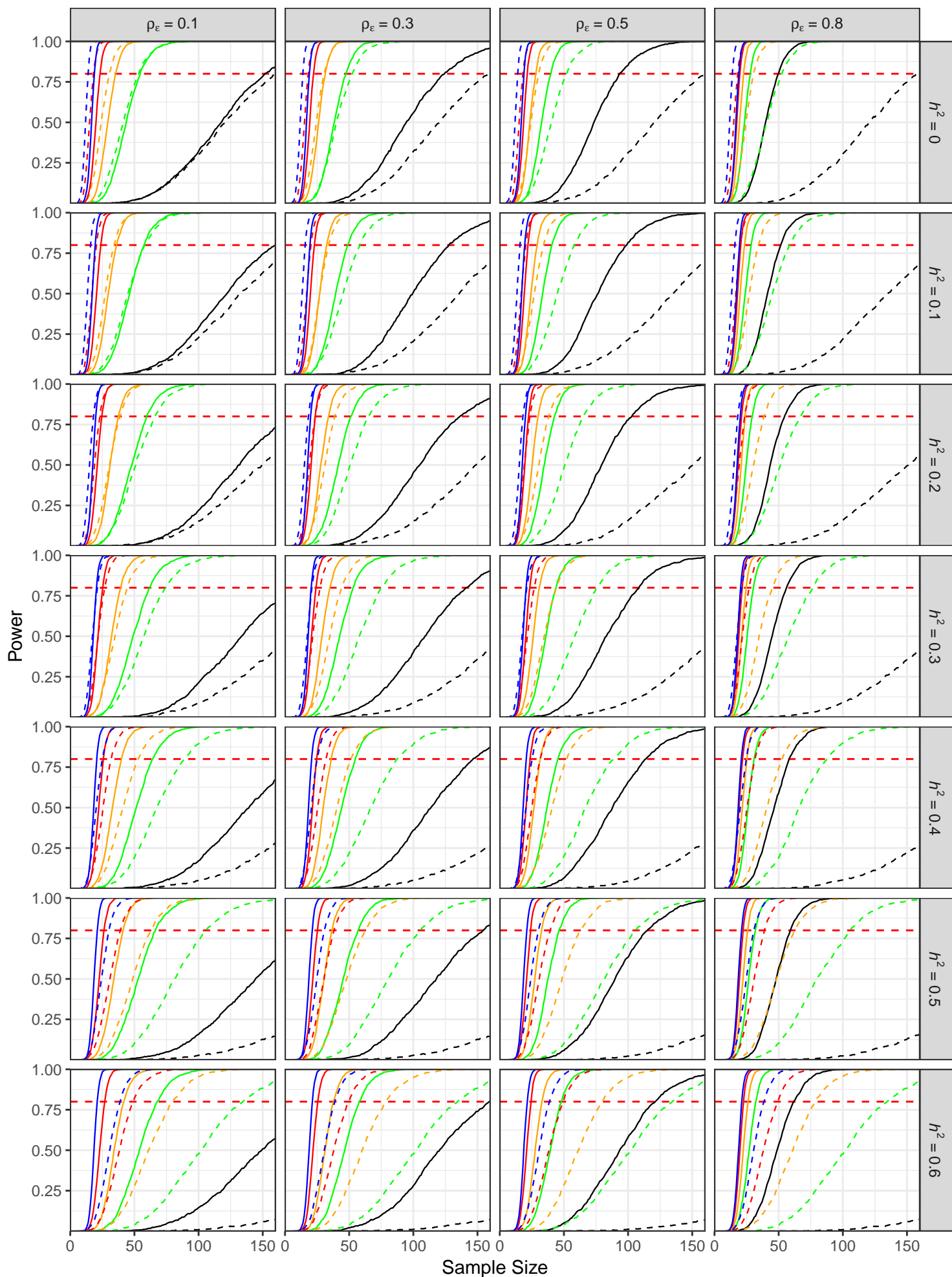


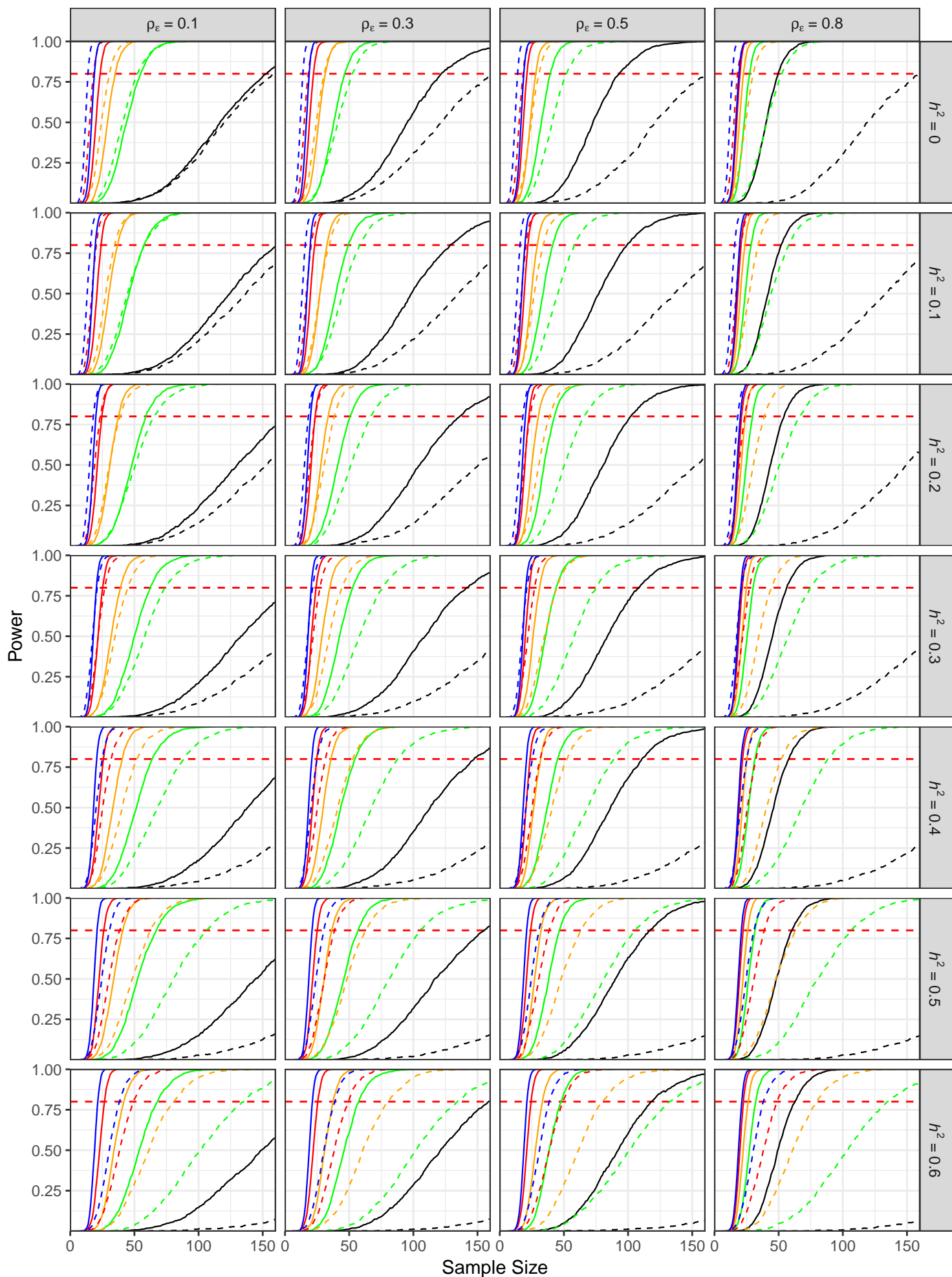
$P_K = 0$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 0.06$



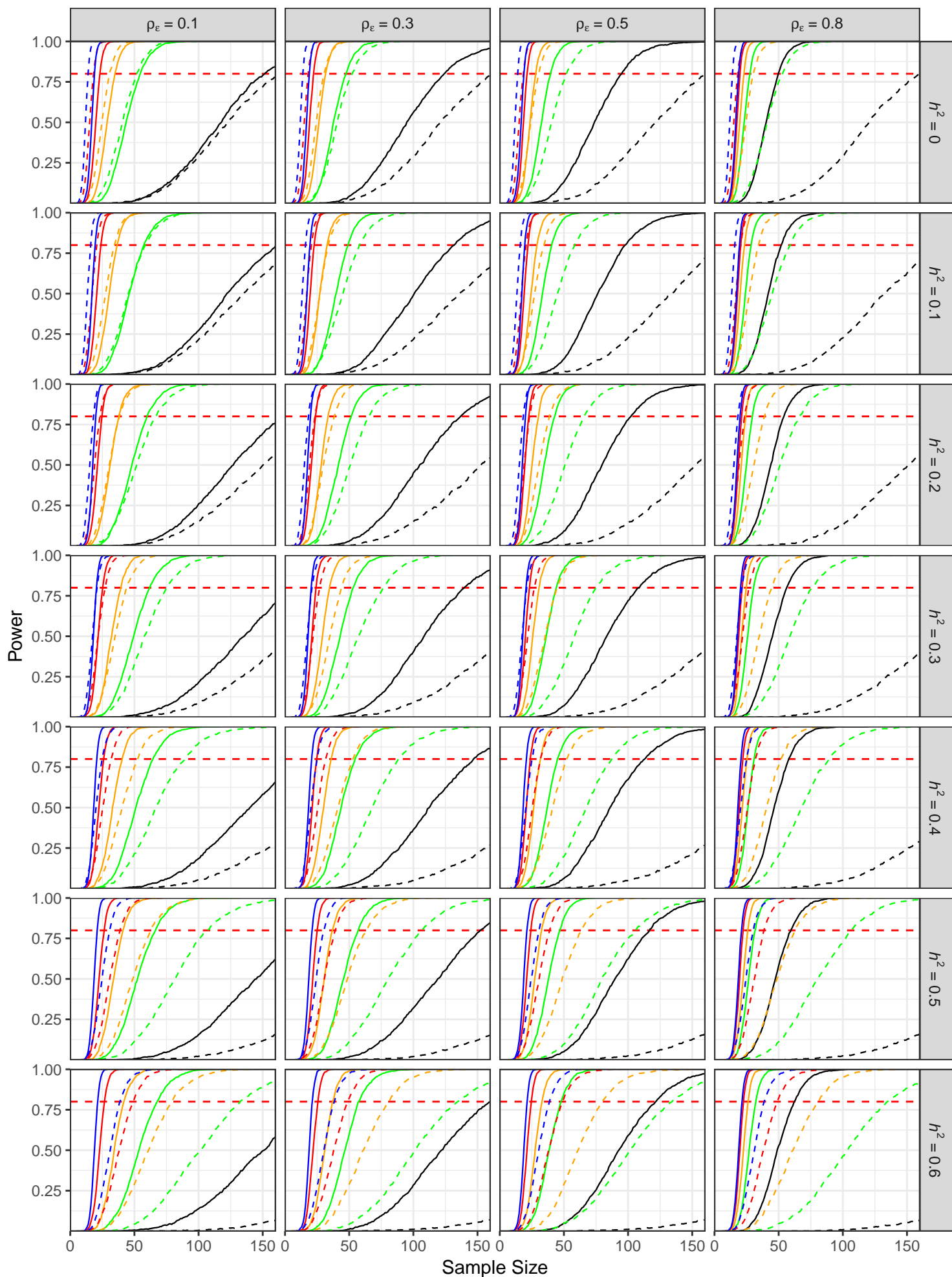
$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

Design - - Ordinary Case-control — Discordant Twin

$$P_K = 0, E(M) = -3.78, \text{Var}(M) = 1$$



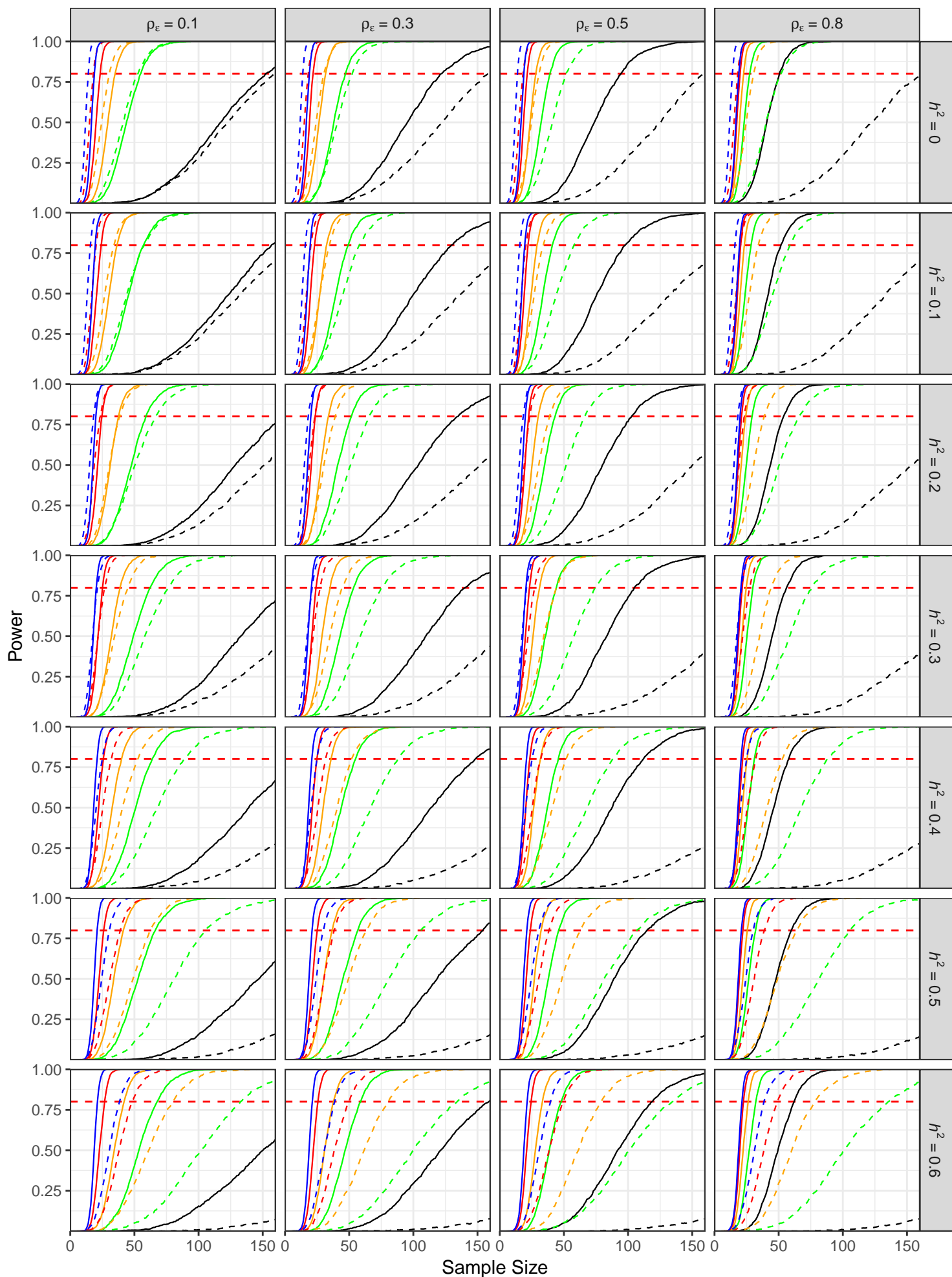
$$P_K = 0, E(M) = -3.78, \text{Var}(M) = 2$$



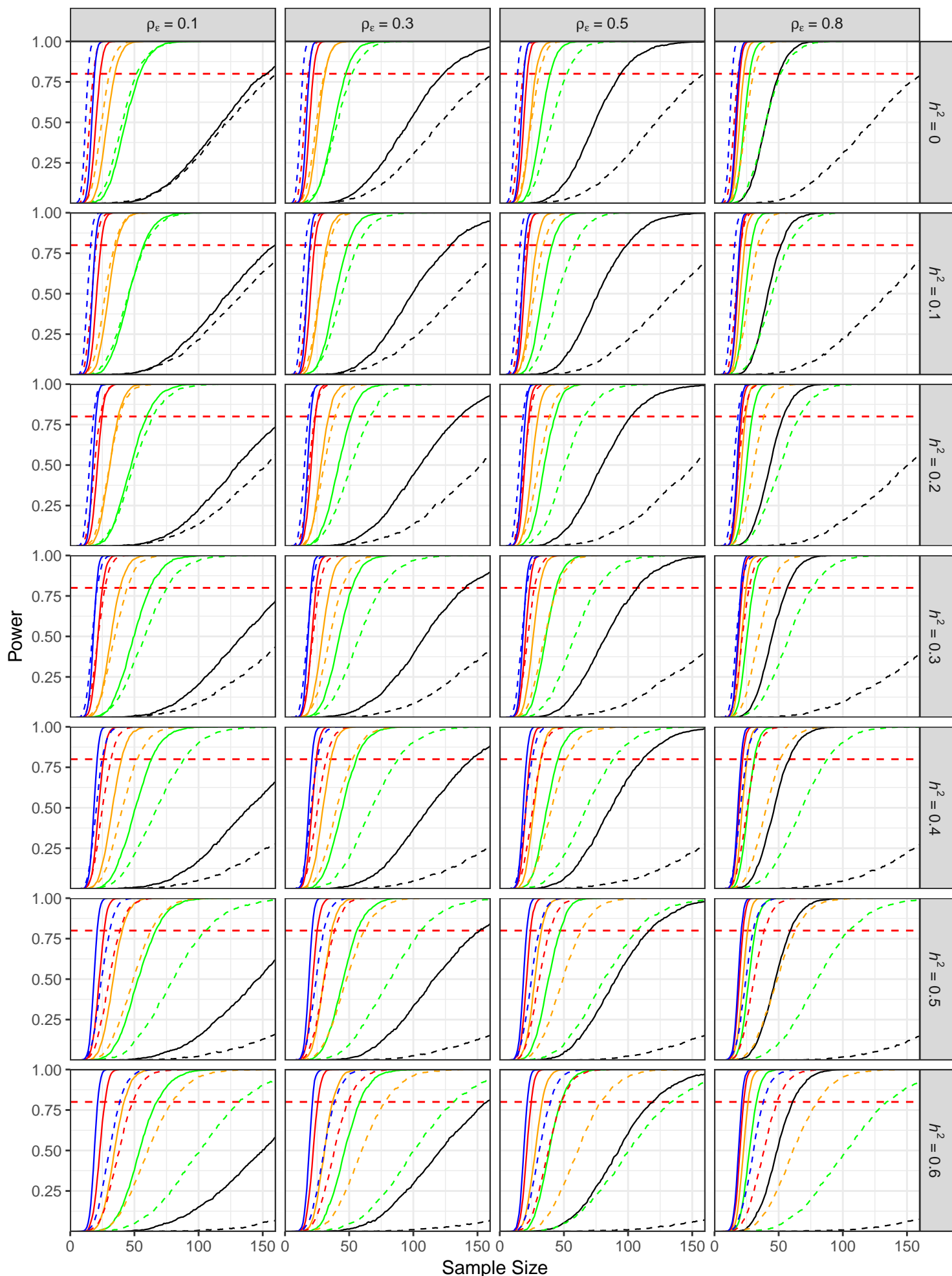
$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

Design - - Ordinary Case-control — Discordant Twin

$$P_K = 0, E(M) = -3.78, \text{Var}(M) = 3$$

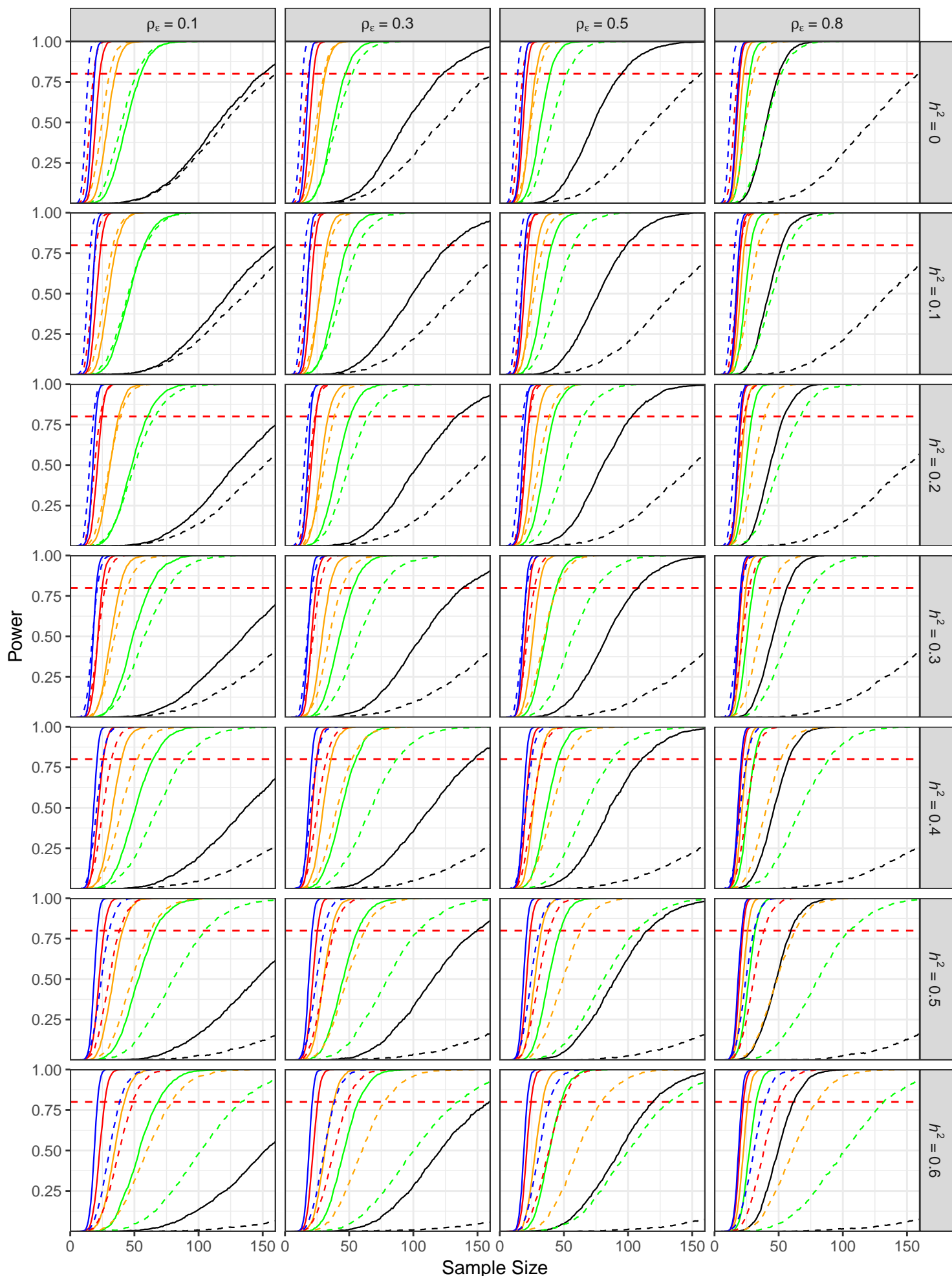


$$P_K = 0, E(M) = -3.78, \text{Var}(M) = 4$$

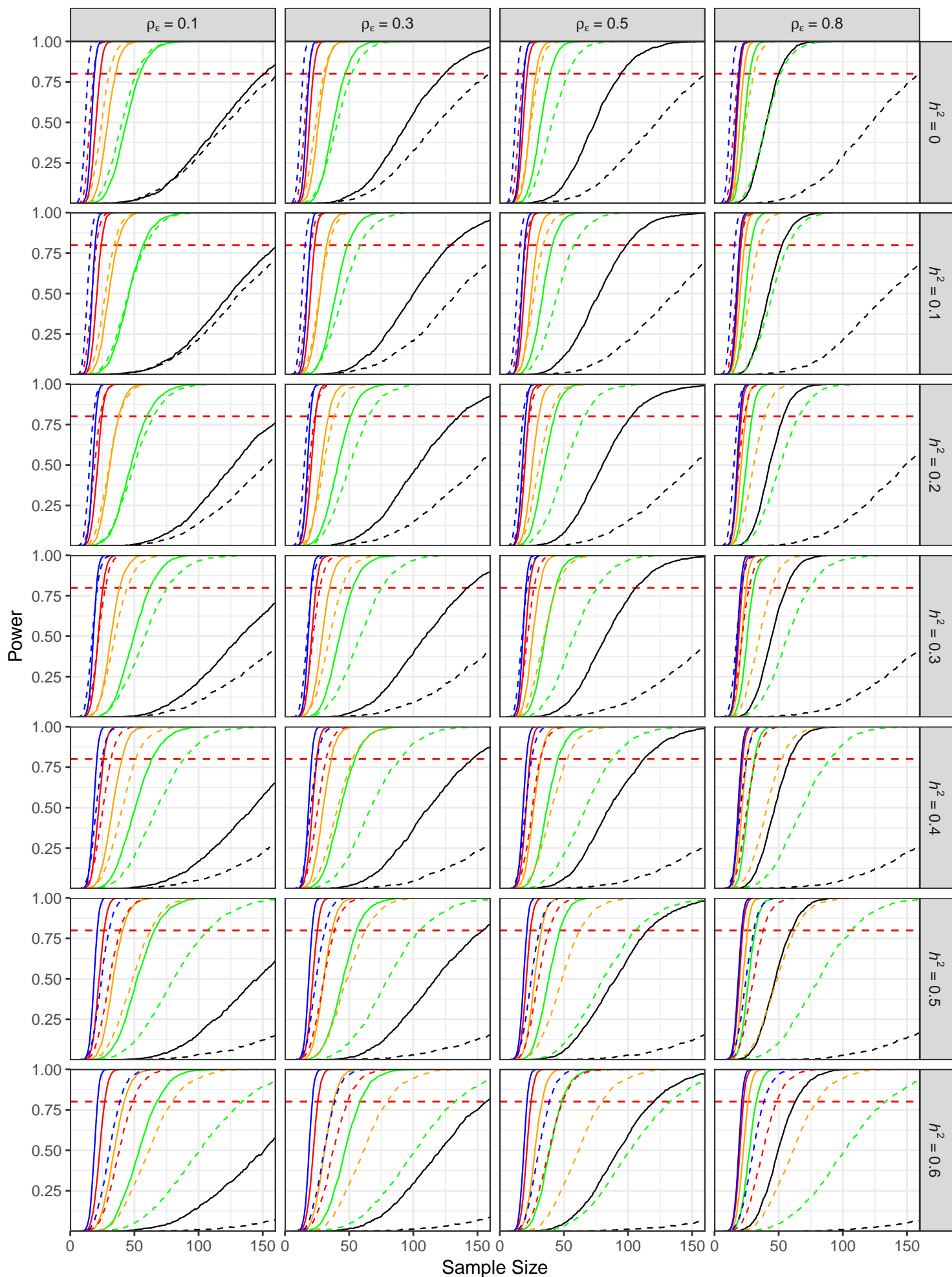




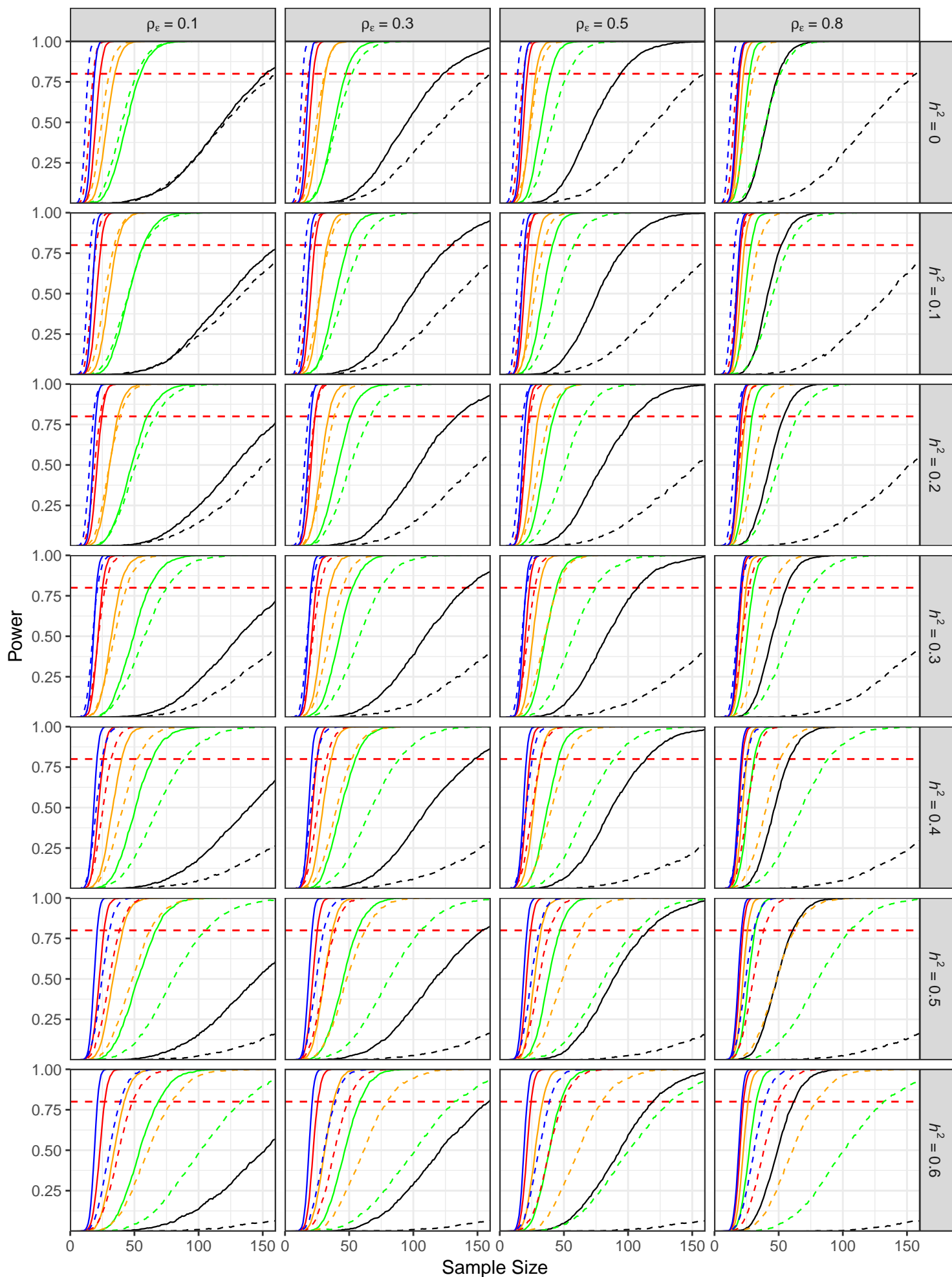
$$P_K = 0, E(M) = 3.36, \text{Var}(M) = 0.06$$



