Samp

inv_cdf = qnorm(u, mean = fit\$par, sd = sd, lower.tail = lo

 $x = 1 \text{ inv_cdf} = \text{qnorm}(u, \text{mean} = 0,$

 $x = 1 \text{ inv_cdf} = qgamma(u, shape = 2.5, respectively)$