Measurement Error In A Single Indicator

$x_i = \nu + \lambda\, \eta_i + \varepsilon_i$

With $\lambda = 1$, $V(y) = \psi + \theta$ and reliability = $\psi / V(y)$

$V(y)$ is estimated as the sample variance, which means that reliability * sample variance = ψ and θ = (1– reliability) * sample variance.

In Mplus: f BY y@1;
y@a;

where a = θ.