$$P_K = 0, E(M) = 3.36, \text{Var}(M) = 1$$

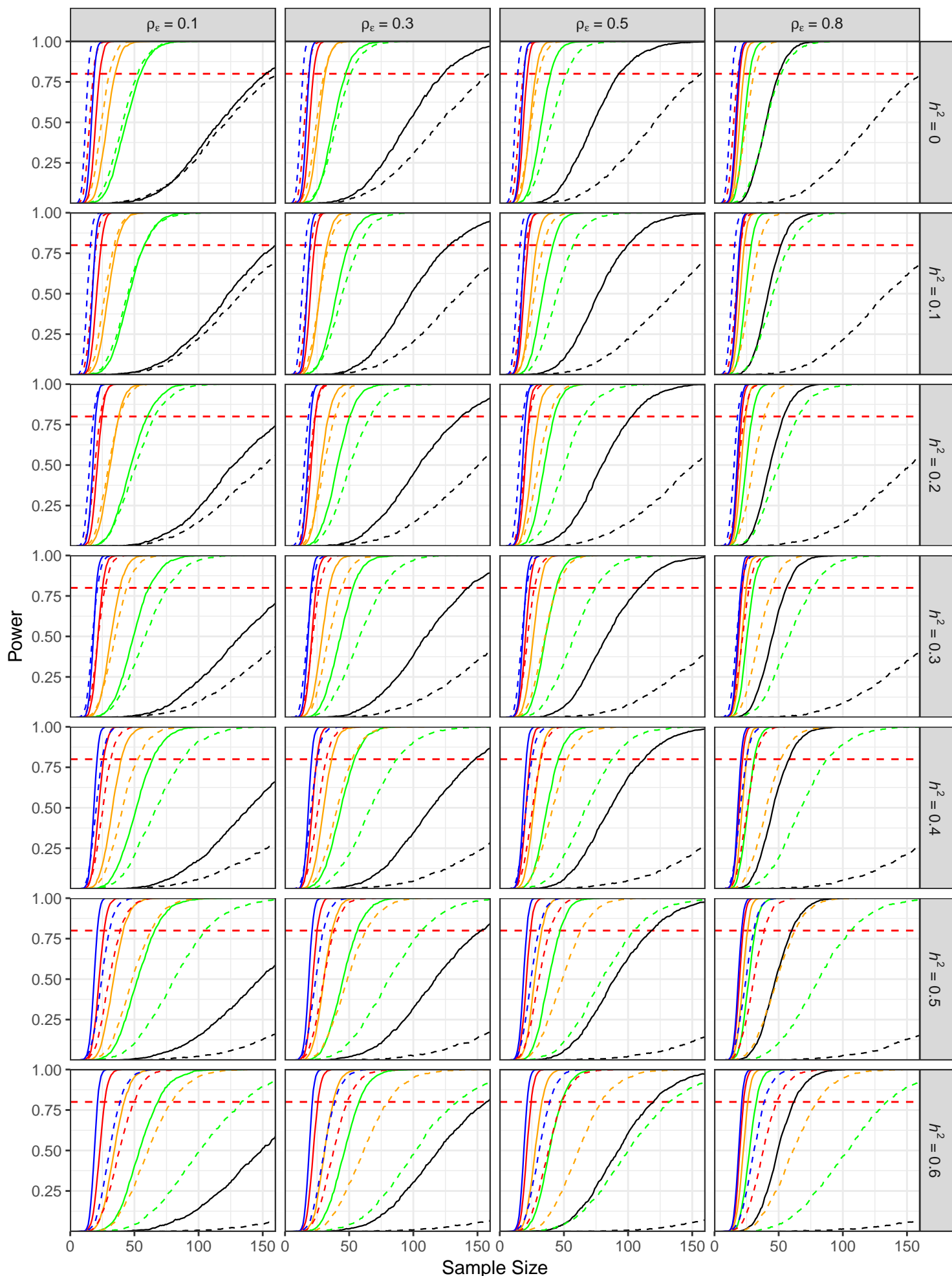


$$P_K = 0, E(M) = 3.36, \text{Var}(M) = 2$$

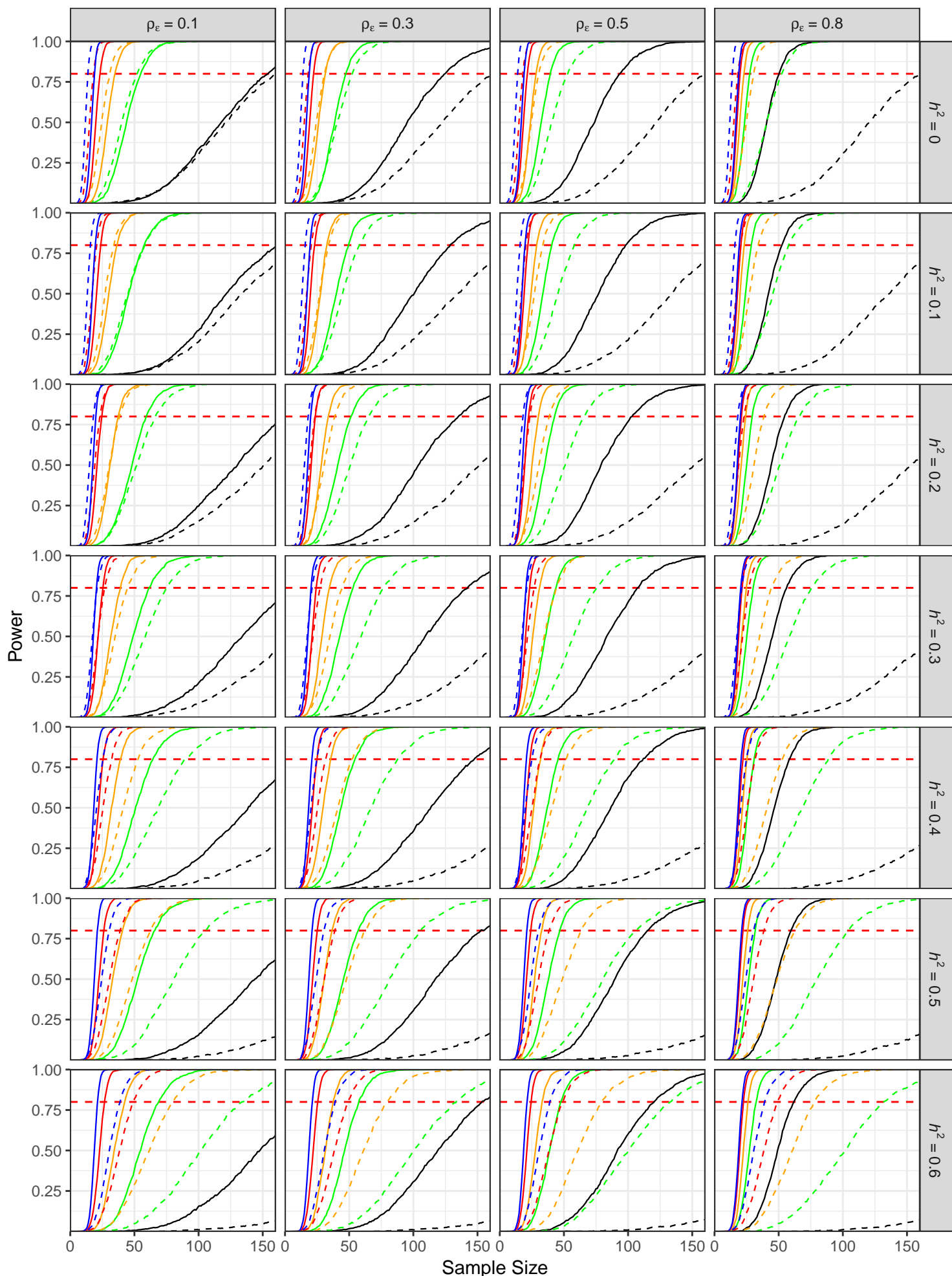




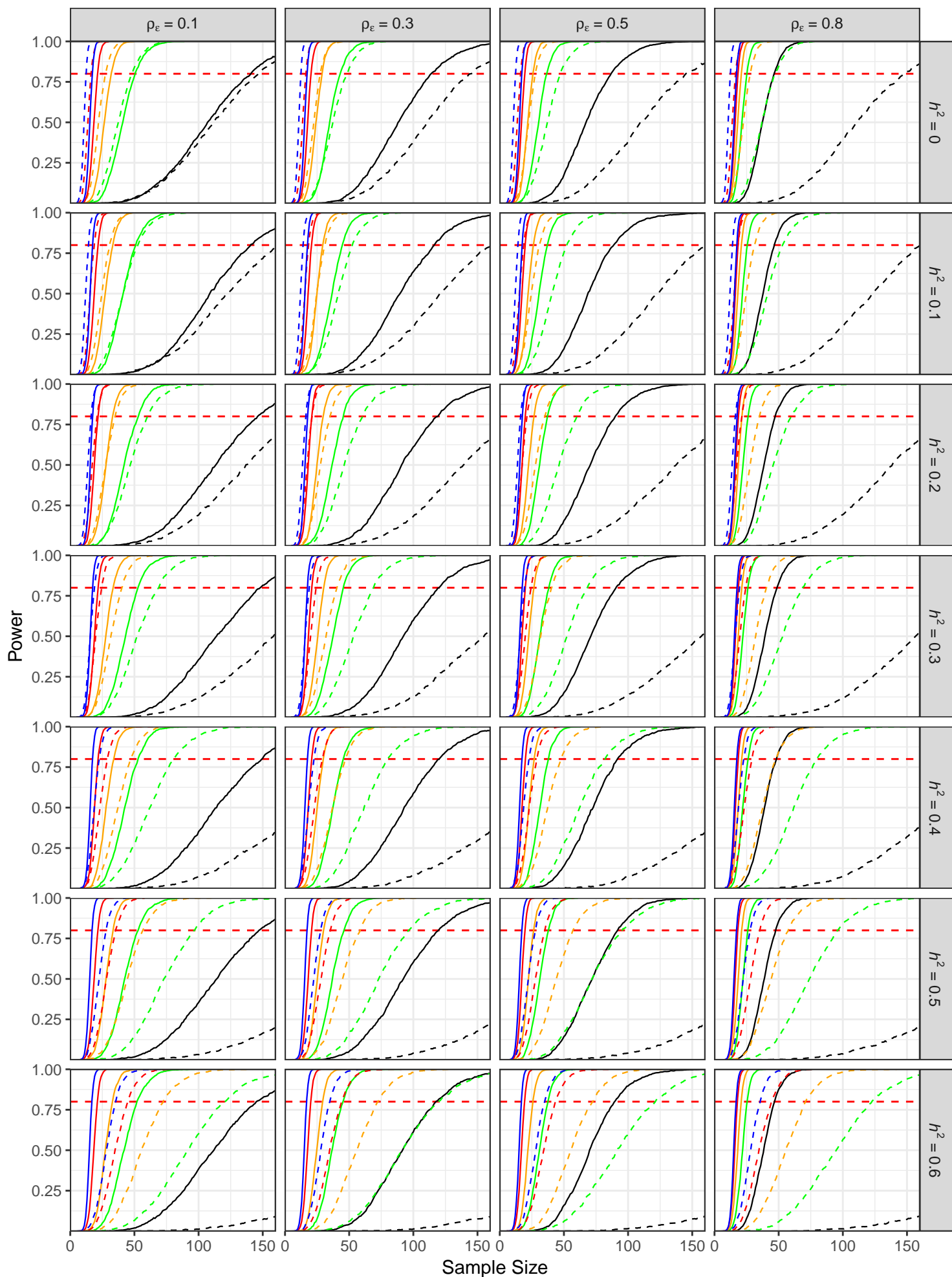
$$P_K = 0, E(M) = 3.36, \text{Var}(M) = 3$$



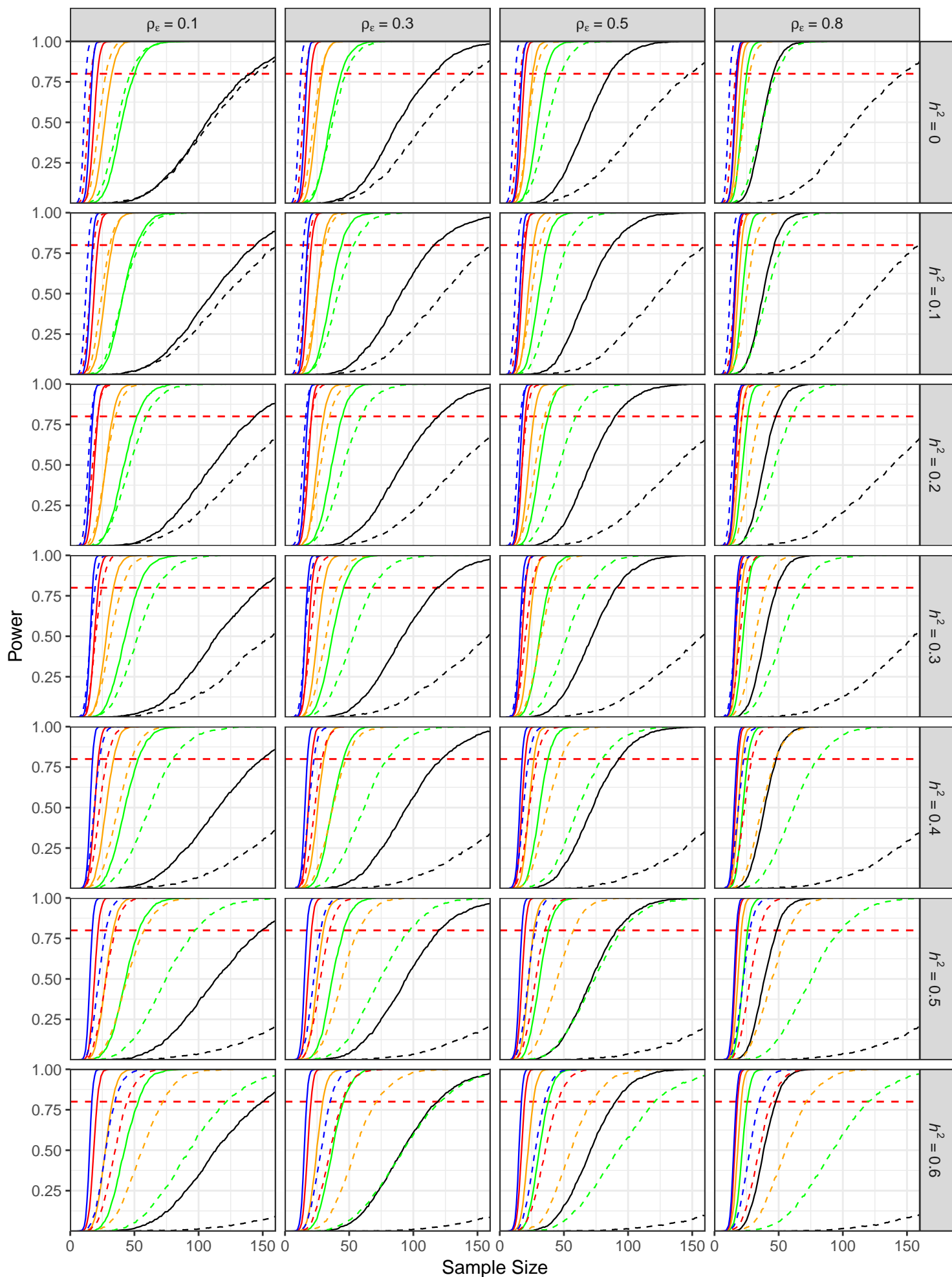
$$P_K = 0, E(M) = 3.36, \text{Var}(M) = 4$$



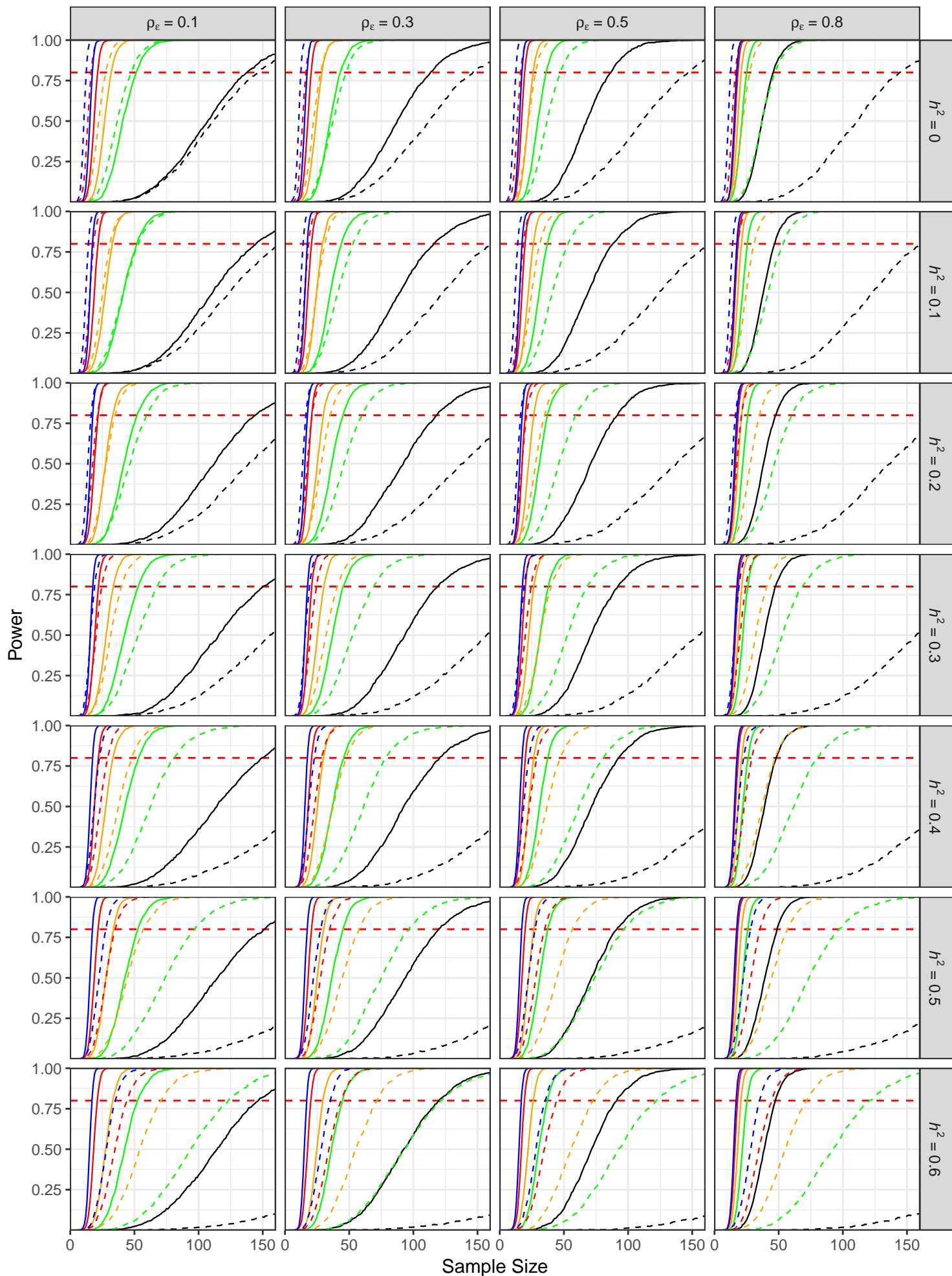
$P_K = 0.05$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 0.06$



