Location parameter μ for h(x) is estimated using the mean:

$$\bar{x} = \frac{1}{N}\sum_{i=1}^{N} x_i$$

and scale parameter σ is estimated using the standard deviation:

$$s = \sqrt{\frac{1}{N-1}\sum_{i=1}^{N}(x_i - \bar{x})^2}$$

These estimators will NOT be exactly equal to μ and σ! Each will be scattered around the true values (μ and σ) approximately following Gaussian distributions with the widths (scale parameters) given by:

the standard error of the mean

$$\sigma_{\bar{x}} = \frac{s}{\sqrt{N}}$$

often called "error bar"!

error of the standard deviation estimate s:

$$\sigma_s = \frac{s}{\sqrt{2(N-1)}}$$