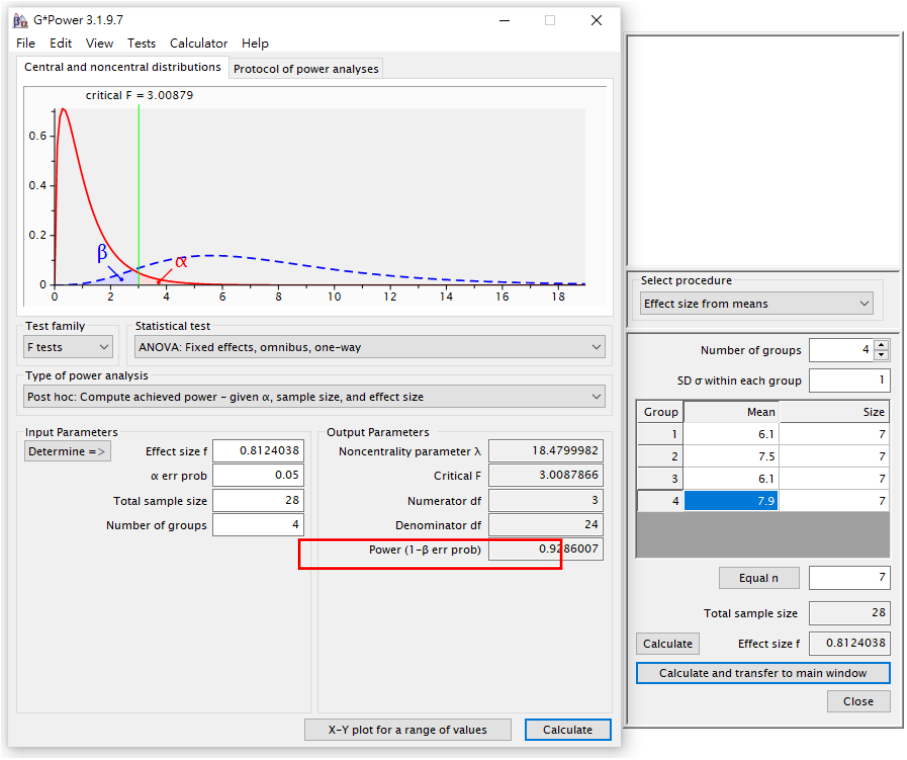


(a)

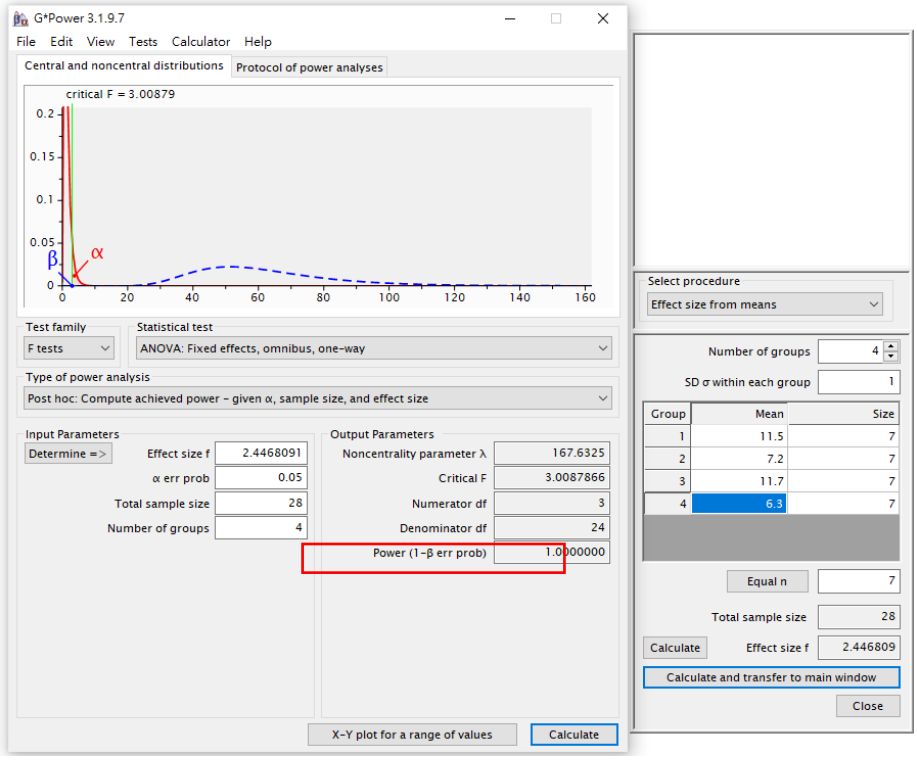


(b)

Figure S4. The examination of statistical power from the data shown in Table 4. (**a**) The value of Power is 0.85 for the data along the ML direction (**b**) The value of Power is 1 for the data along the AP direction.



(a)



(b)

Figure S5. The examination of statistical power from the data shown in Table 6. (**a**) The value of Power is 0.93 for the data along the ML direction (**b**) The value of Power is 1 for the data along the AP direction.

Table 1. The specifications of the pressure sensing insole.

Pressure array sensor	
Number of sensor	89 (insole)
Area of sensor	Dia. 1 cm
Pattern of sensor	Circle
Thickness of sensor size	< 300 μm
Range	0~140 psi
Resolution	2% full scale
Hysteresis	±8% full scale
Acceleration sensor (option)	Digital-output X-, Y-, and Z-axis accelerometer with a programmable full scale range of ±2g, ±4g, ±8g and ±16 g and integrated 16-bit ADCs
Gyro sensor (option)	Digital-output X-, Y-, and Z-axis angular rate sensors with a user-programmable full scale range of ±250, ±500, ±1000, and ±2000°/sec and integrated 16-bit ADC
Array scanning frequency	~30 Hz
Power consumption	< 100 mA
Signal transmission	Bluetooth
Size of control box	50 mm × 80 mm, thickness < 20 mm