$P_K = 0.05$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 1$

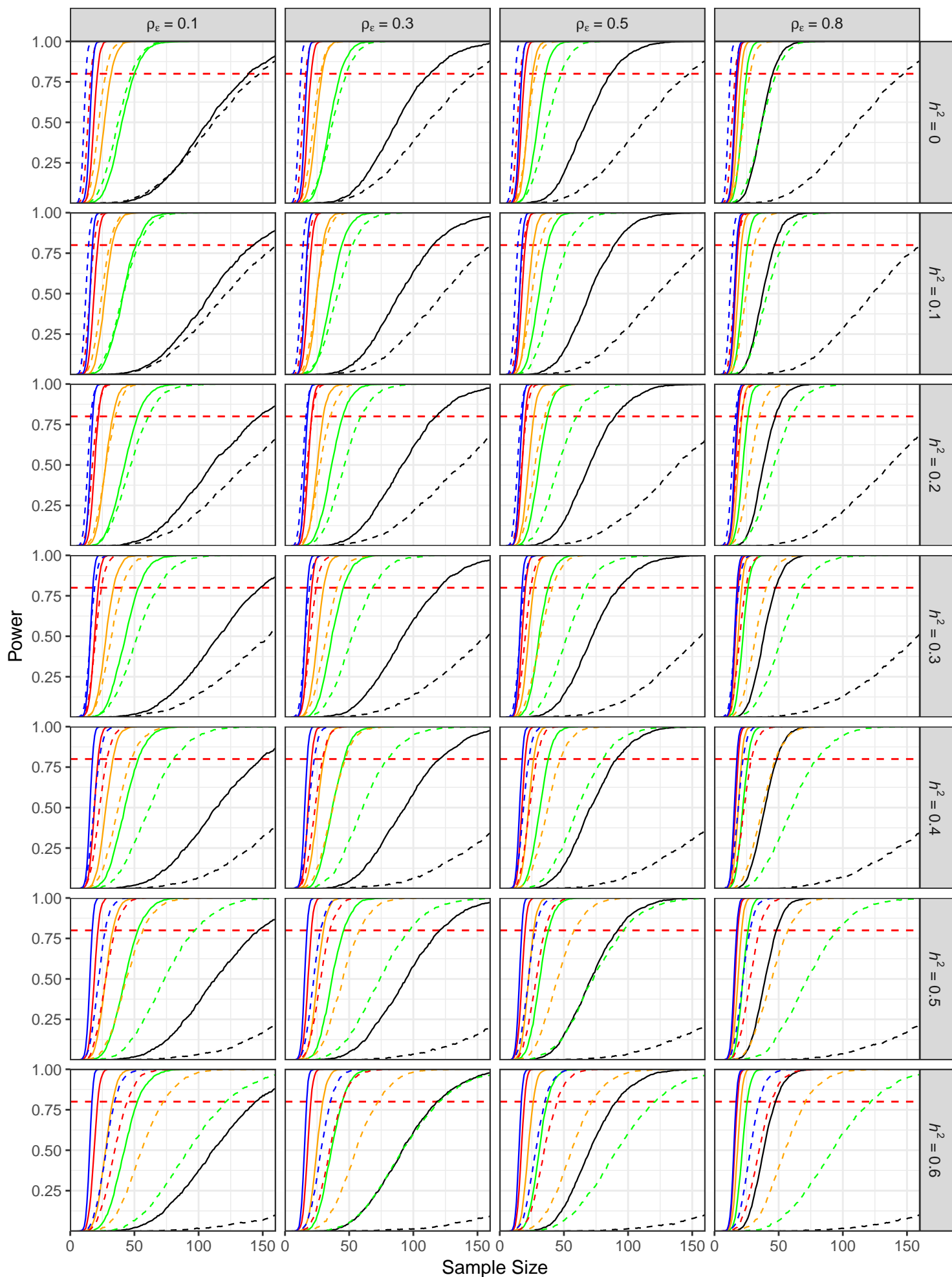


$P_K = 0.05$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 2$

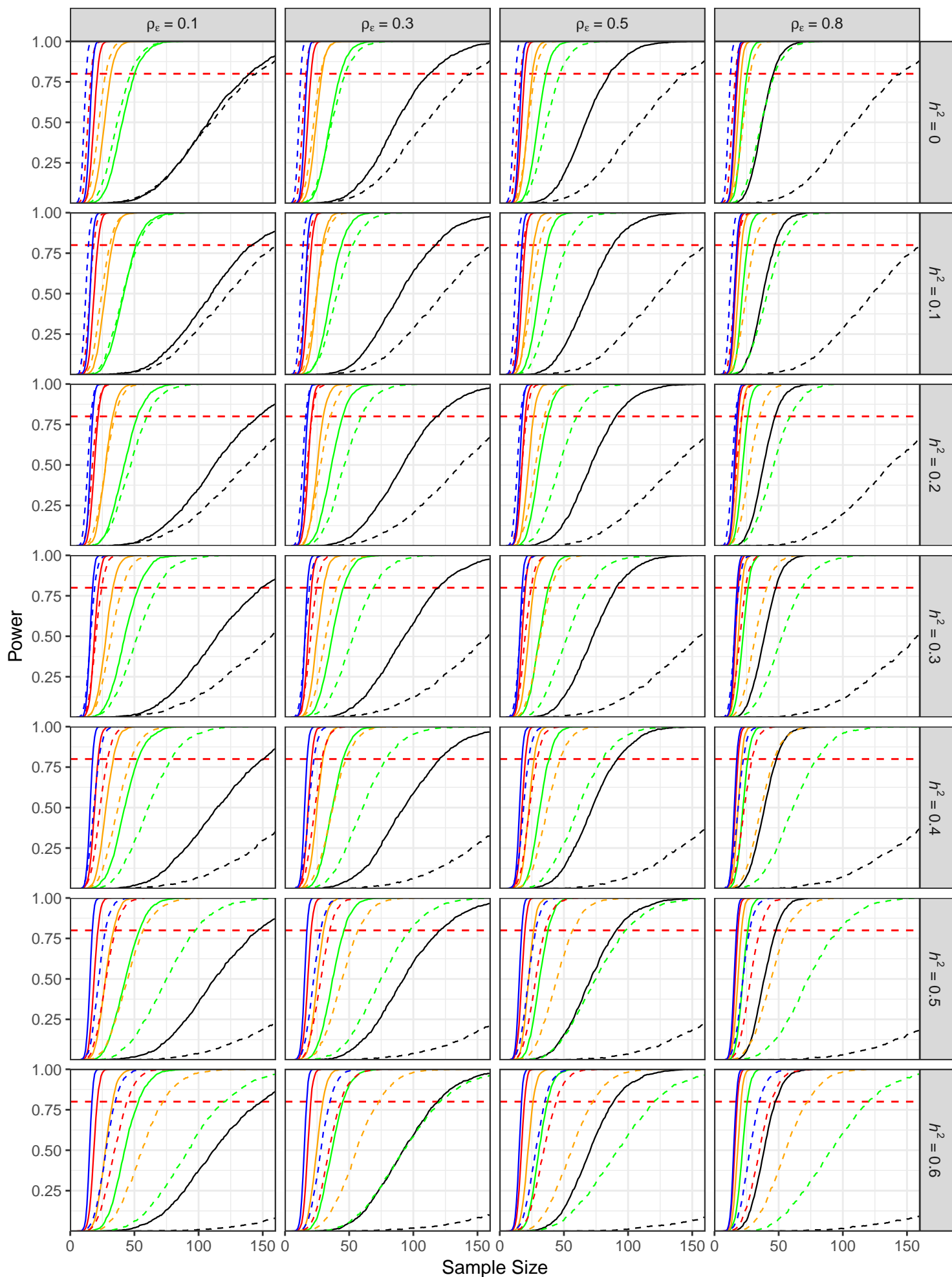




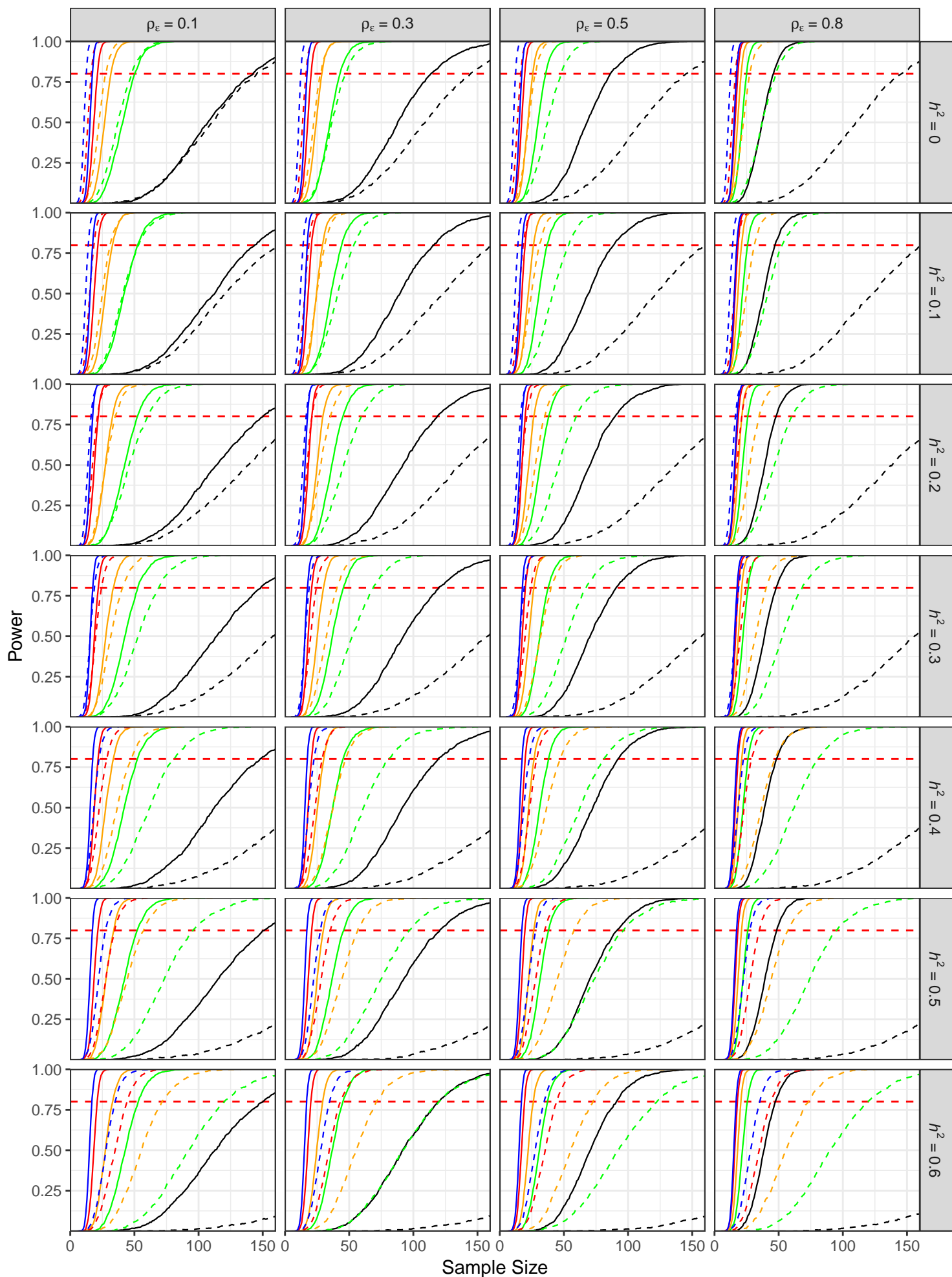
$P_K = 0.05$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 3$



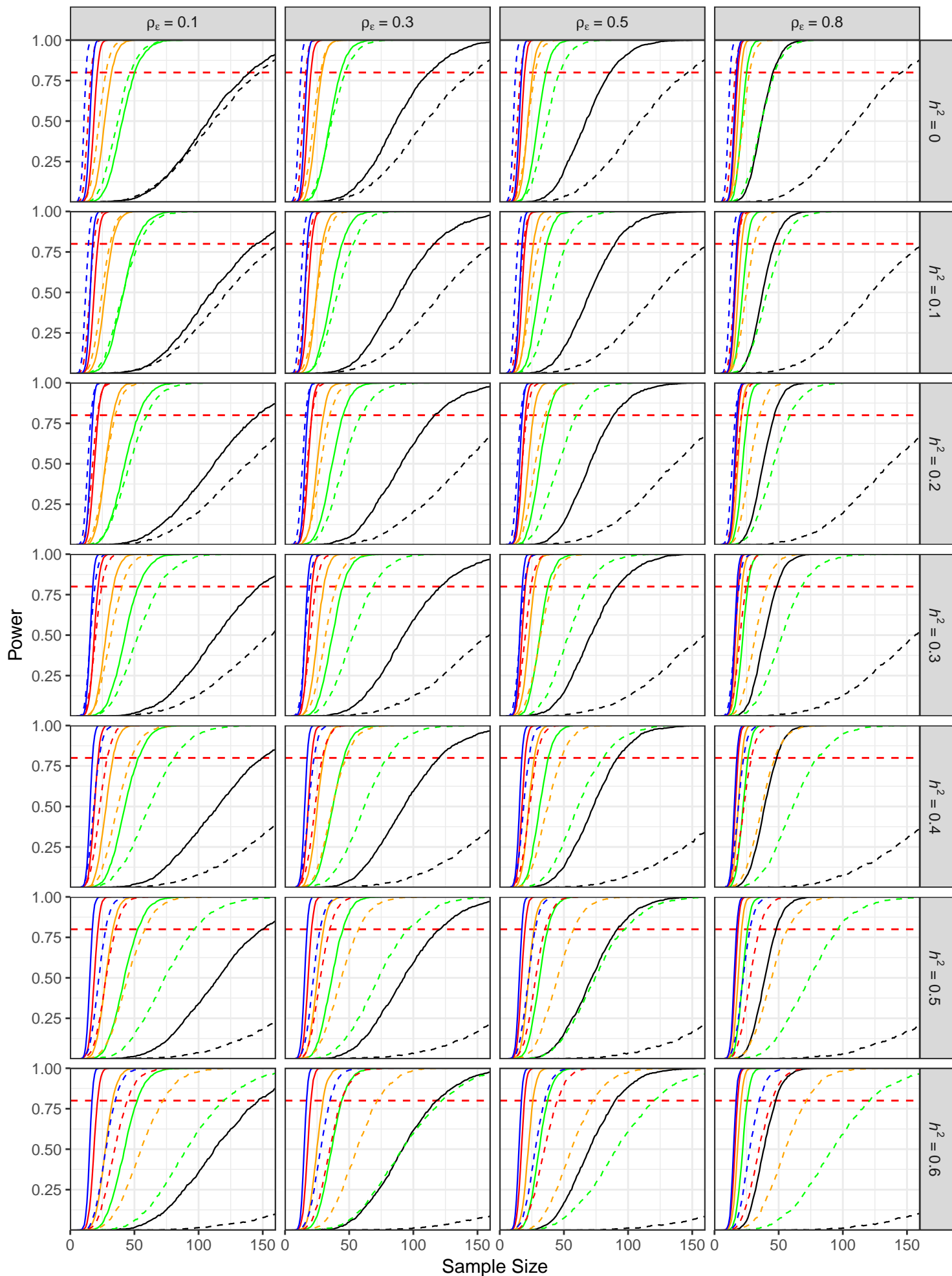
$P_K = 0.05$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 4$



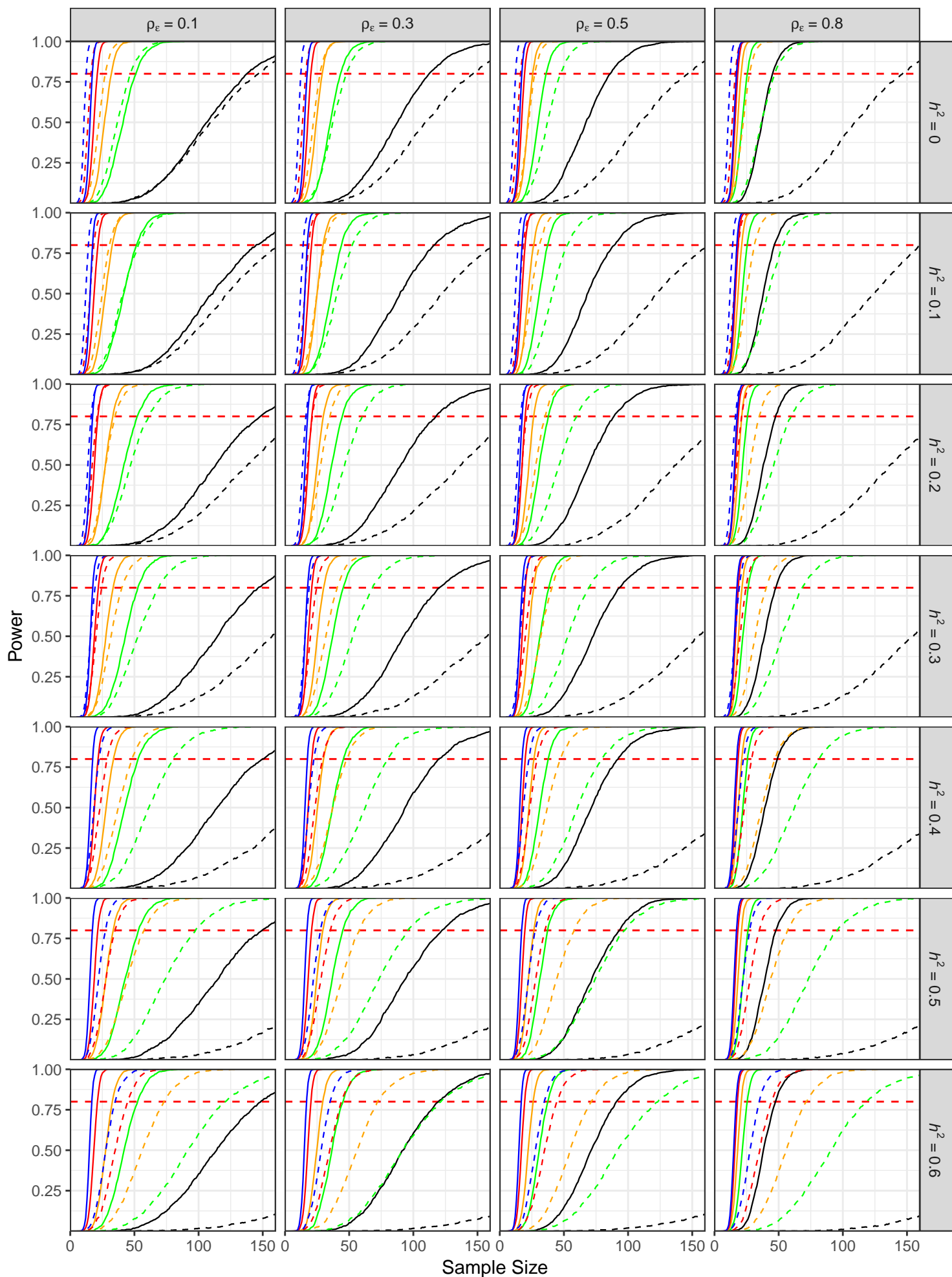
$P_K = 0.05$ ,  $E(M) = 3.36$ ,  $Var(M) = 0.06$



$P_K = 0.05$ ,  $E(M) = 3.36$ ,  $Var(M) = 1$

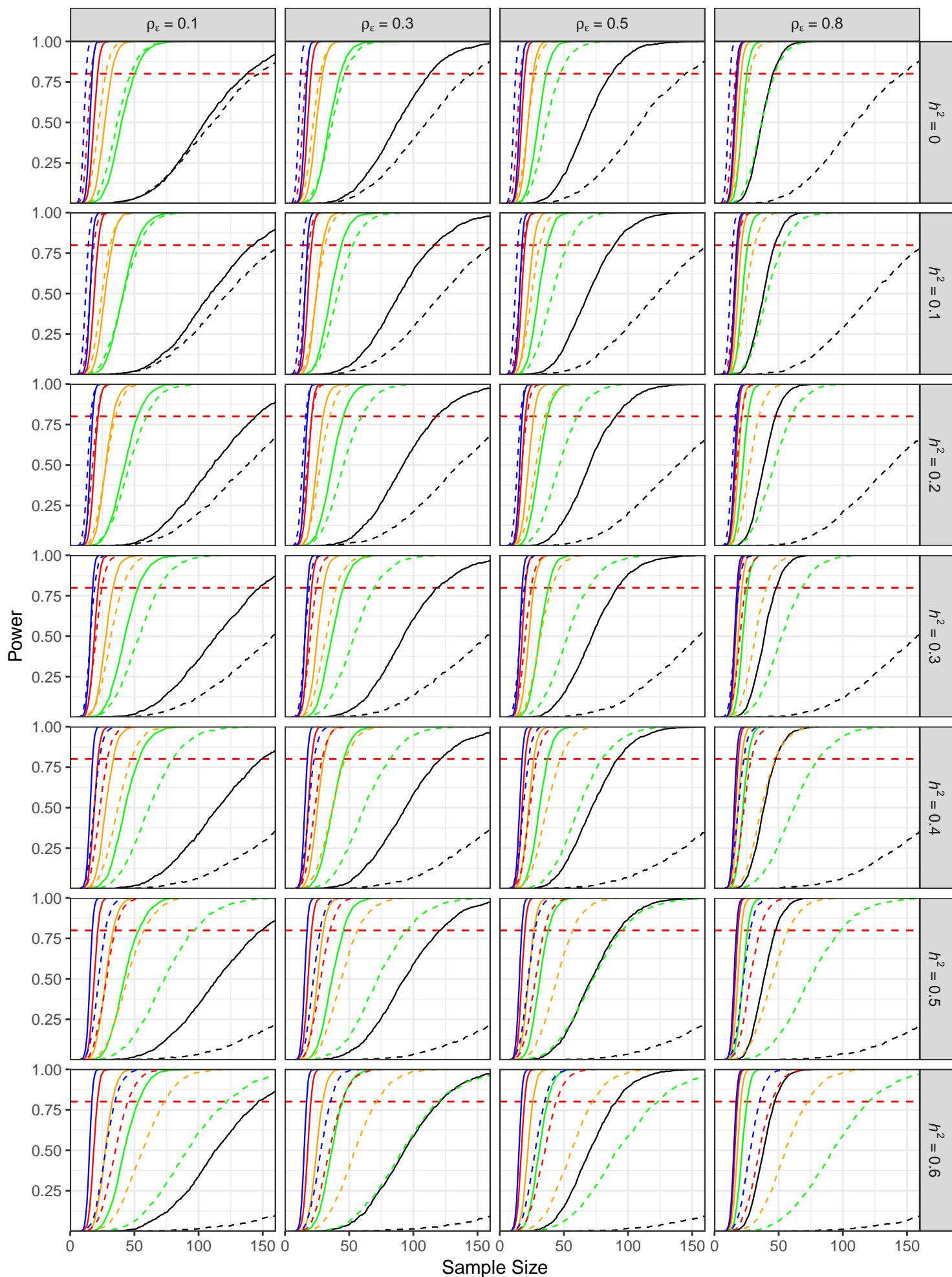


$P_K = 0.05$ ,  $E(M) = 3.36$ ,  $Var(M) = 2$

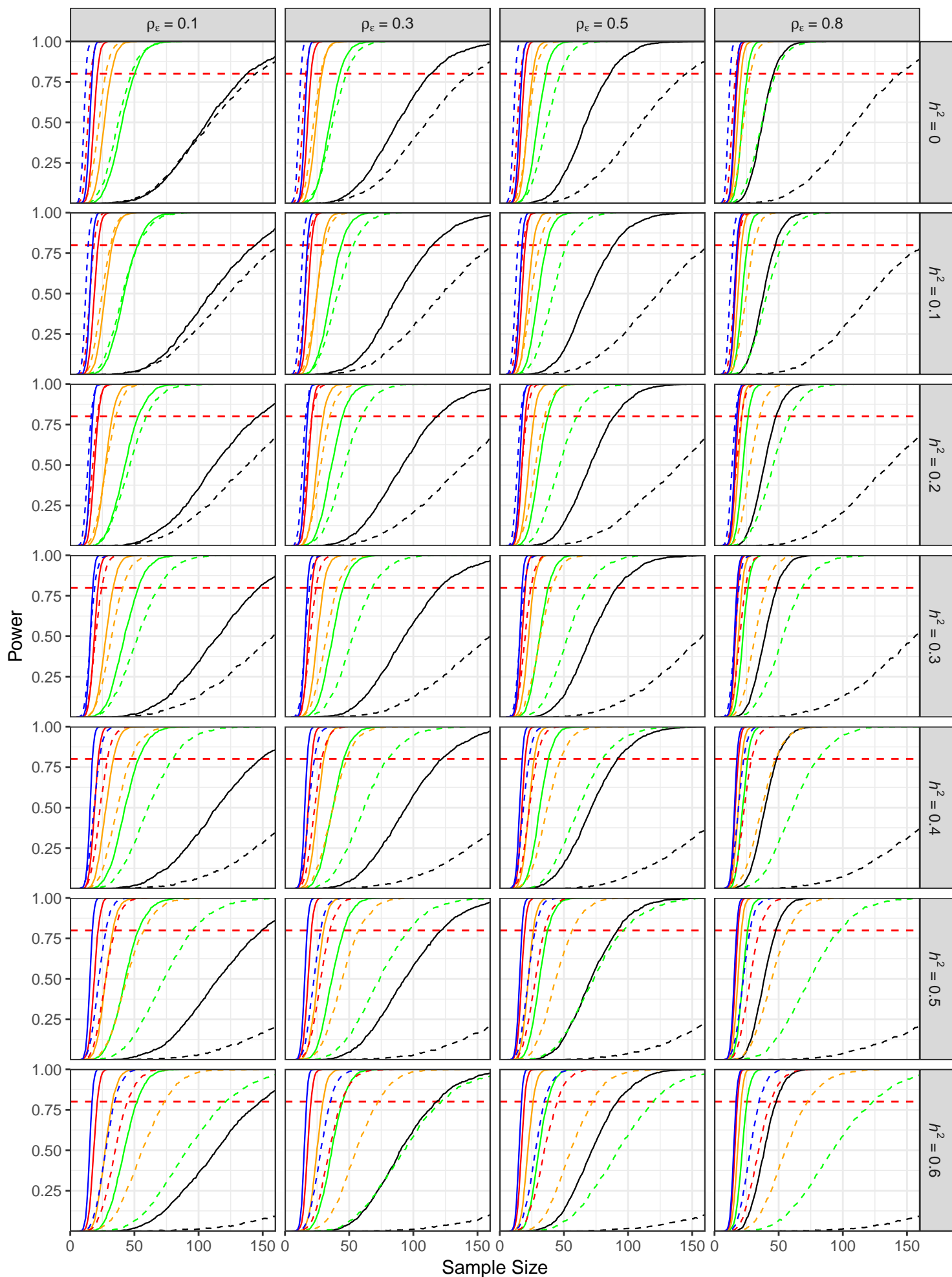




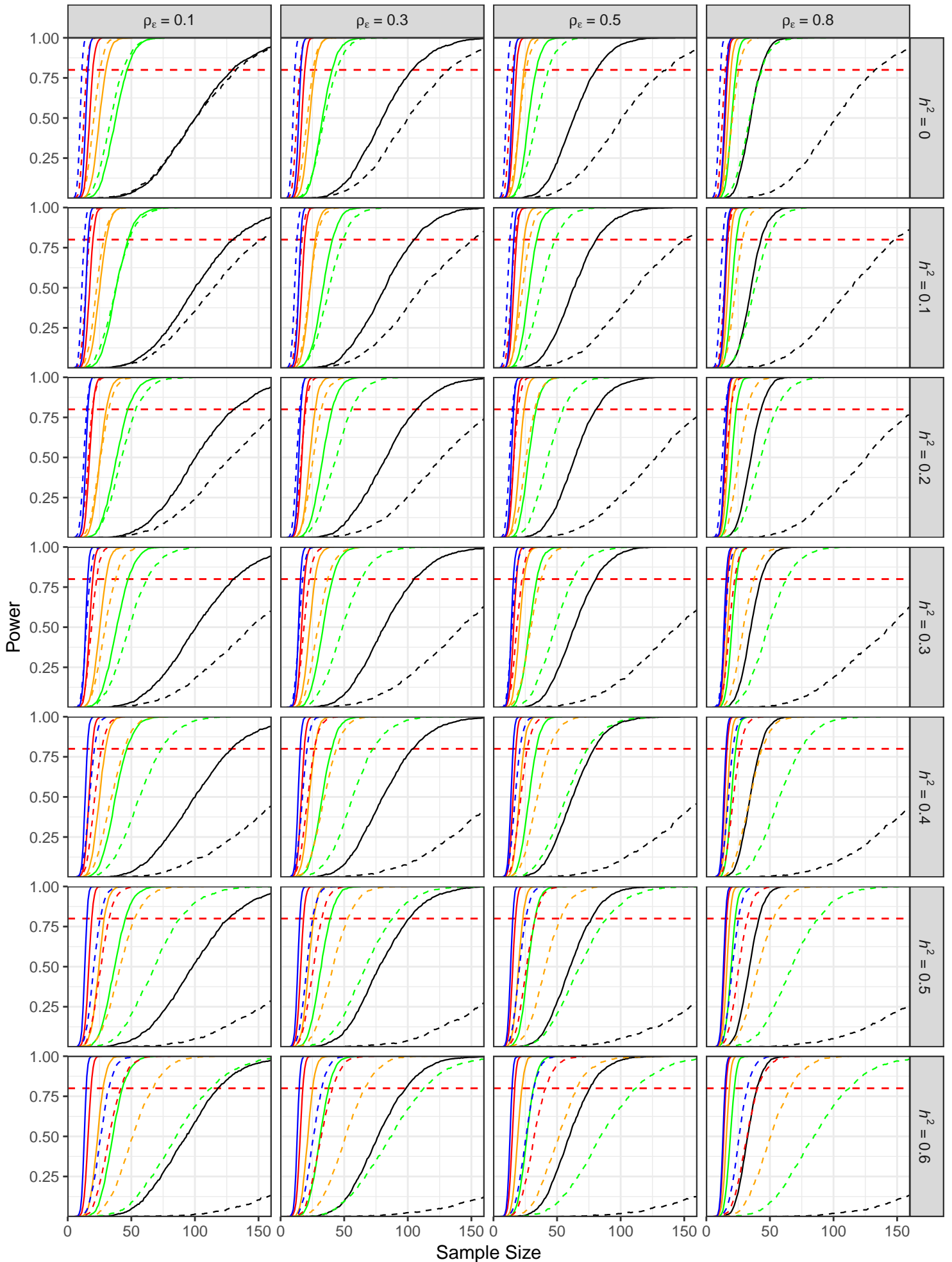
$P_K = 0.05$ ,  $E(M) = 3.36$ ,  $Var(M) = 3$



$P_K = 0.05$ ,  $E(M) = 3.36$ ,  $Var(M) = 4$



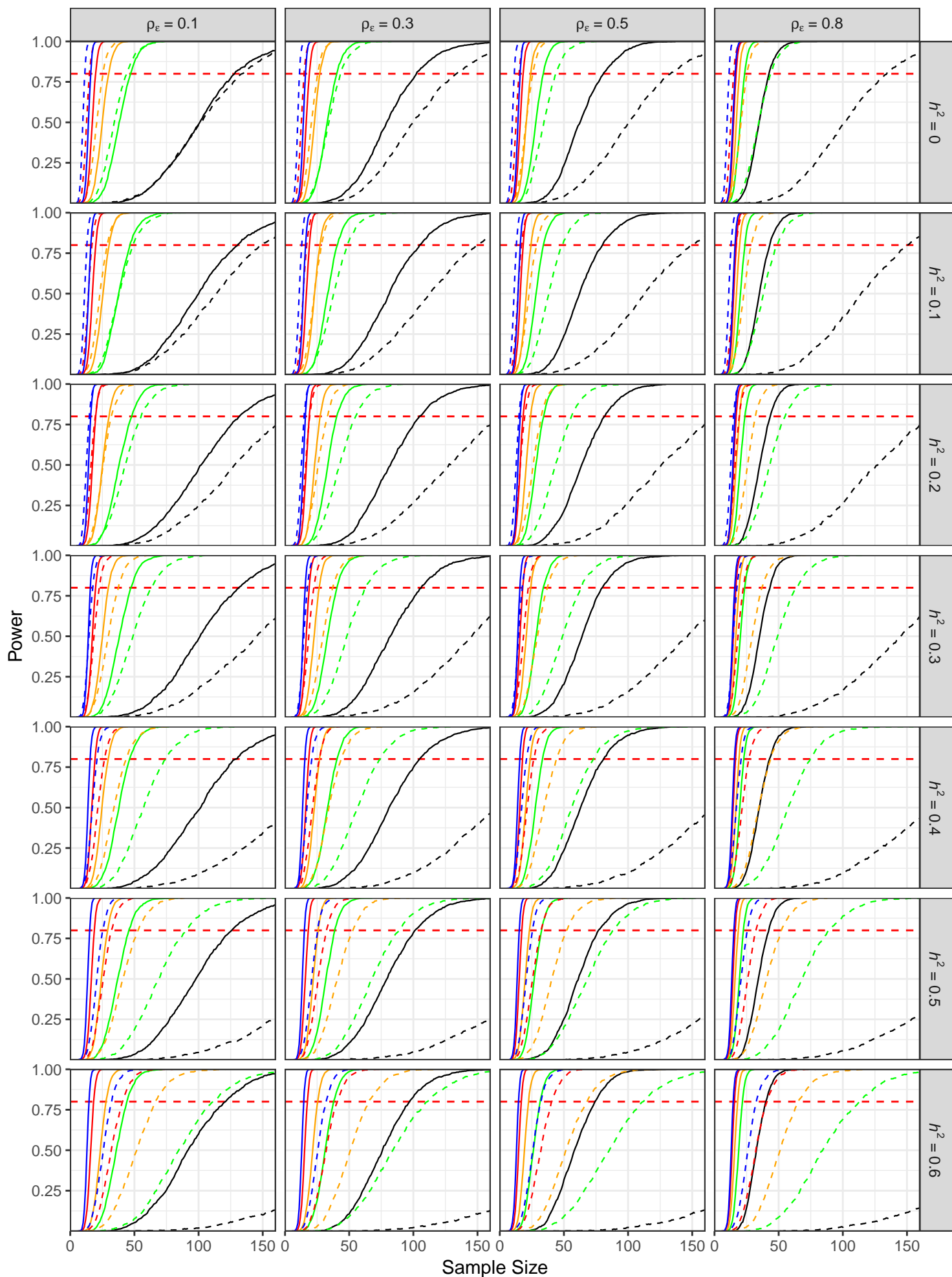
$P_K = 0.1$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 0.06$



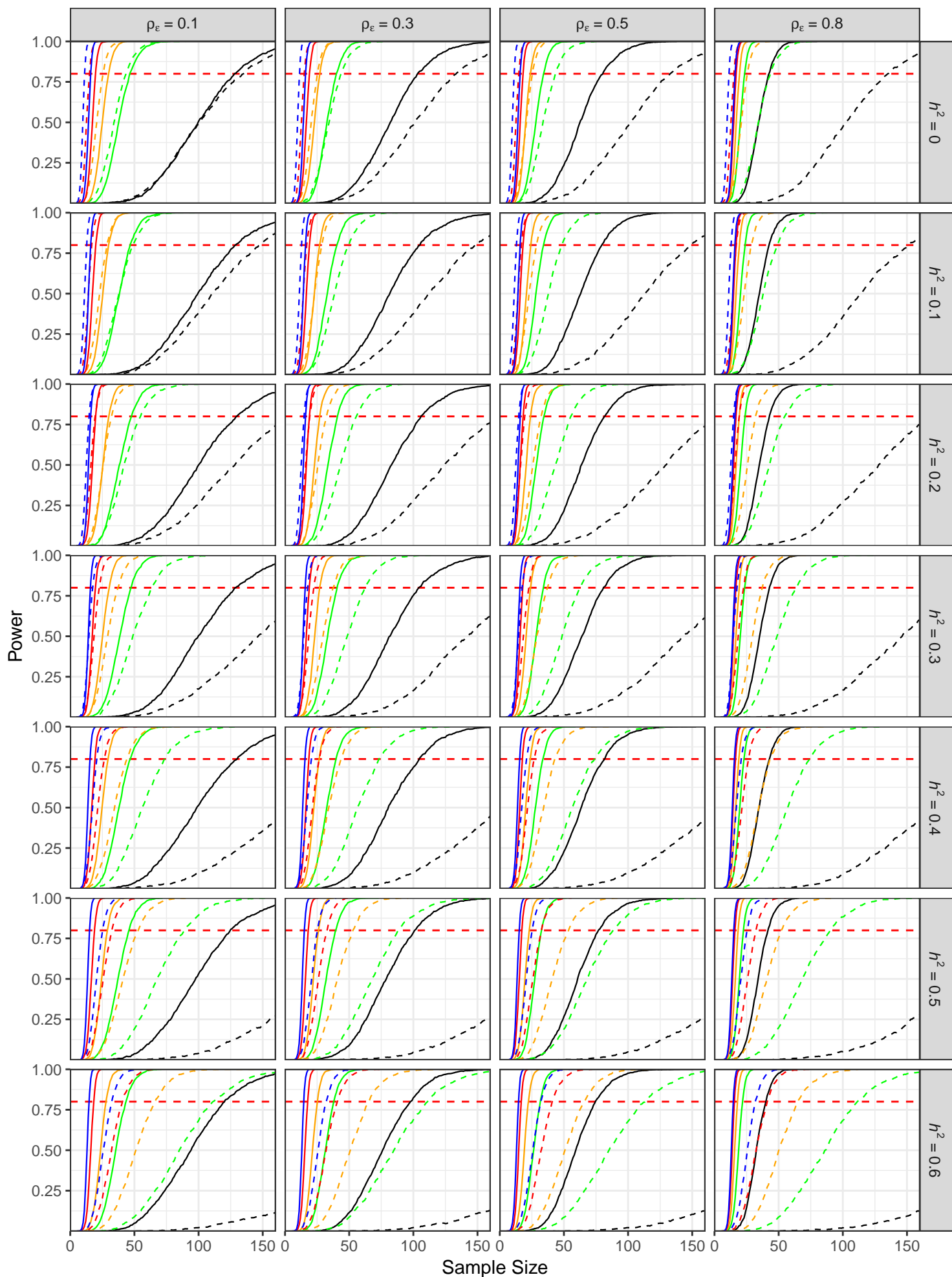
$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

Design - - Ordinary Case-control — Discordant Twin

$P_K = 0.1$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 1$

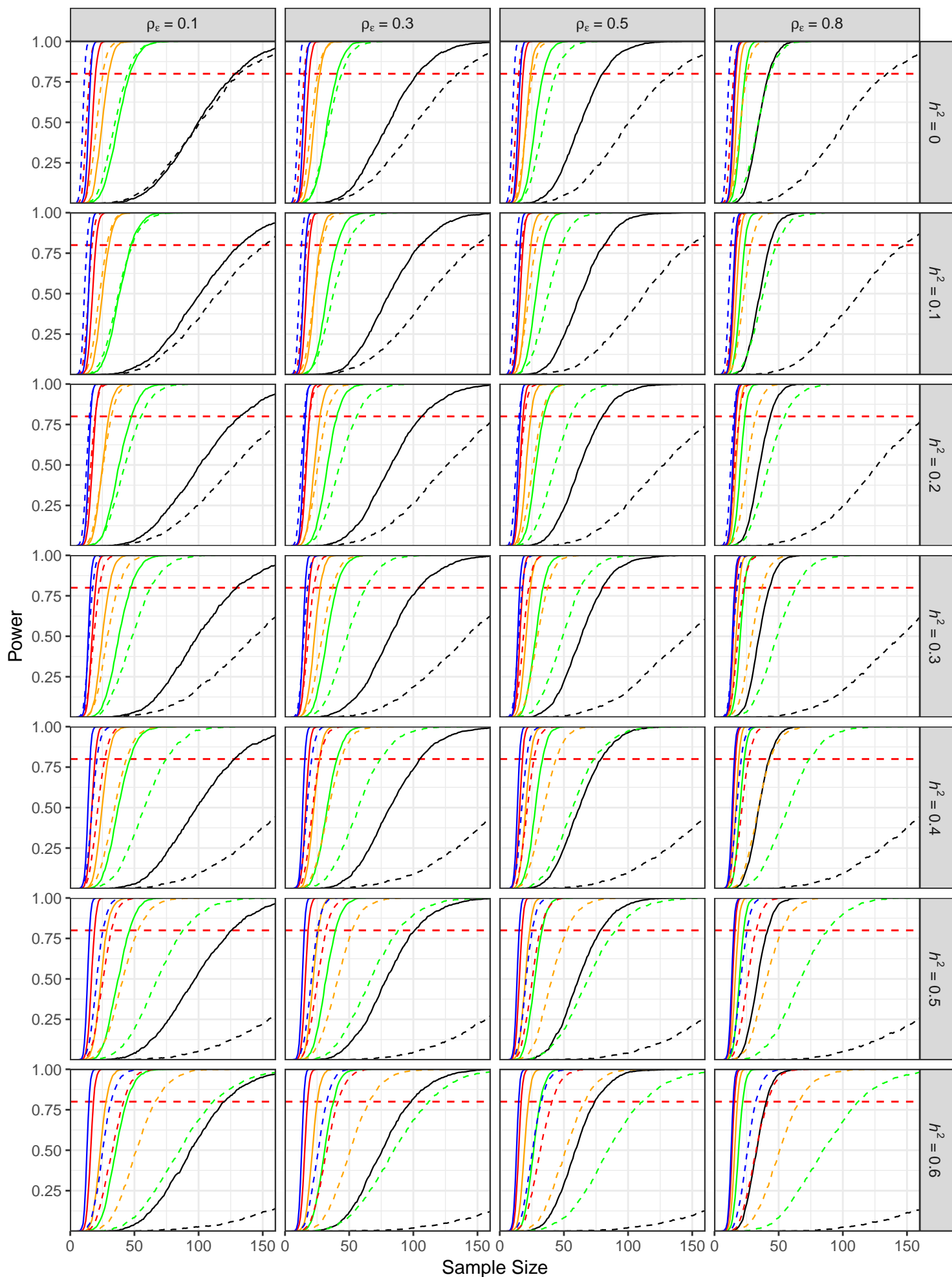


$P_K = 0.1$ ,  $E(M) = -3.78$ ,  $Var(M) = 2$

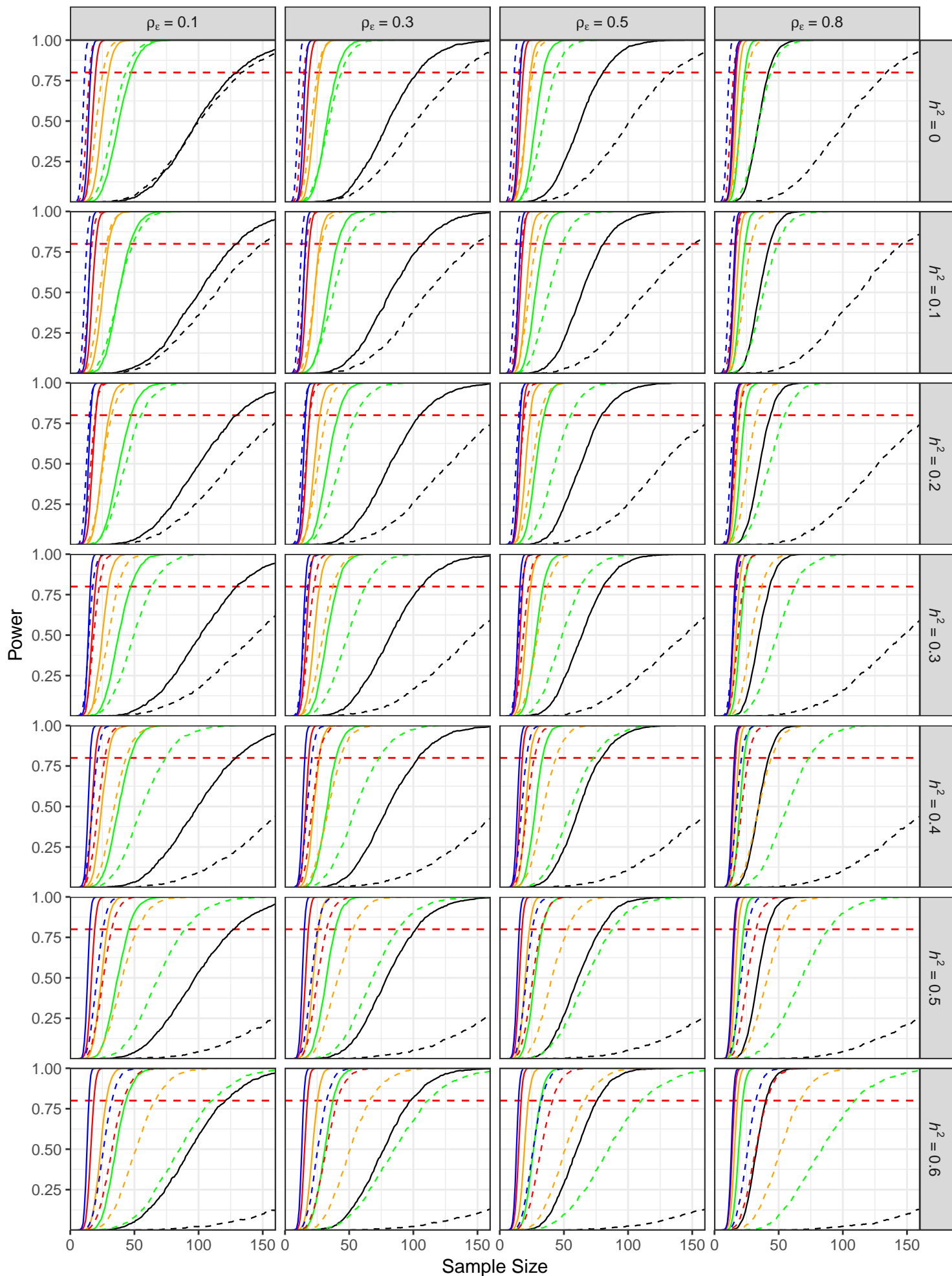




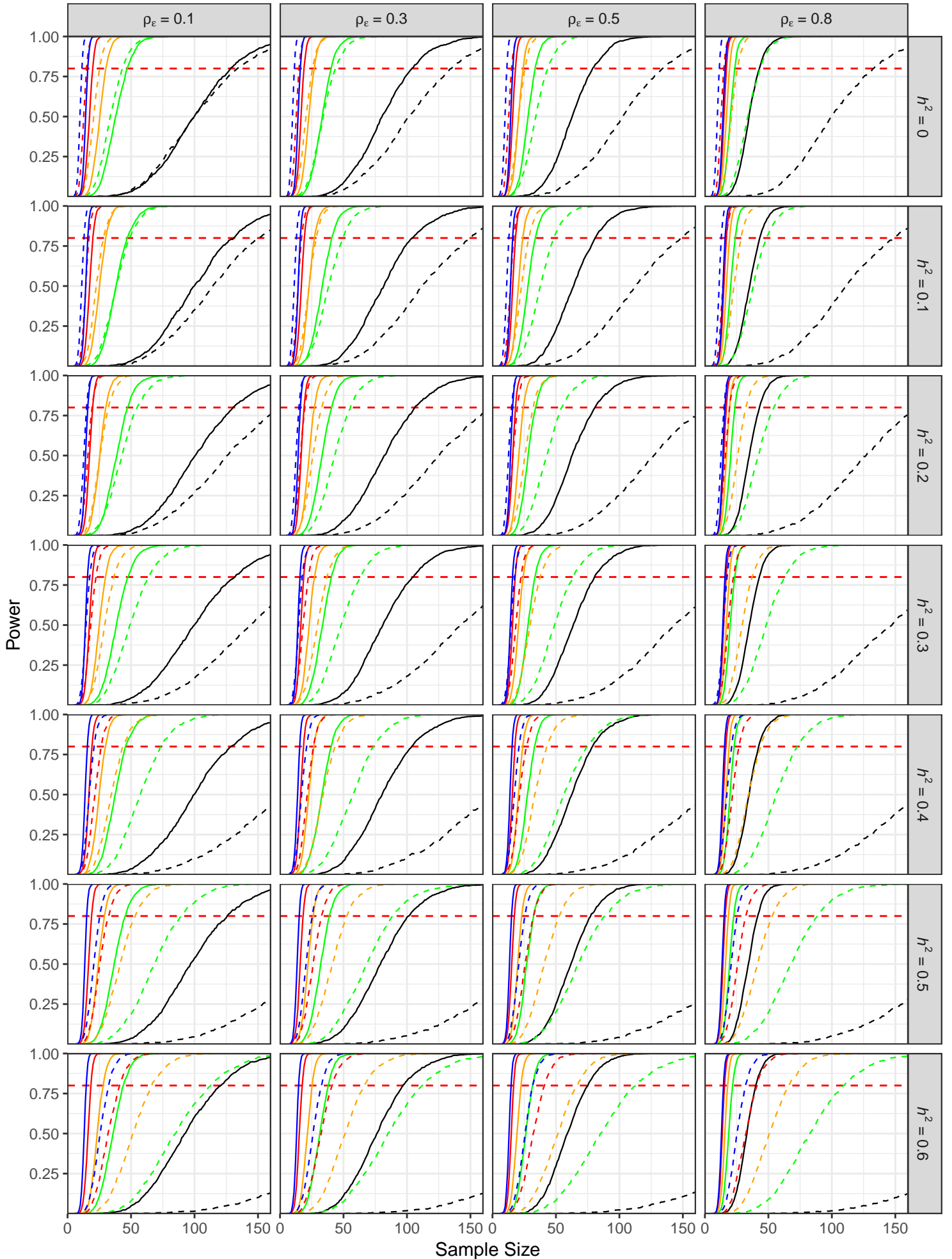
$P_K = 0.1$ ,  $E(M) = -3.78$ ,  $Var(M) = 3$



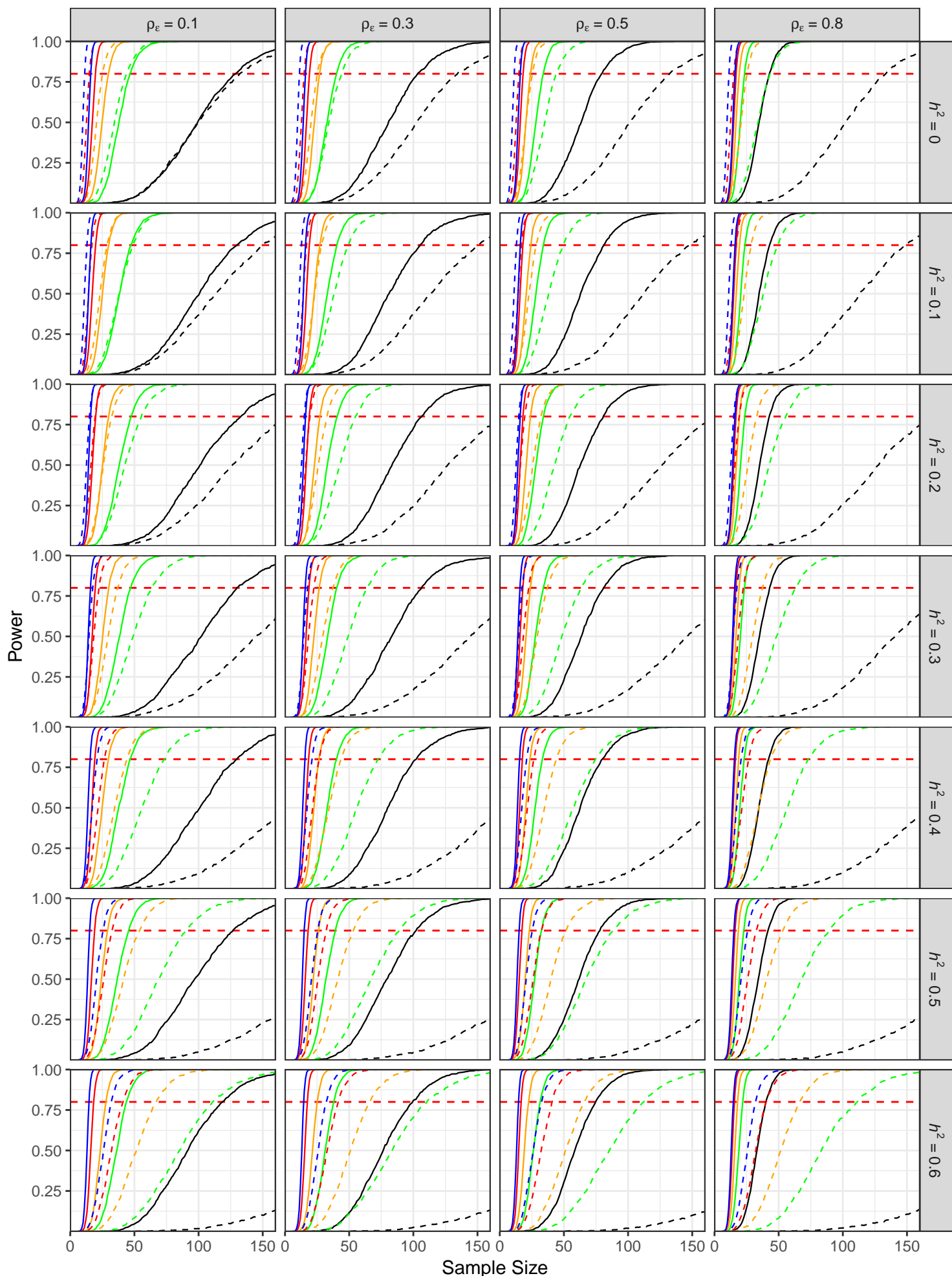
$P_K = 0.1$ ,  $E(M) = -3.78$ ,  $Var(M) = 4$



$P_K = 0.1$  ,  $E(M) = 3.36$  ,  $Var(M) = 0.06$



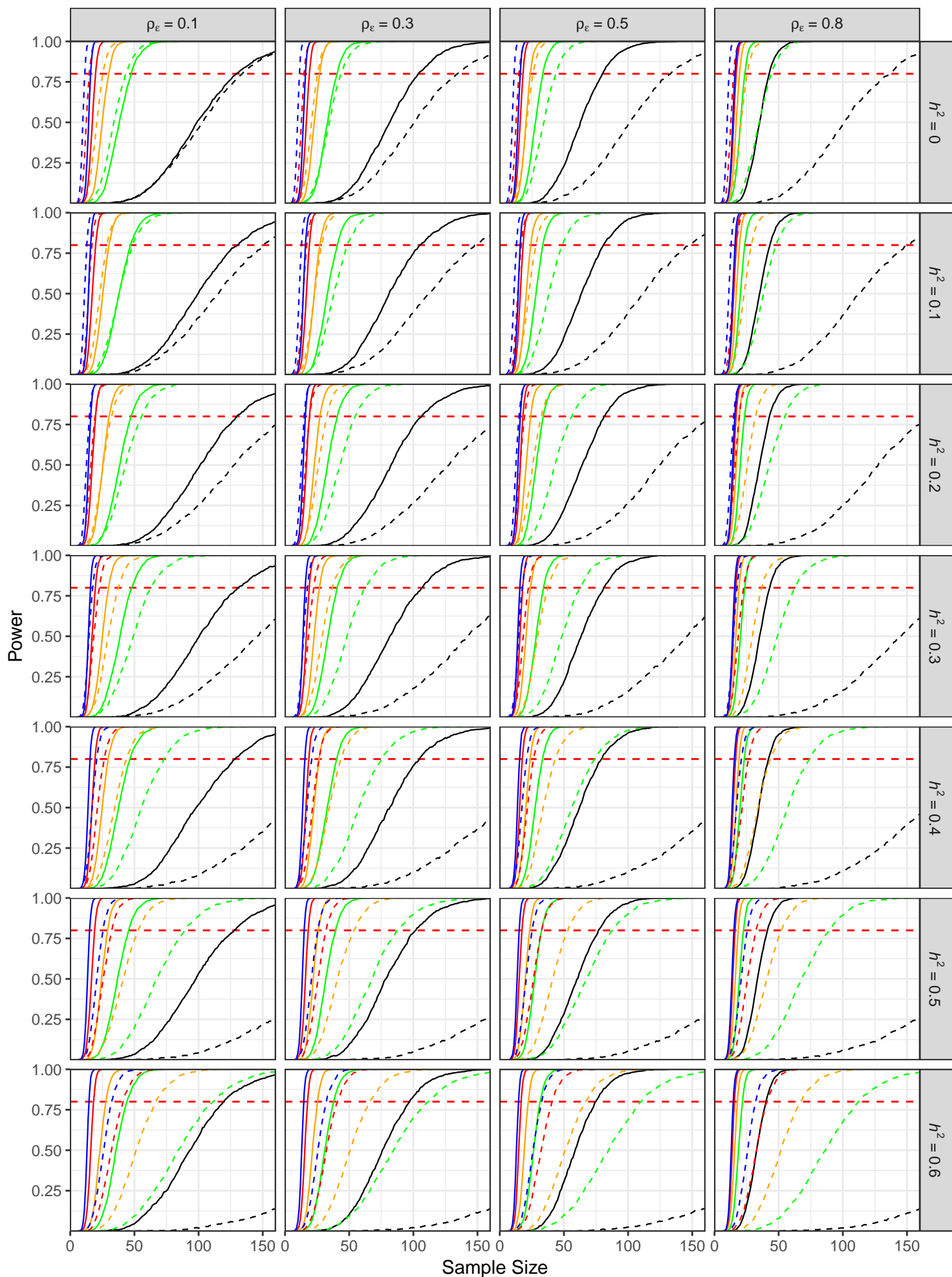
$P_K = 0.1$ ,  $E(M) = 3.36$ ,  $\text{Var}(M) = 1$



$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

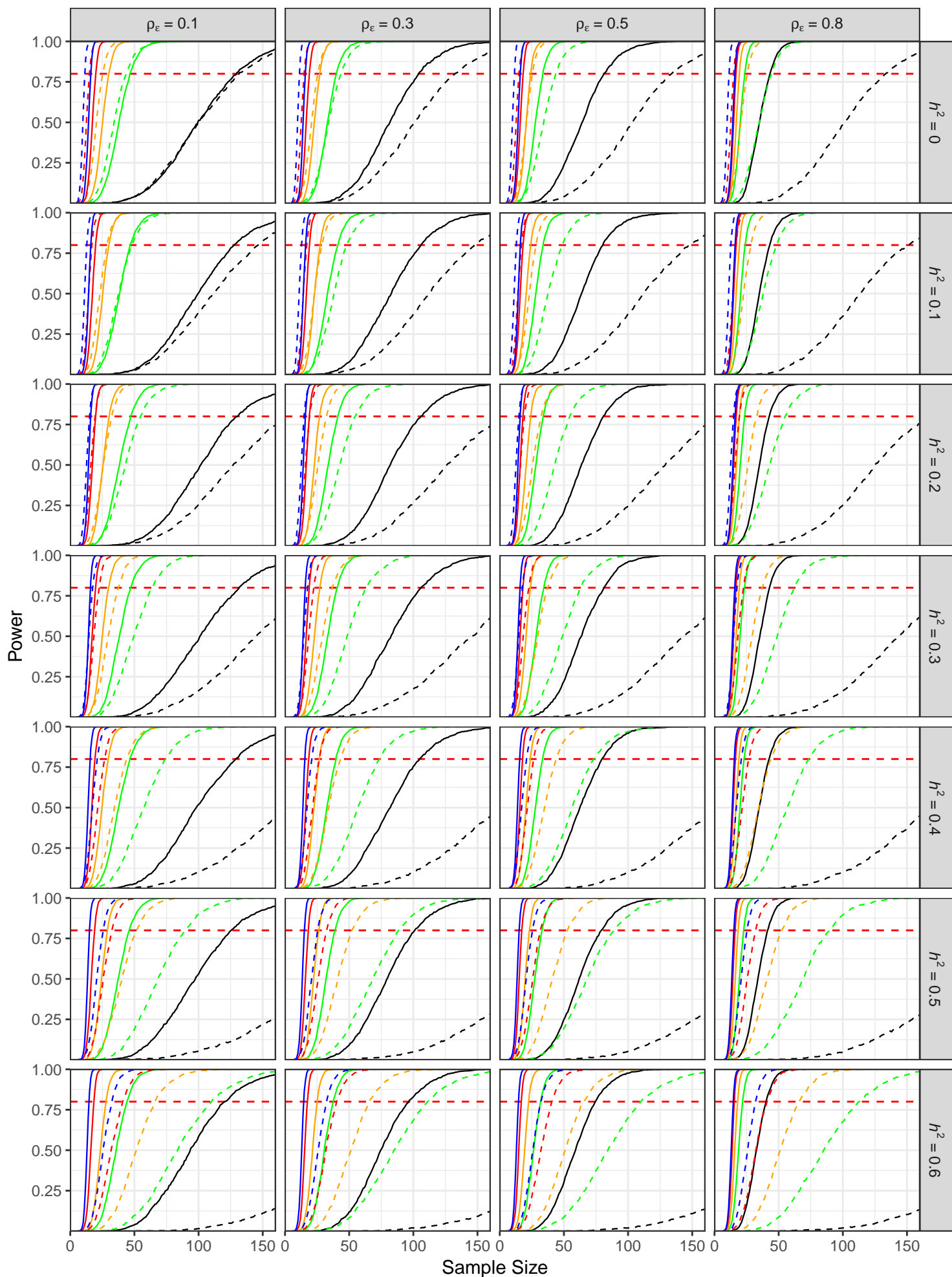
Design - - Ordinary Case-control — Discordant Twin

$P_K = 0.1$ ,  $E(M) = 3.36$ ,  $Var(M) = 2$

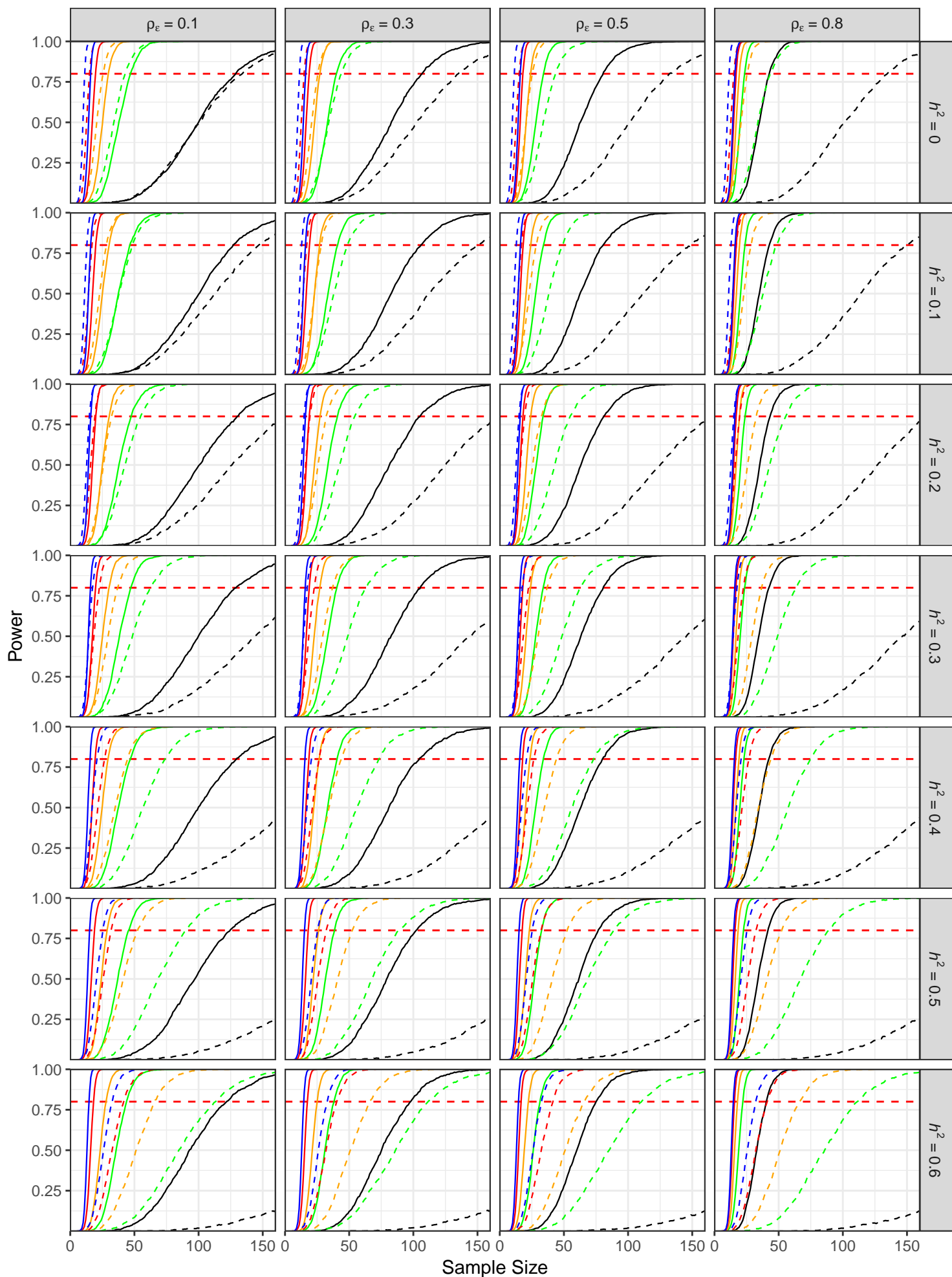




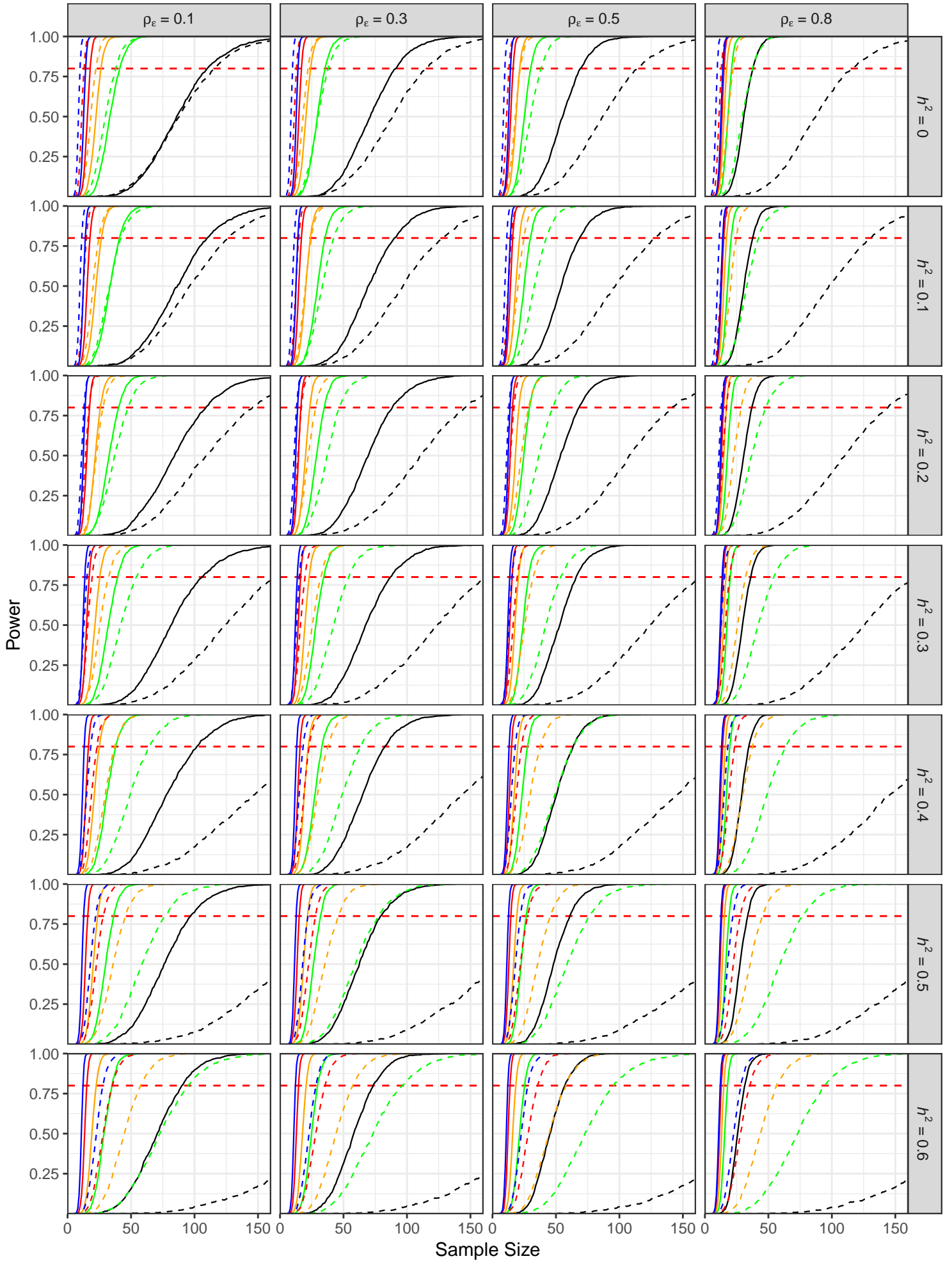
$P_K = 0.1$ ,  $E(M) = 3.36$ ,  $Var(M) = 3$



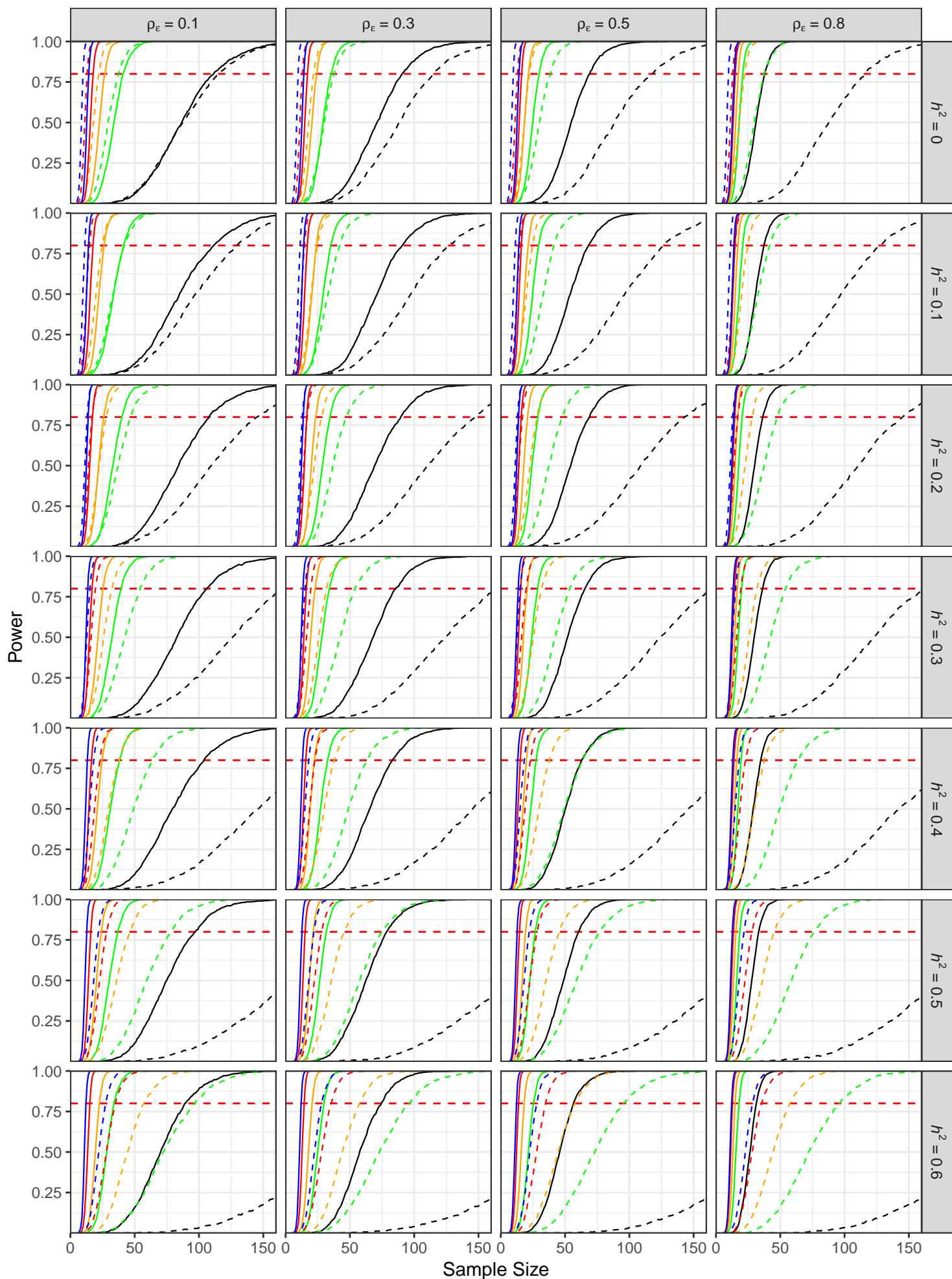
$P_K = 0.1$ ,  $E(M) = 3.36$ ,  $\text{Var}(M) = 4$



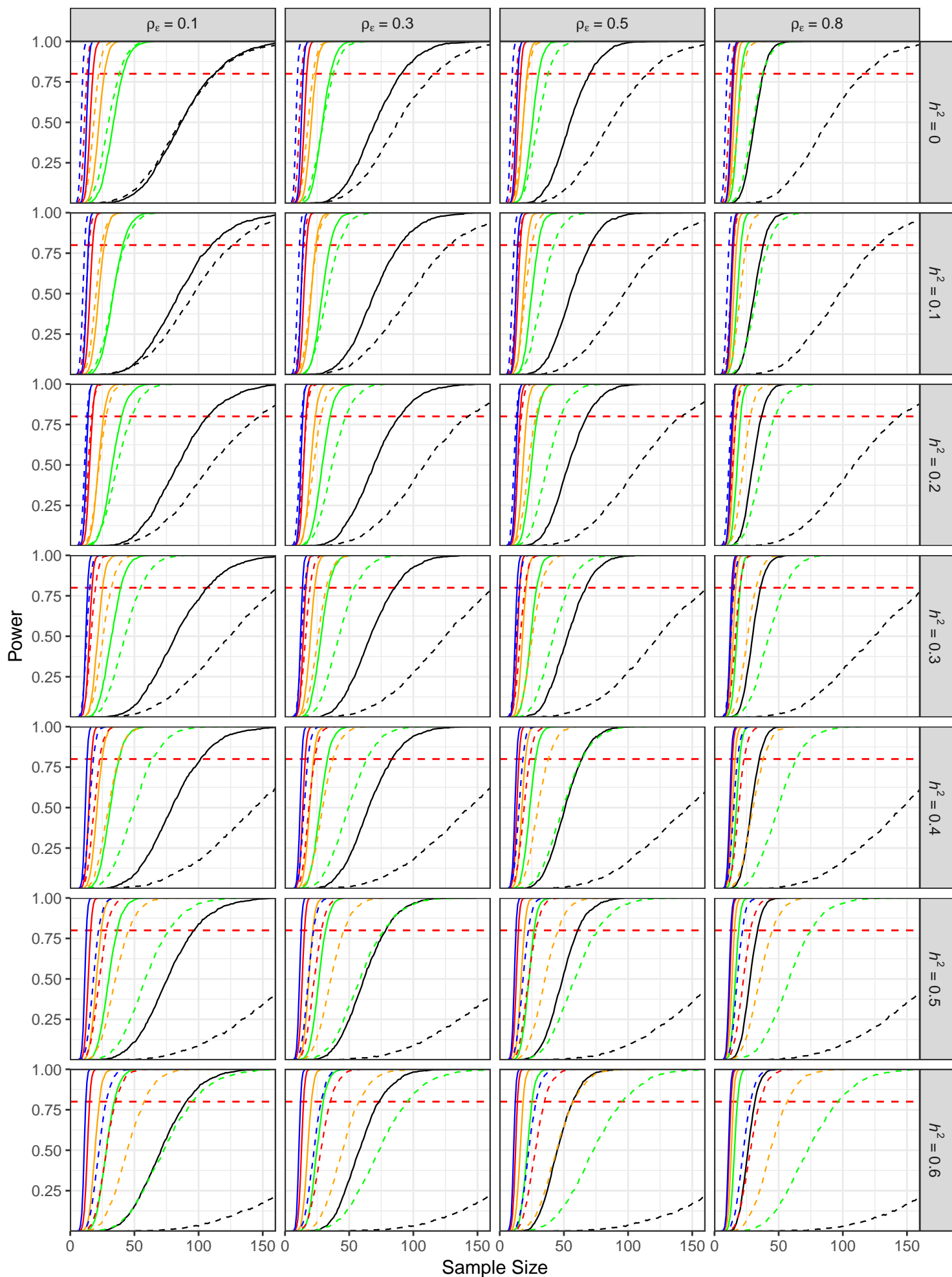
$P_K = 0.2$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 0.06$



$P_K = 0.2$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 1$

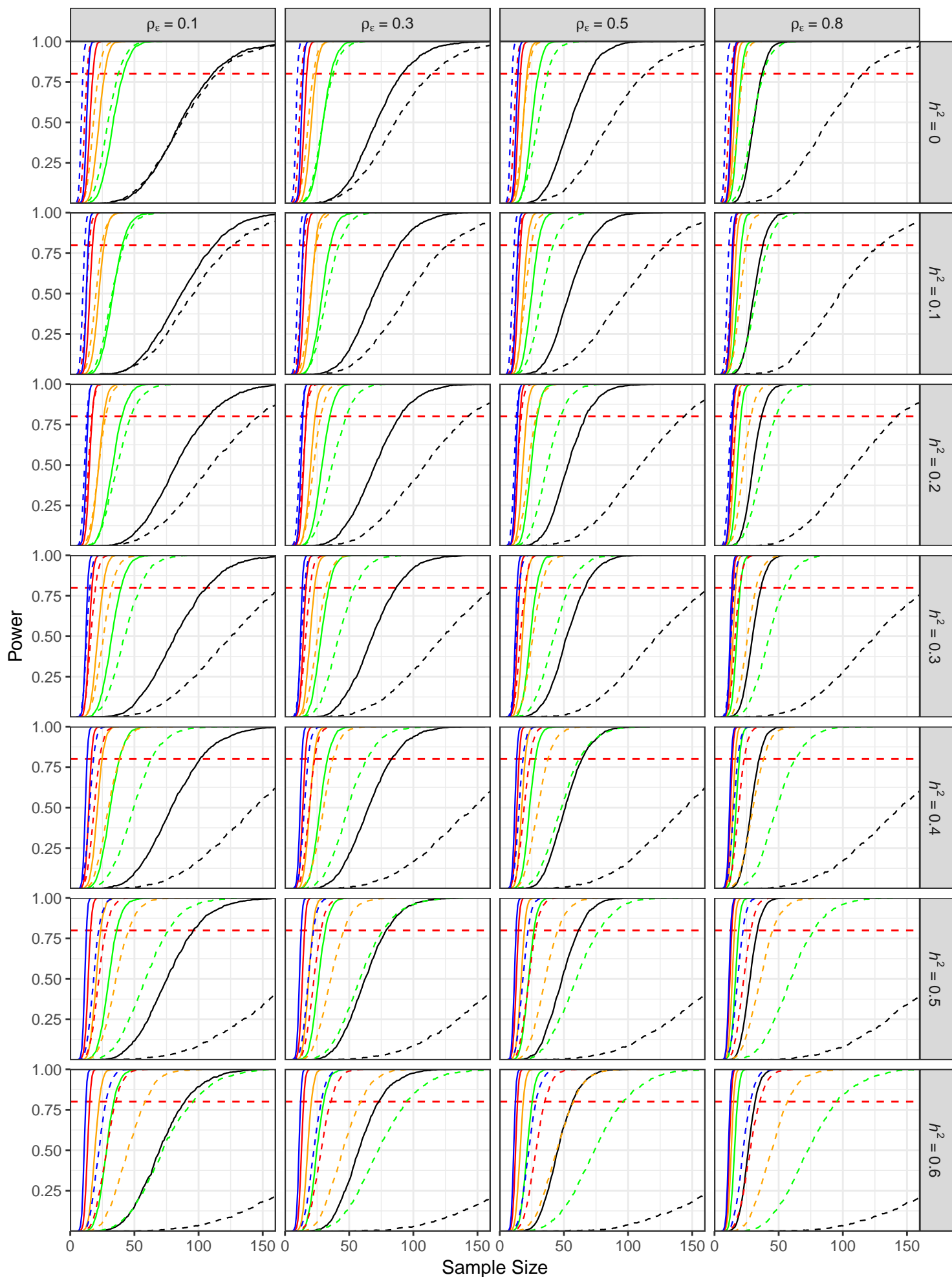


$P_K = 0.2$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 2$





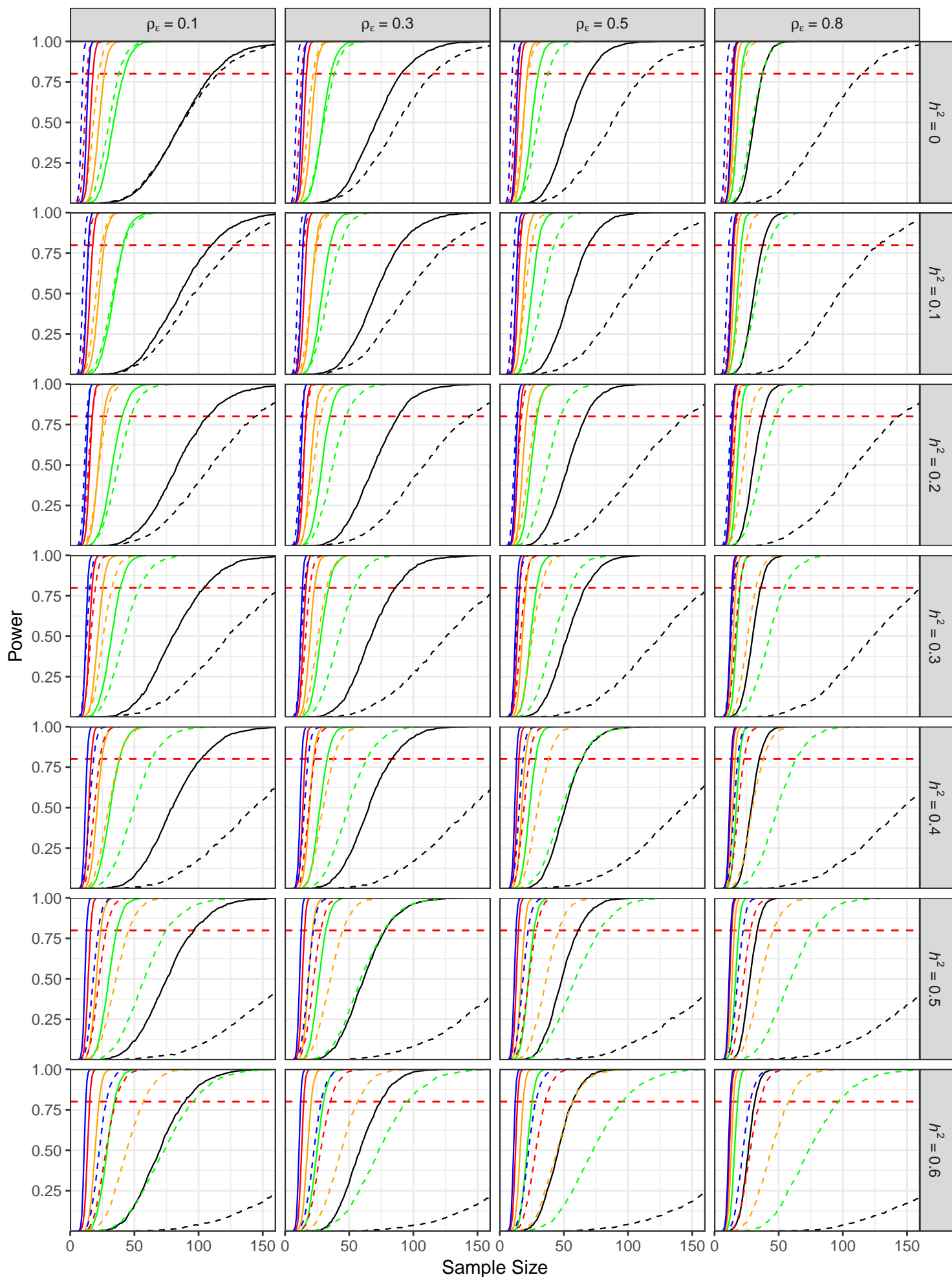
$P_K = 0.2$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 3$



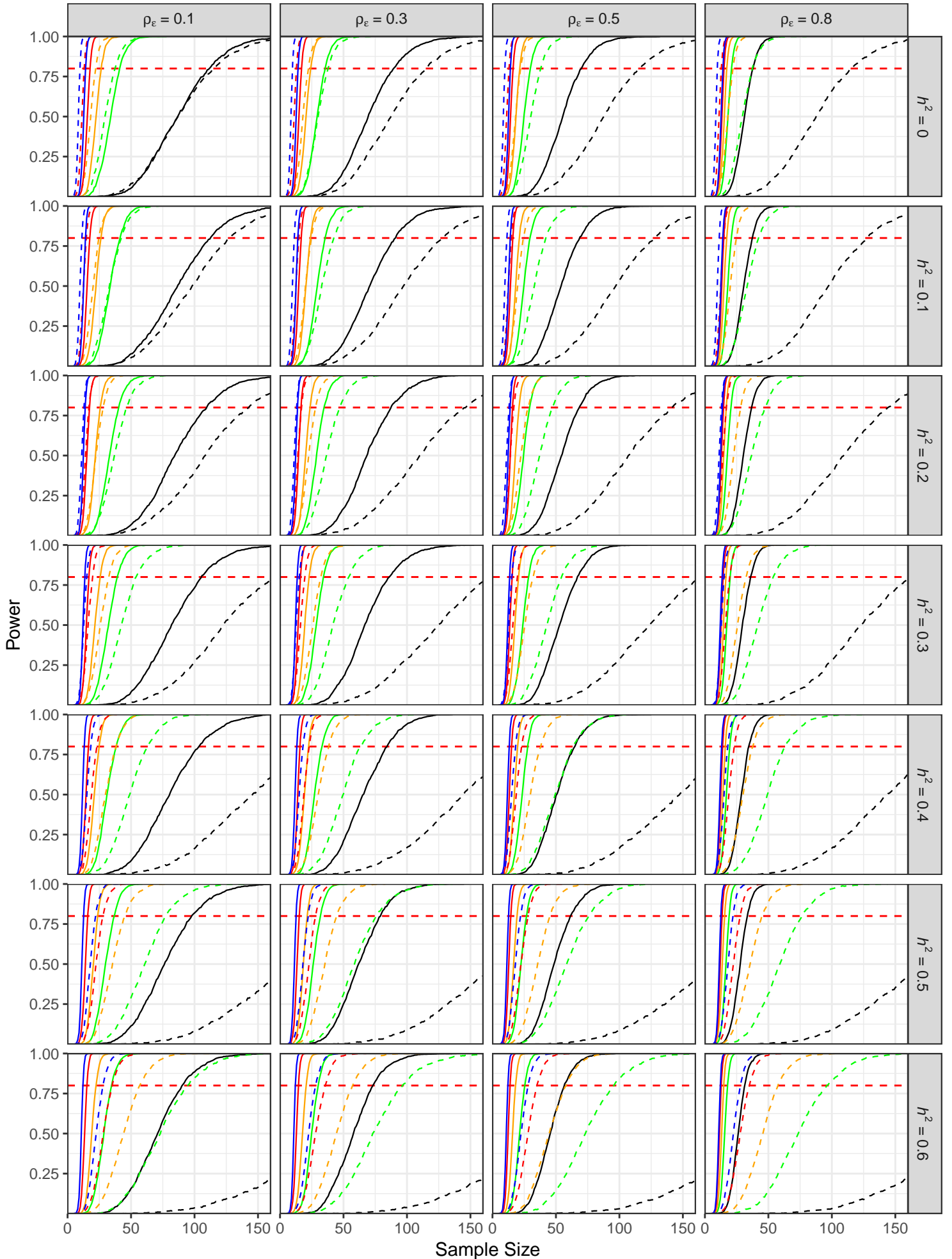
$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

Design - - Ordinary Case-control — Discordant Twin

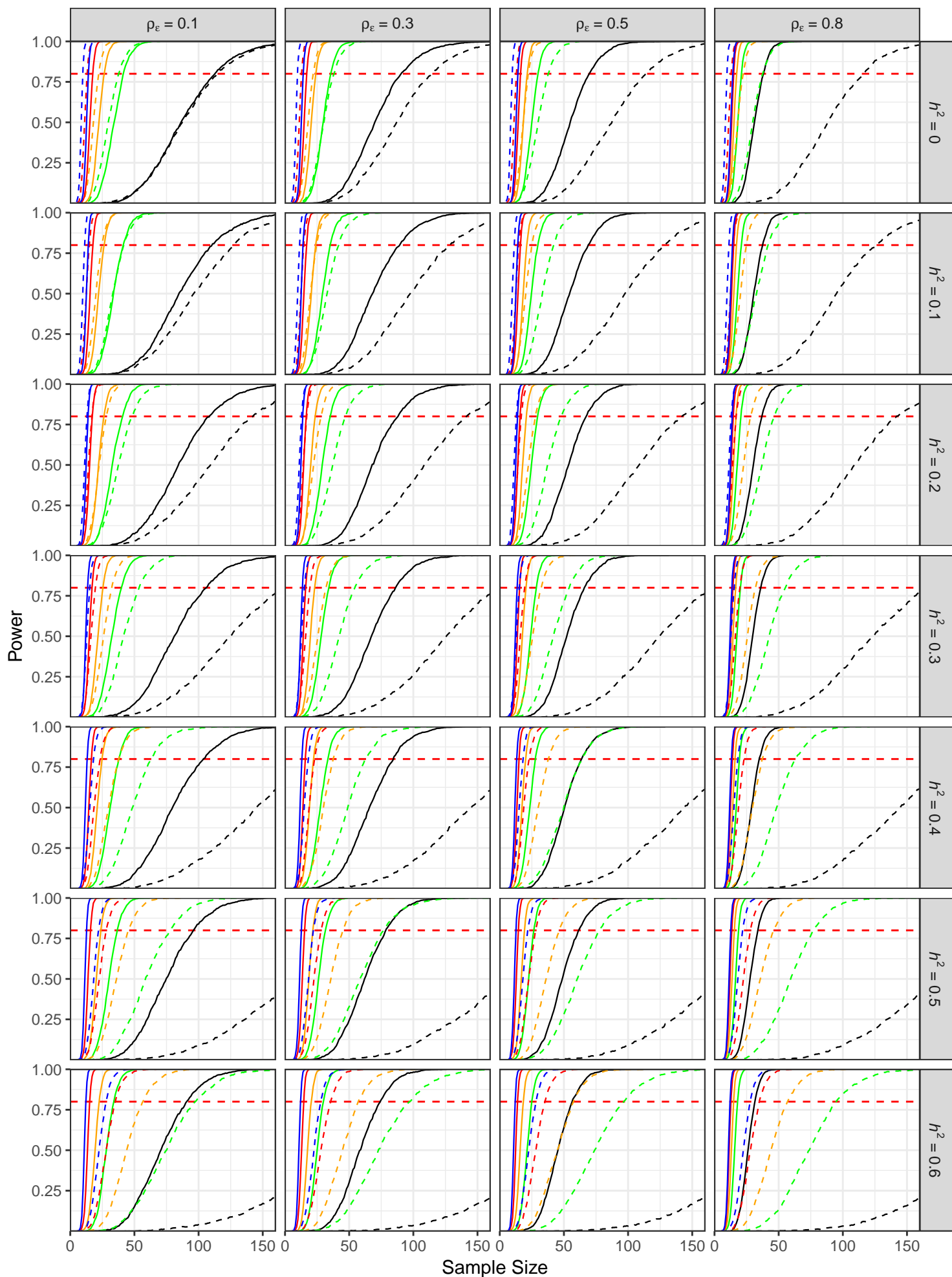
$P_K = 0.2$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 4$



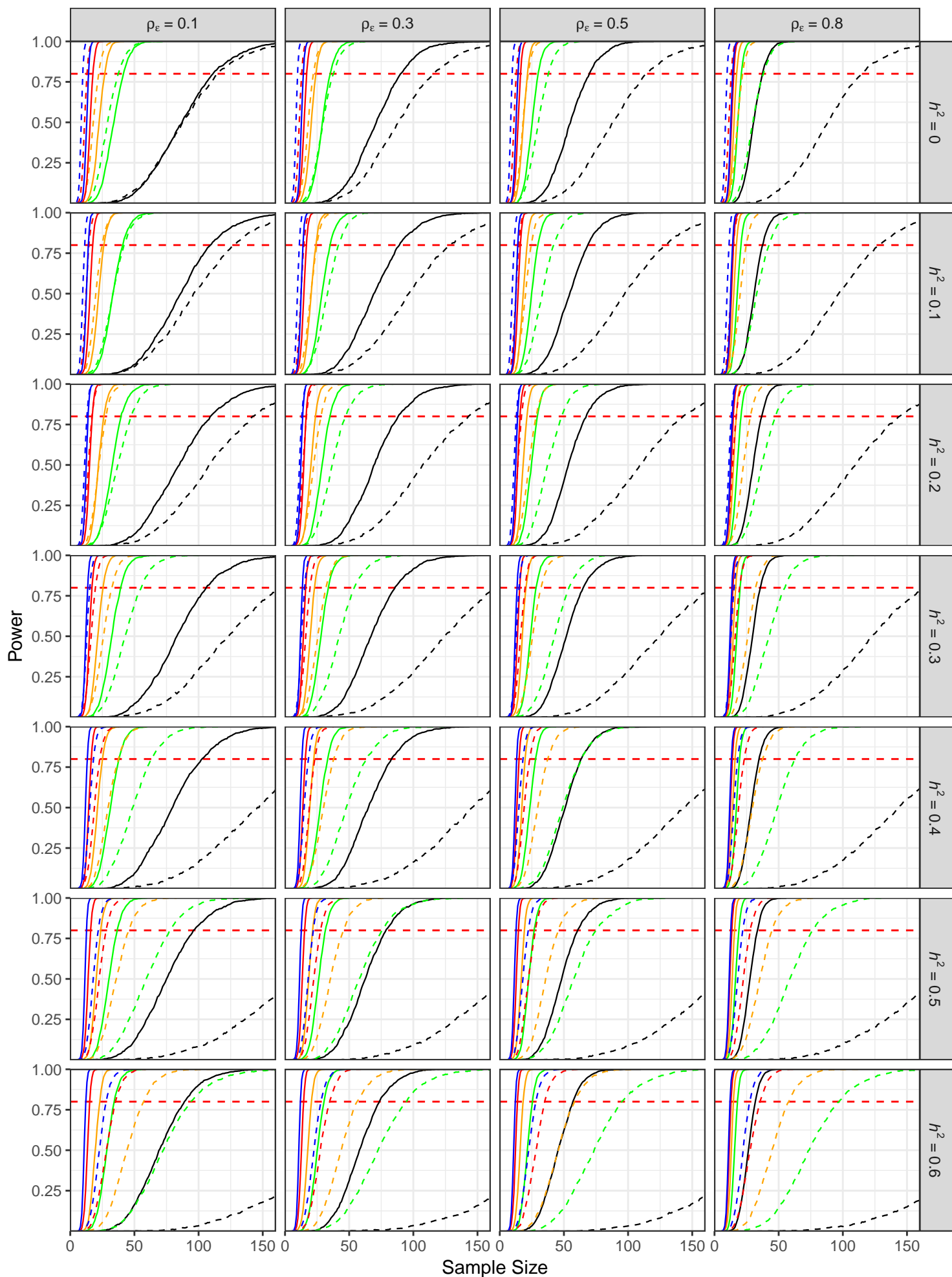
$P_K = 0.2$  ,  $E(M) = 3.36$  ,  $Var(M) = 0.06$



$P_K = 0.2$ ,  $E(M) = 3.36$ ,  $\text{Var}(M) = 1$



$P_K = 0.2$ ,  $E(M) = 3.36$ ,  $\text{Var}(M) = 2$

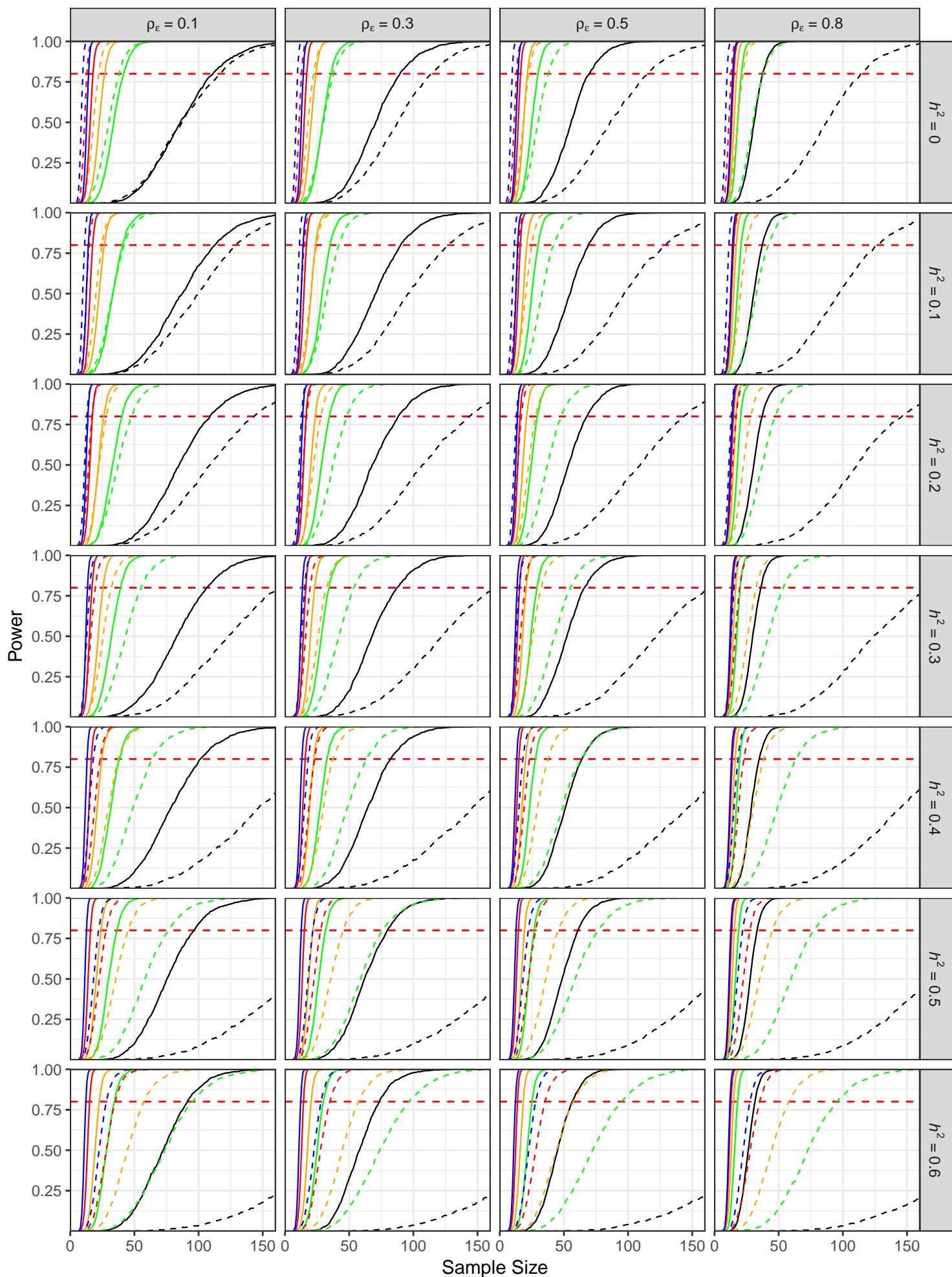


$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

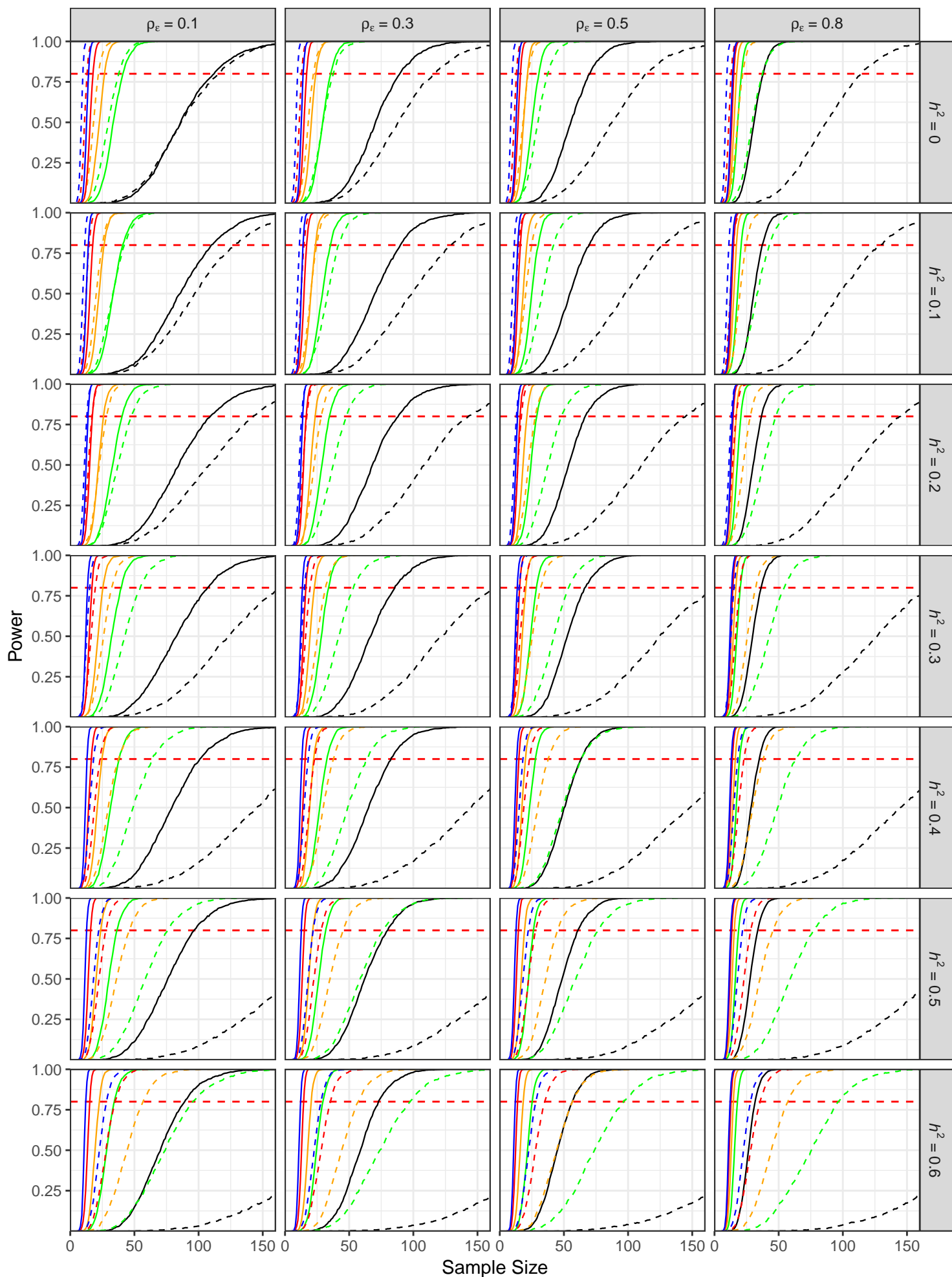
Design - - Ordinary Case-control — Discordant Twin



$P_K = 0.2$ ,  $E(M) = 3.36$ ,  $\text{Var}(M) = 3$



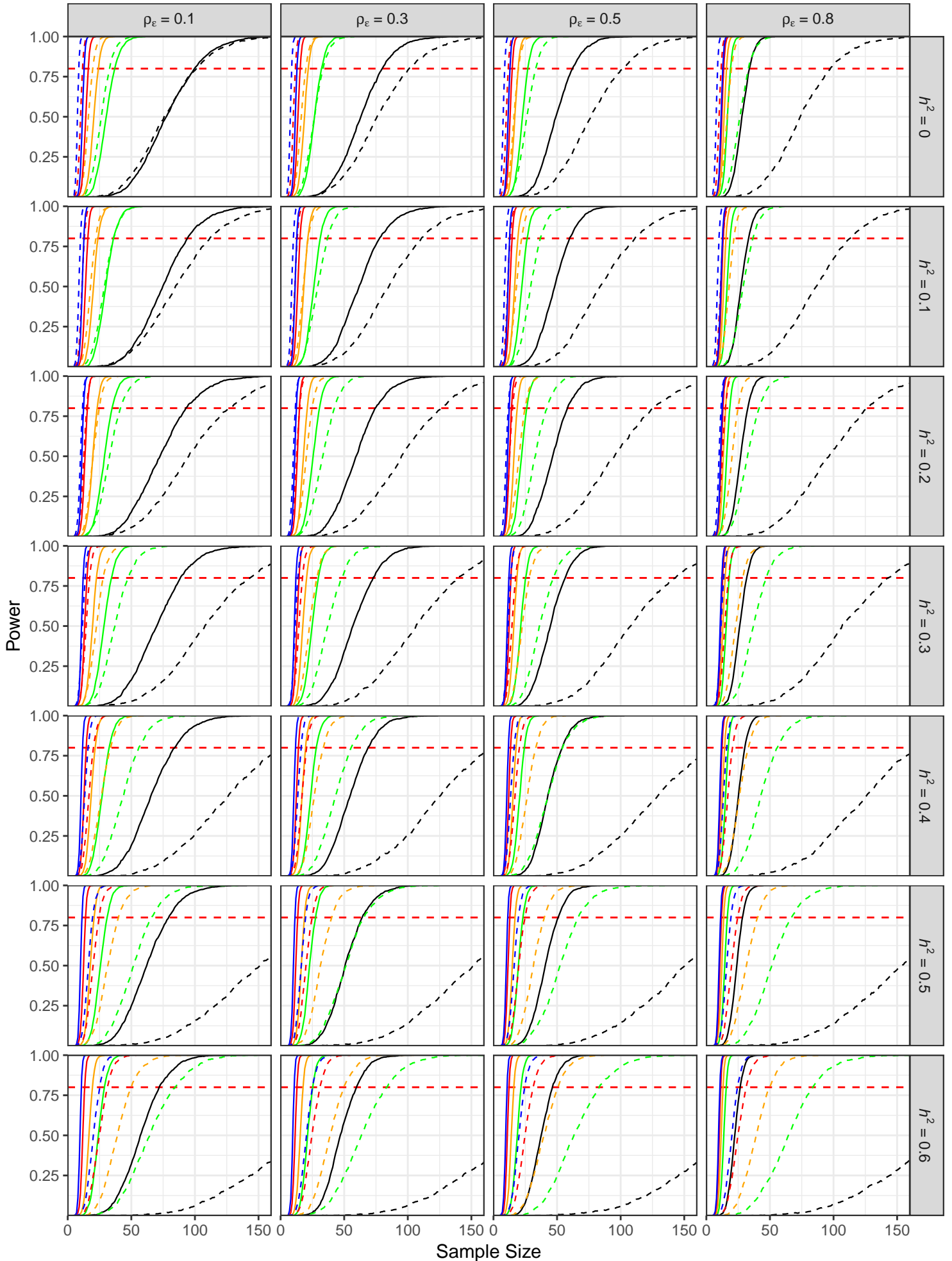
$P_K = 0.2$ ,  $E(M) = 3.36$ ,  $\text{Var}(M) = 4$



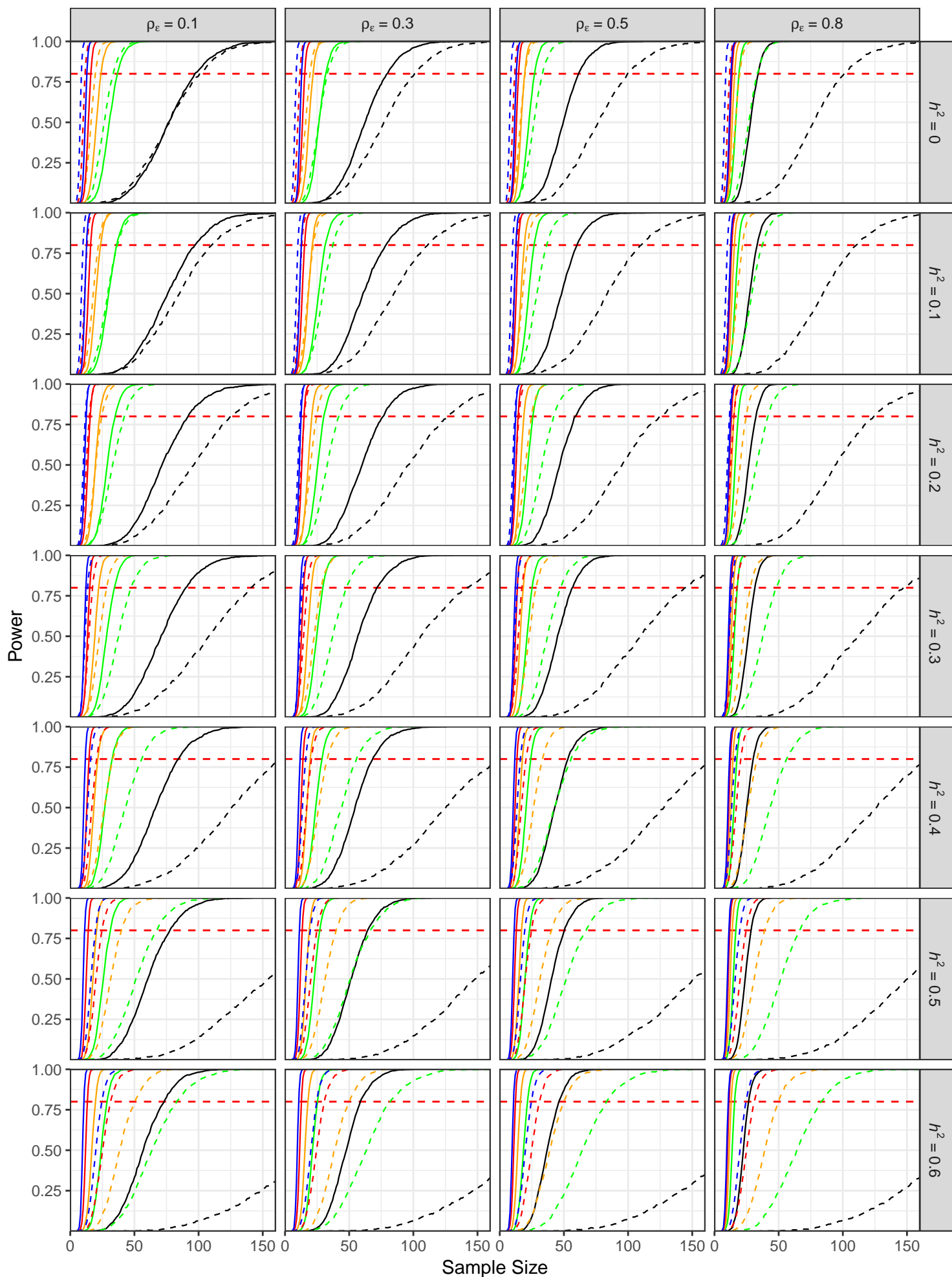
$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

Design - - Ordinary Case-control — Discordant Twin

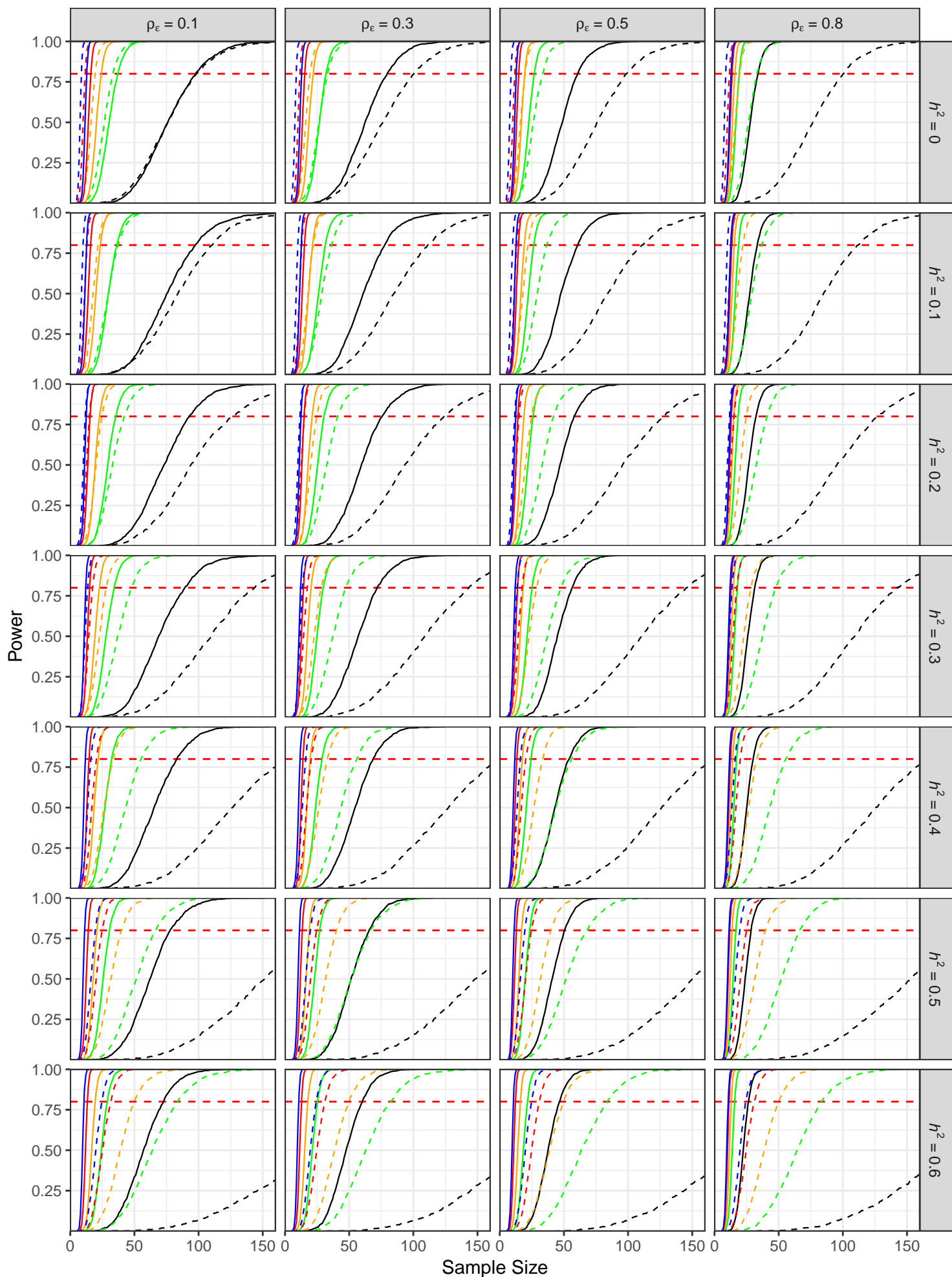
$P_K = 0.3$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 0.06$



$P_K = 0.3$ ,  $E(M) = -3.78$ ,  $Var(M) = 1$

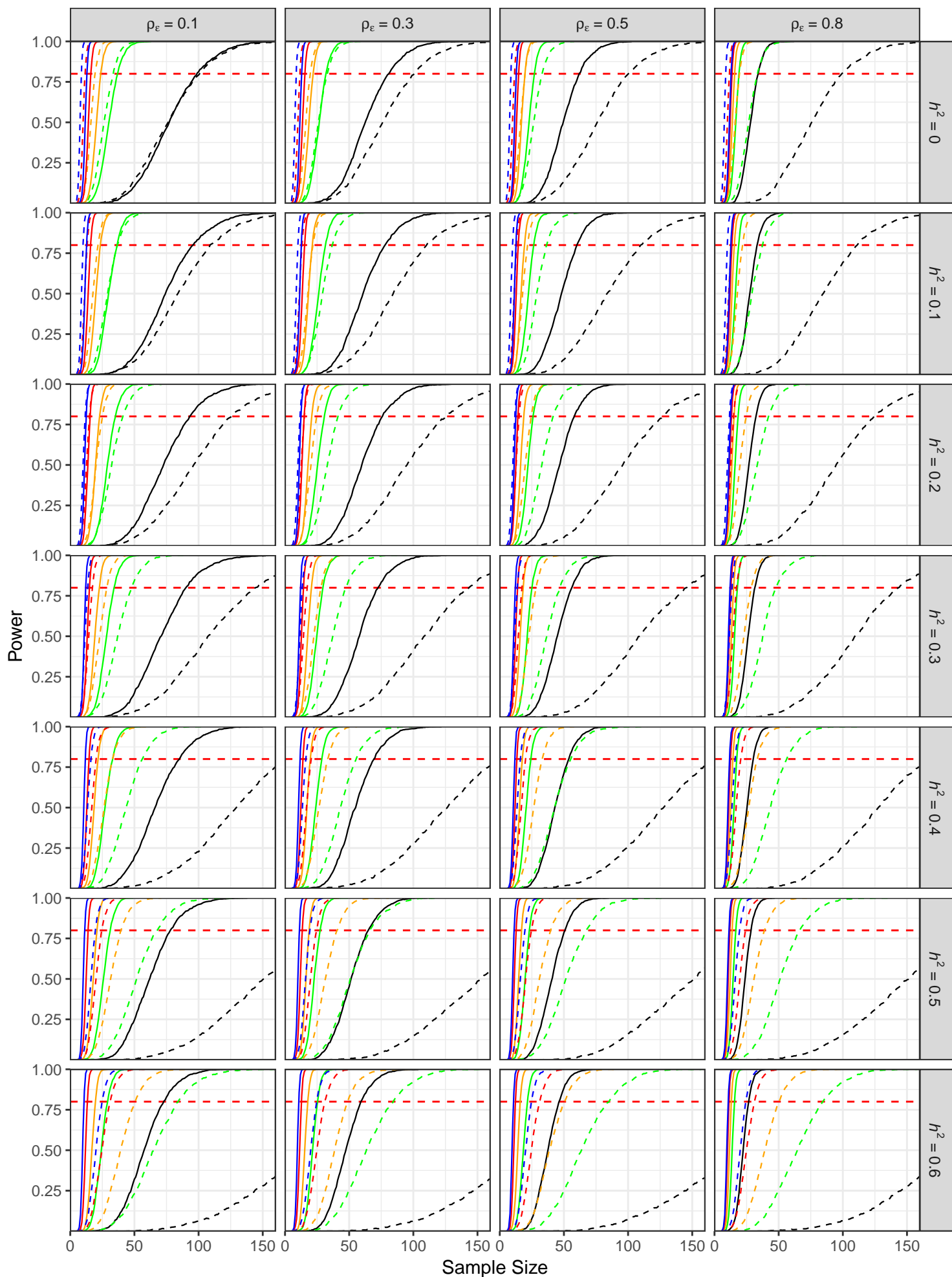


$P_K = 0.3$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 2$





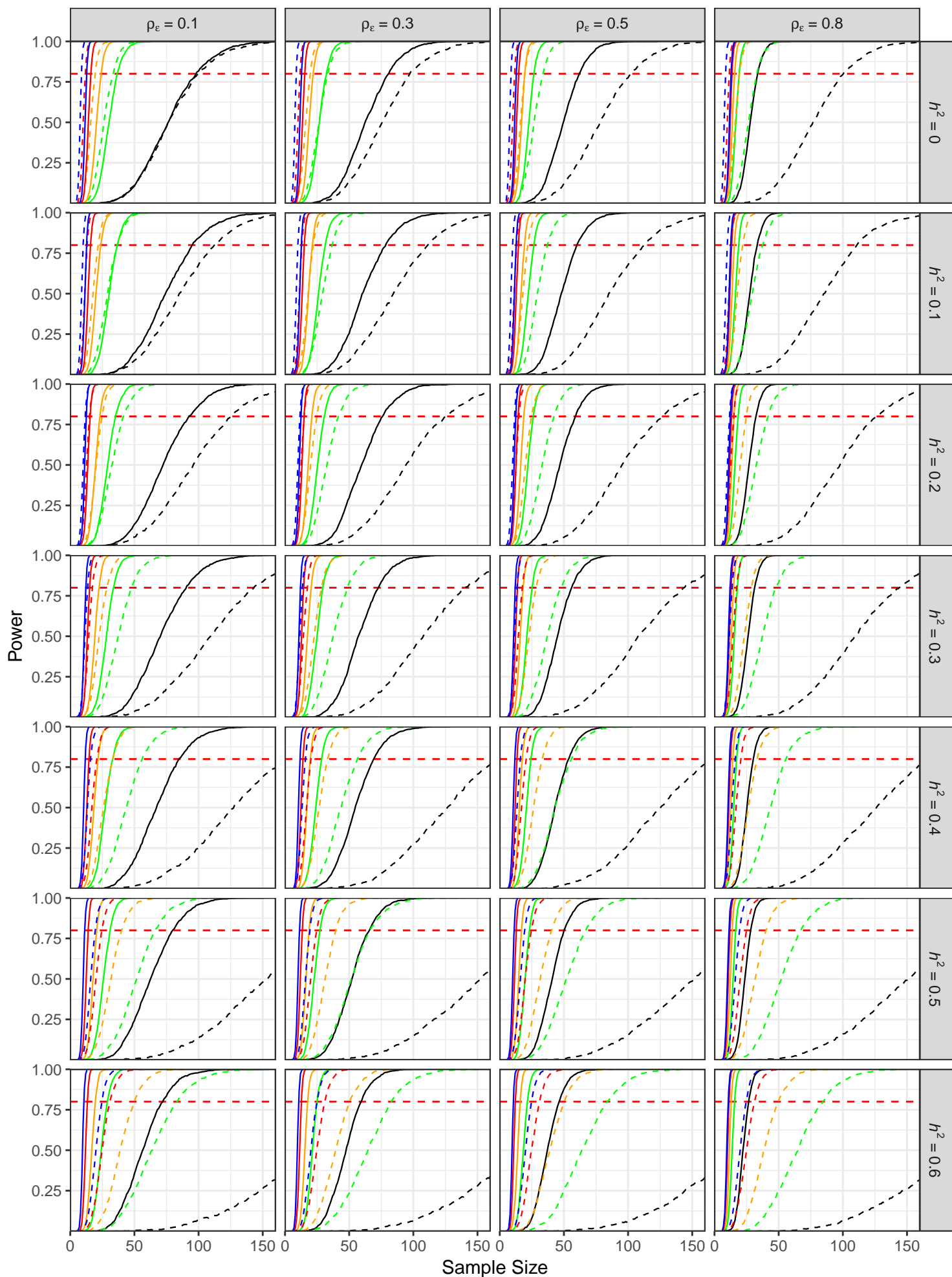
$P_K = 0.3$ ,  $E(M) = -3.78$ ,  $Var(M) = 3$



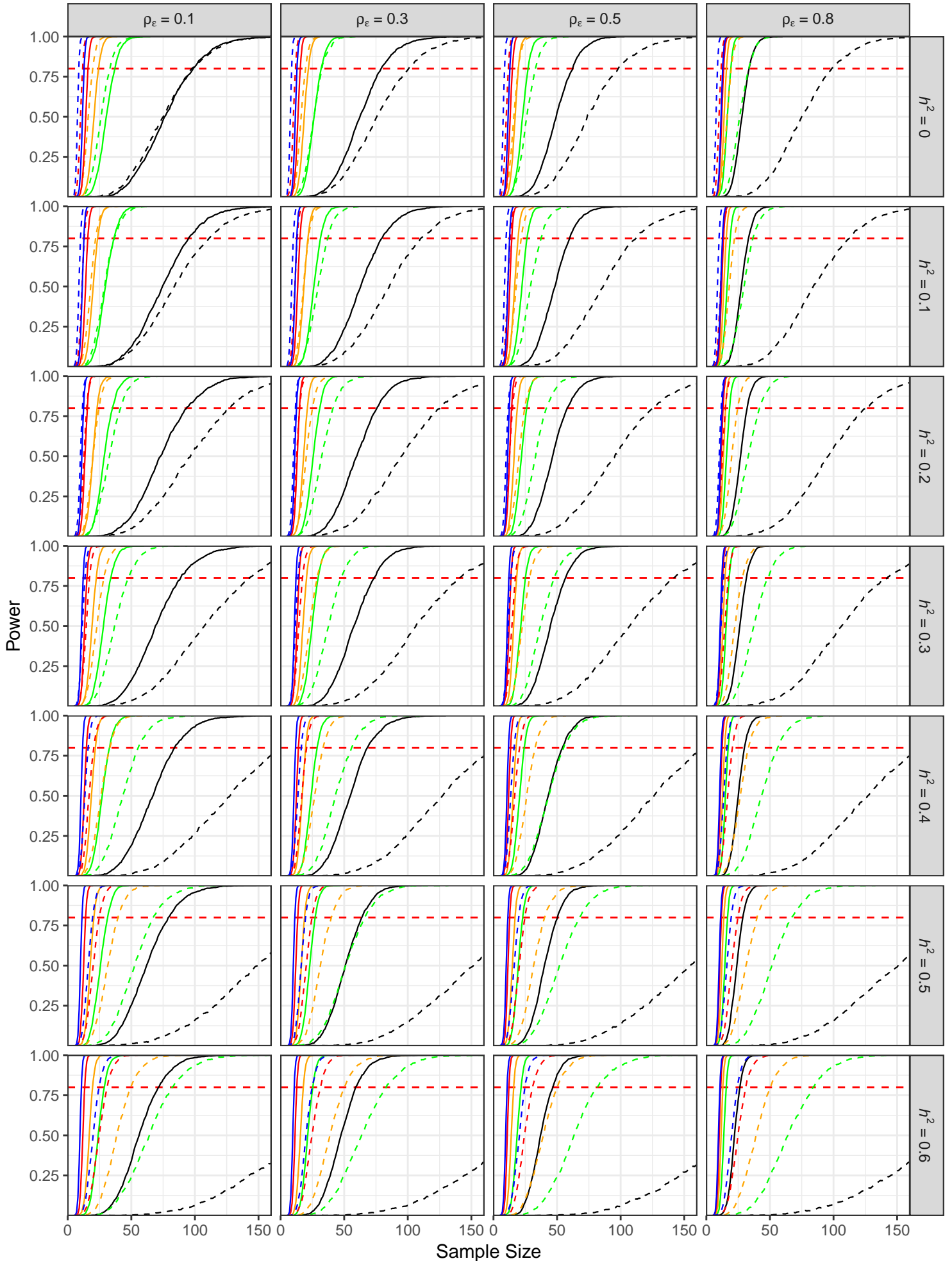
$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

Design - - Ordinary Case-control — Discordant Twin

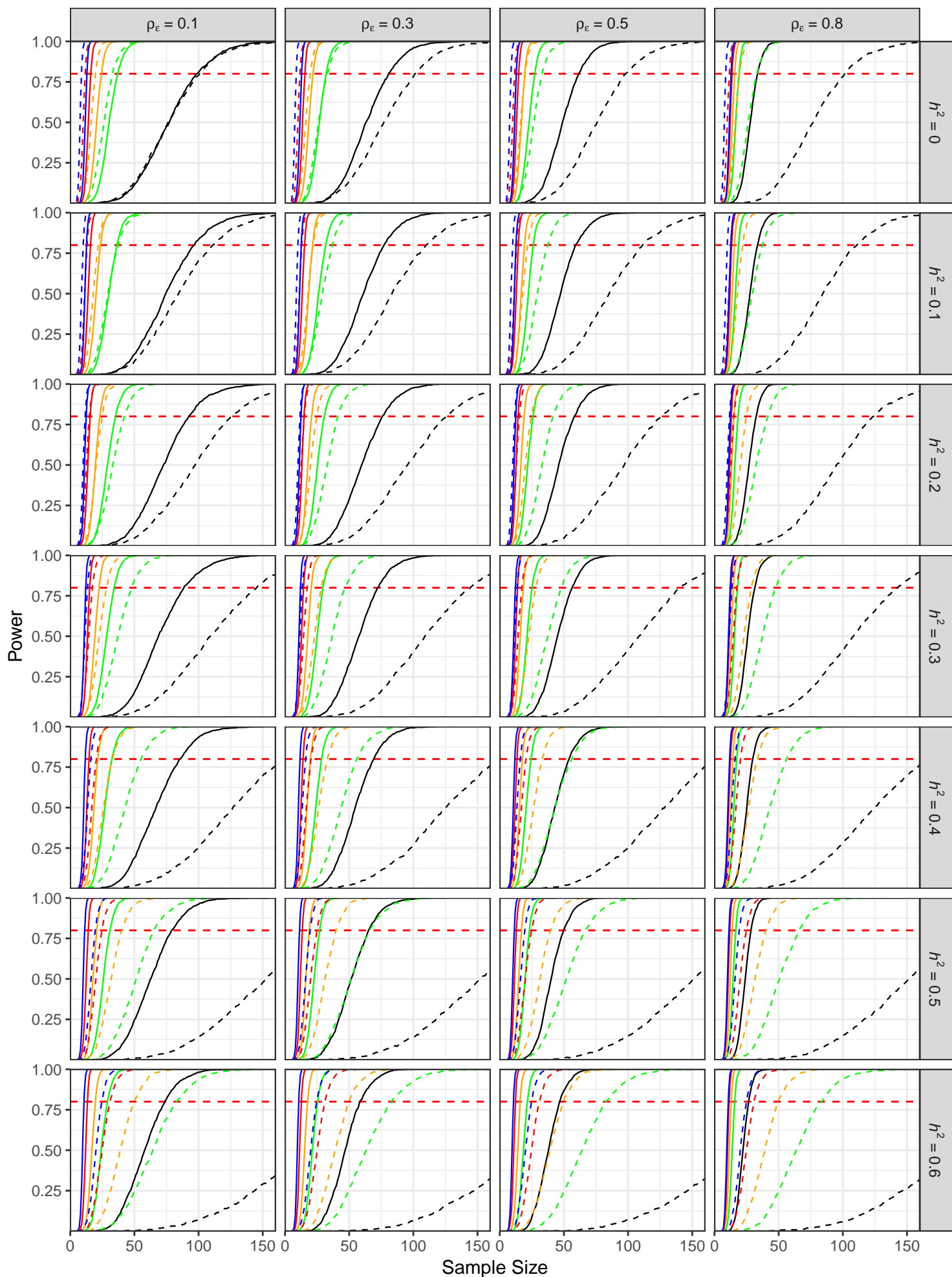
$P_K = 0.3$ ,  $E(M) = -3.78$ ,  $Var(M) = 4$



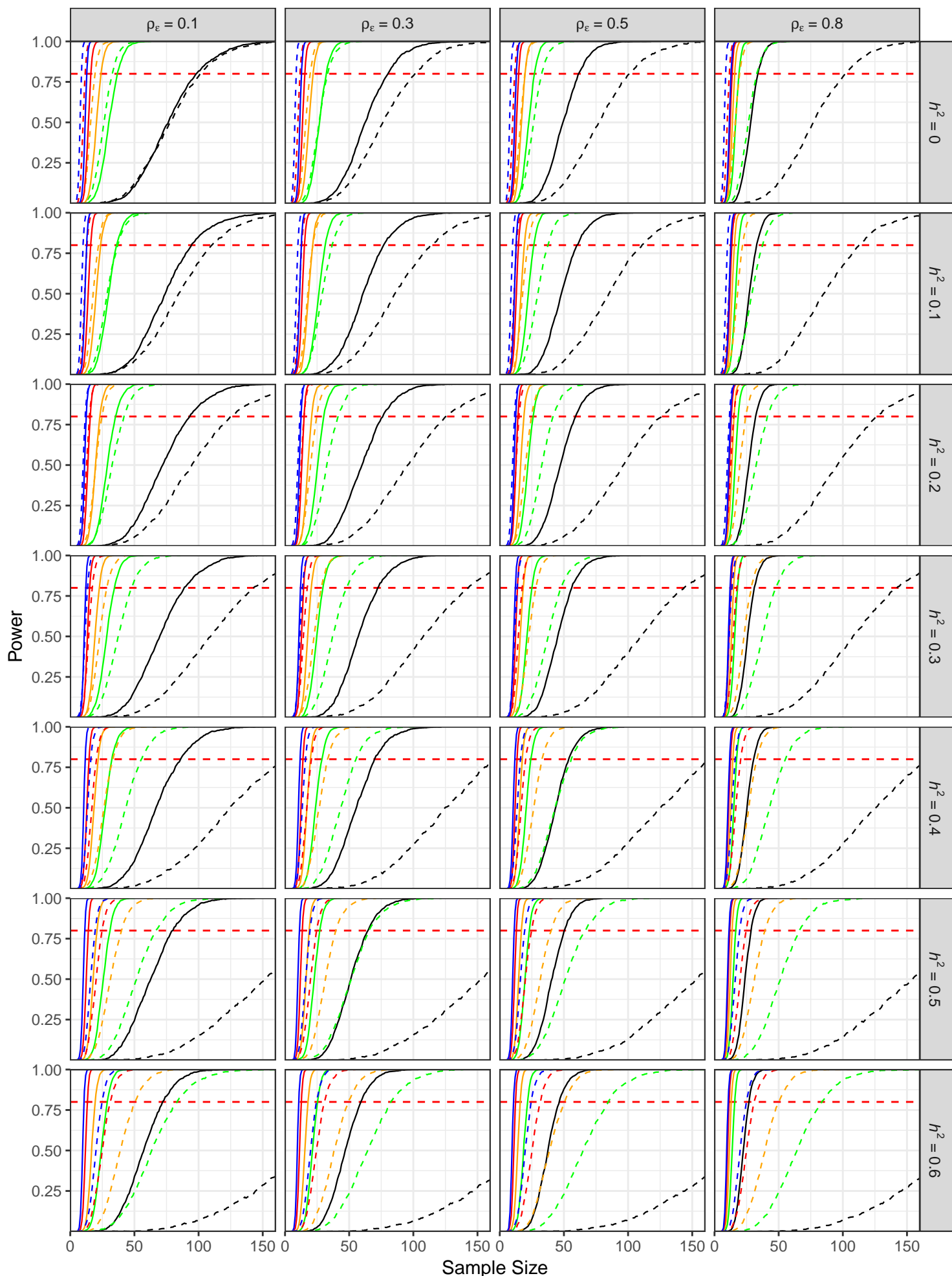
$P_K = 0.3$ ,  $E(M) = 3.36$ ,  $Var(M) = 0.06$



$P_K = 0.3$ ,  $E(M) = 3.36$ ,  $Var(M) = 1$

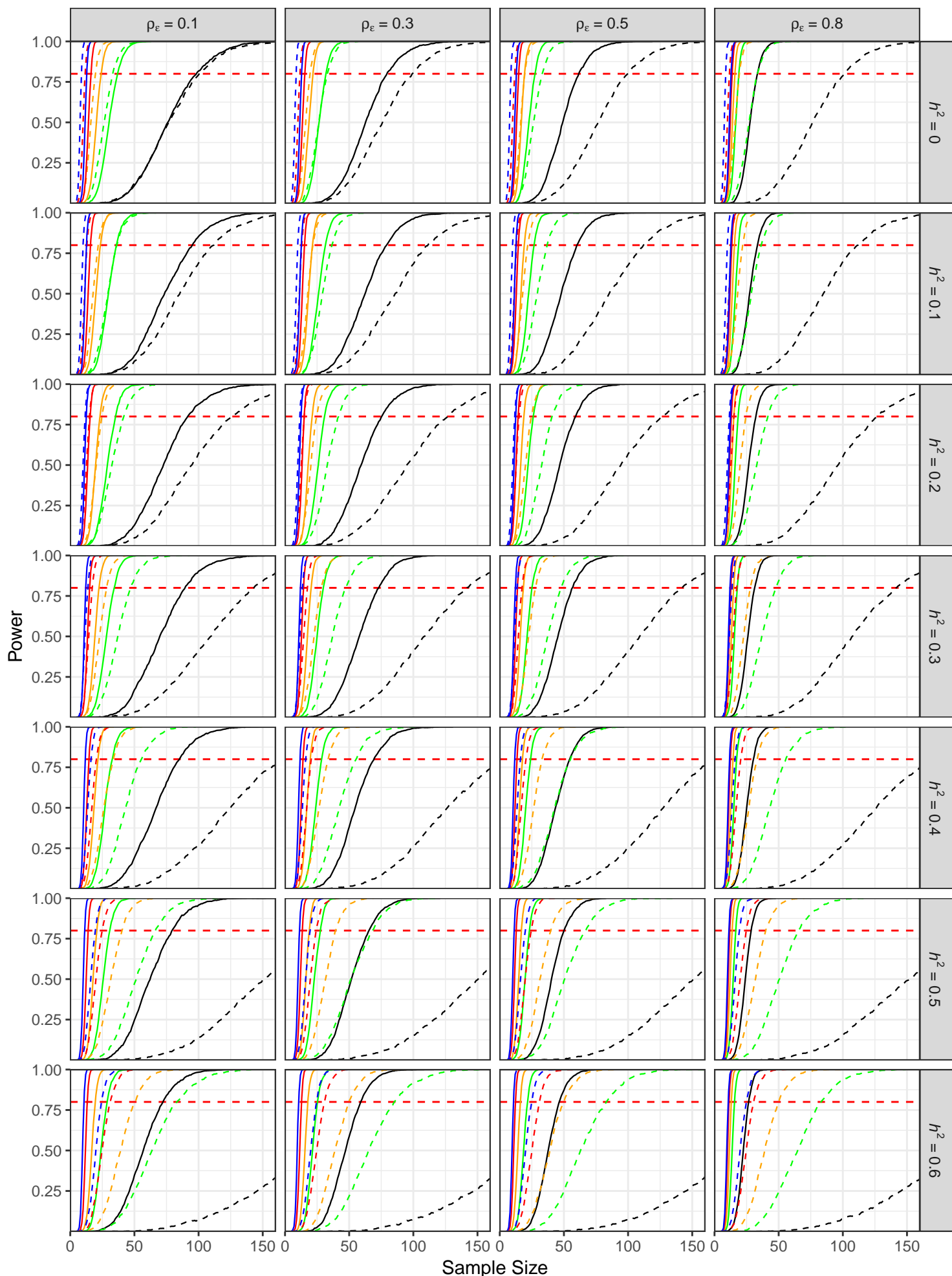


$P_K = 0.3$ ,  $E(M) = 3.36$ ,  $\text{Var}(M) = 2$

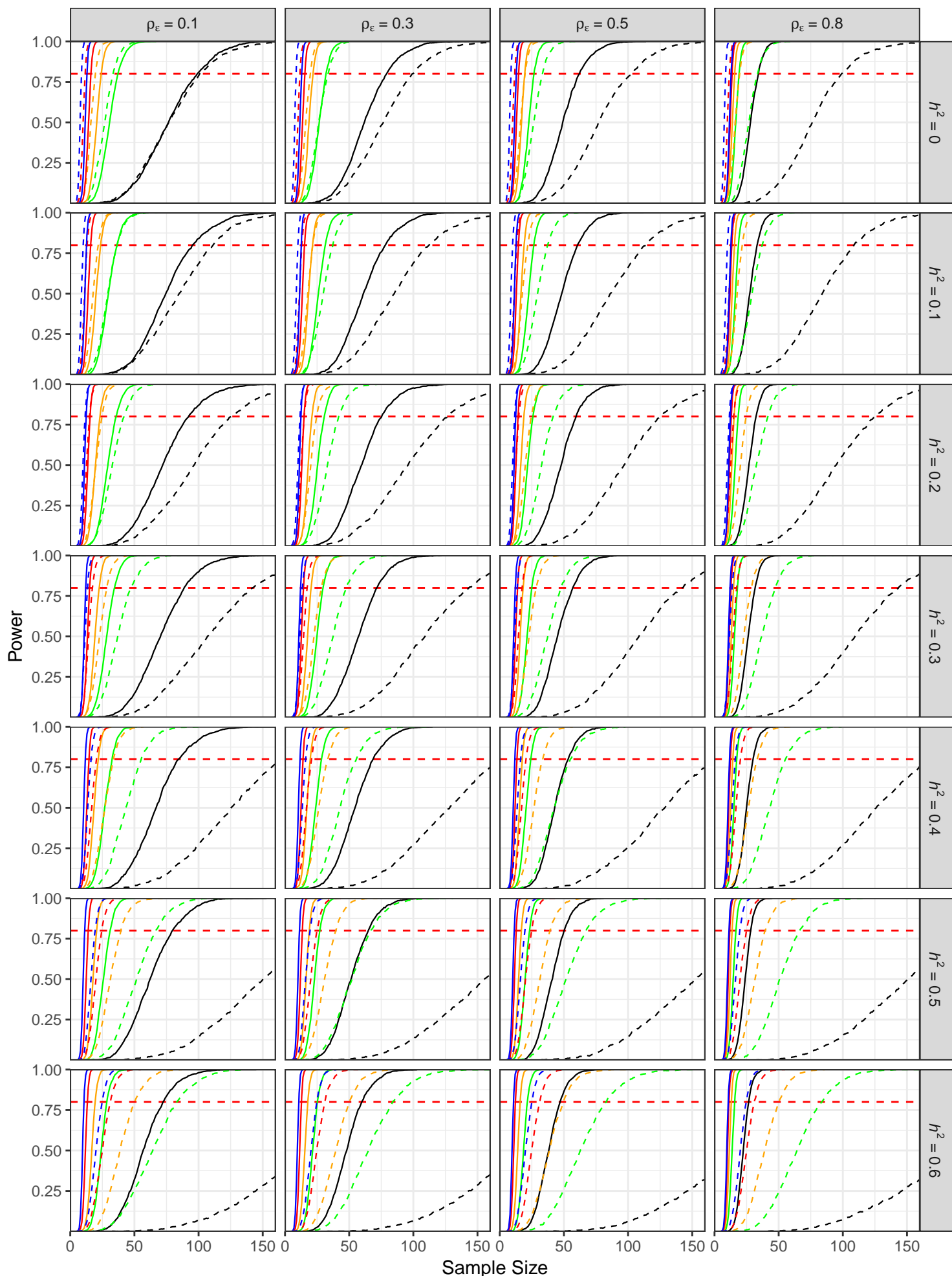




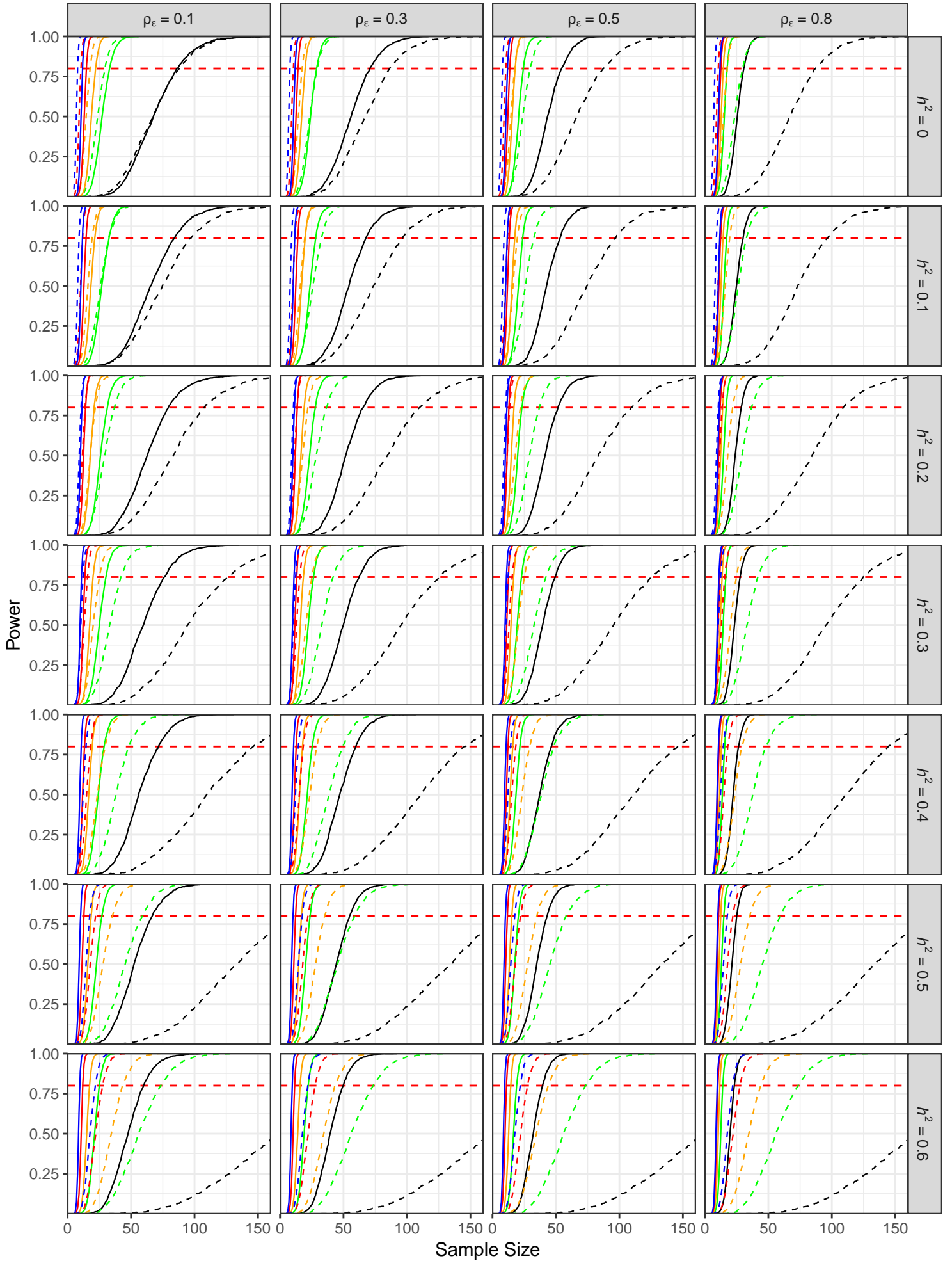
$P_K = 0.3$ ,  $E(M) = 3.36$ ,  $Var(M) = 3$



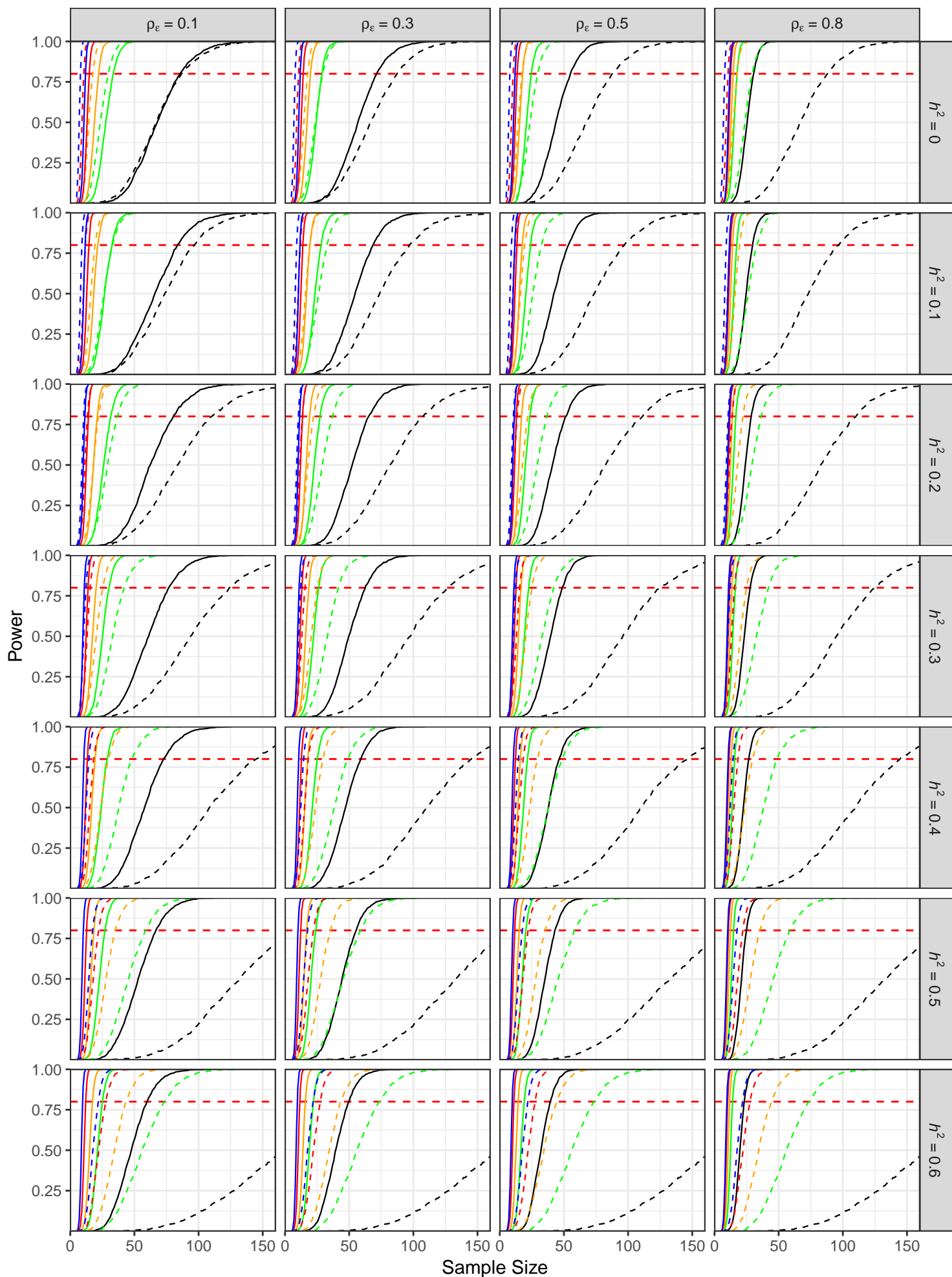
$P_K = 0.3$ ,  $E(M) = 3.36$ ,  $\text{Var}(M) = 4$



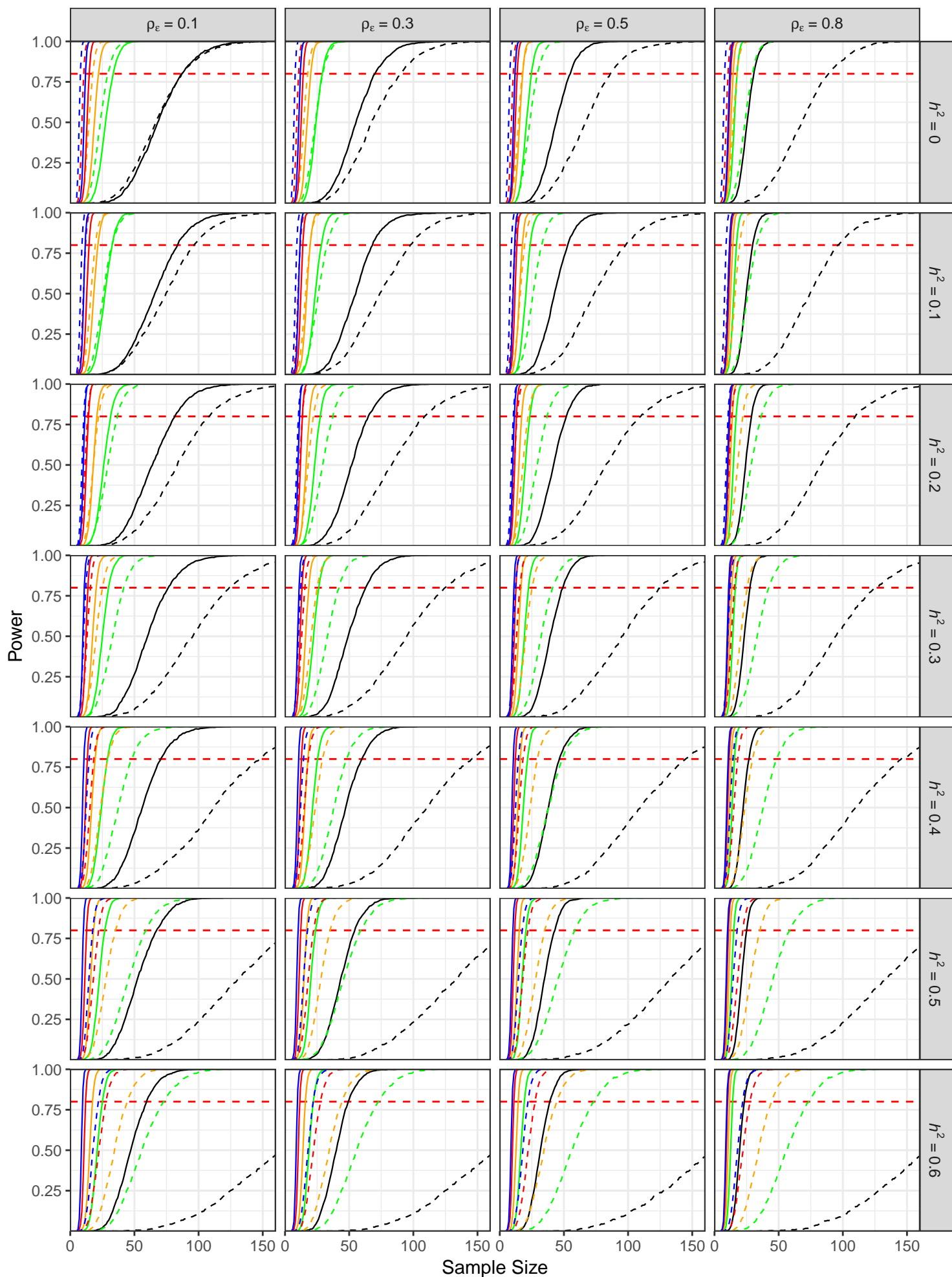
$P_K = 0.4$ ,  $E(M) = -3.78$ ,  $Var(M) = 0.06$



$P_K = 0.4$ ,  $E(M) = -3.78$ ,  $Var(M) = 1$

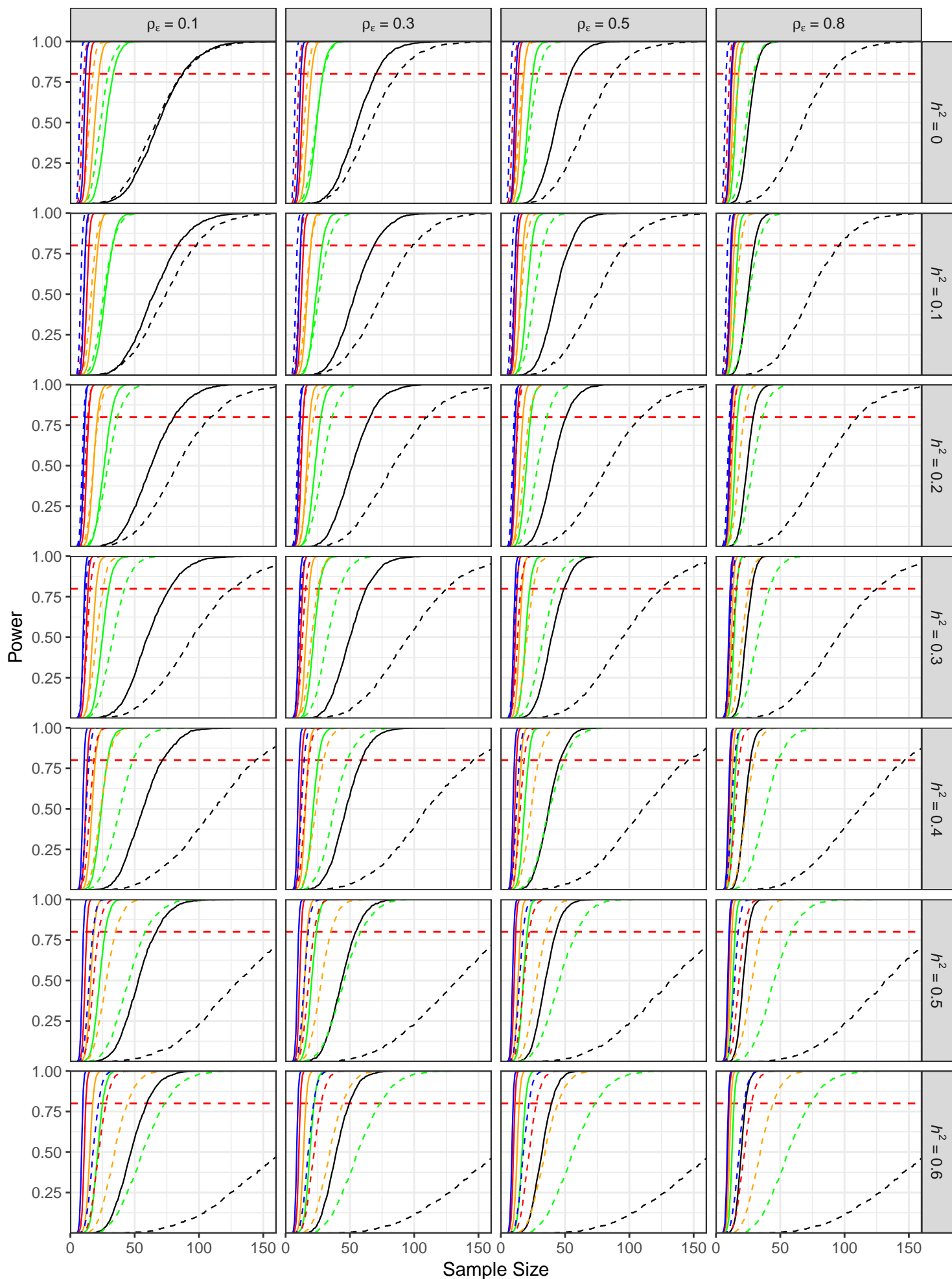


$P_K = 0.4$ ,  $E(M) = -3.78$ ,  $Var(M) = 2$

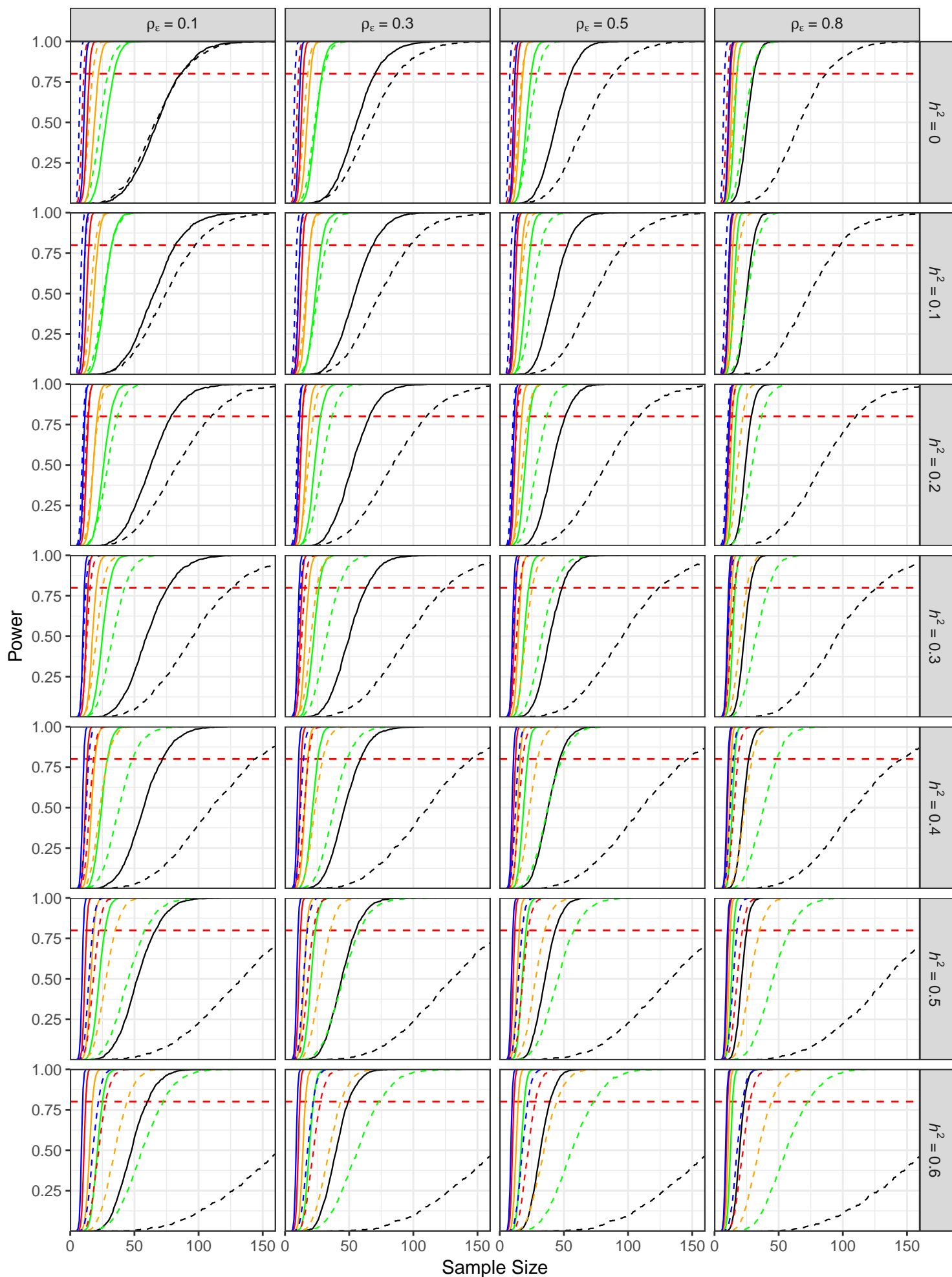




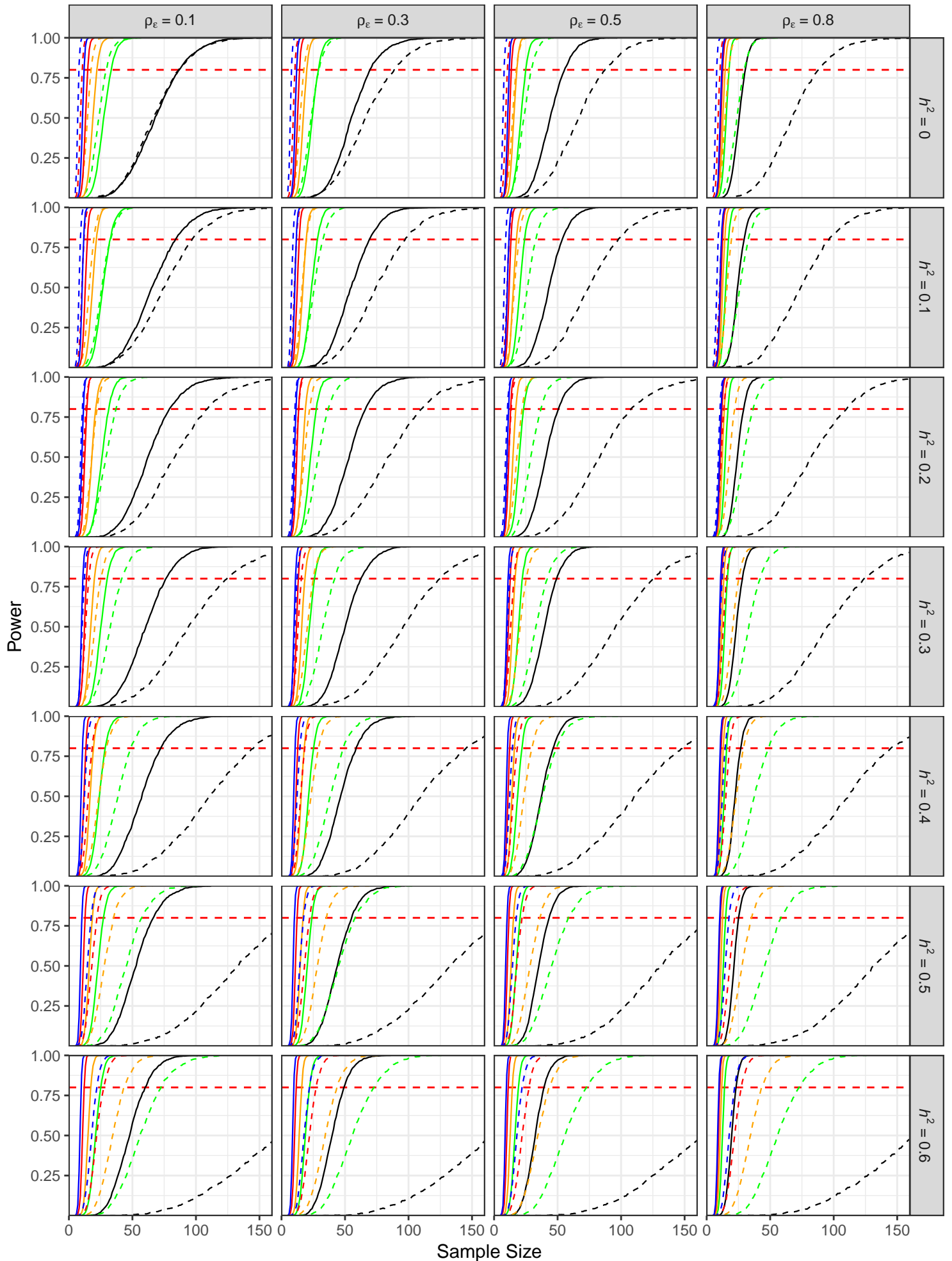
$P_K = 0.4$ ,  $E(M) = -3.78$ ,  $Var(M) = 3$



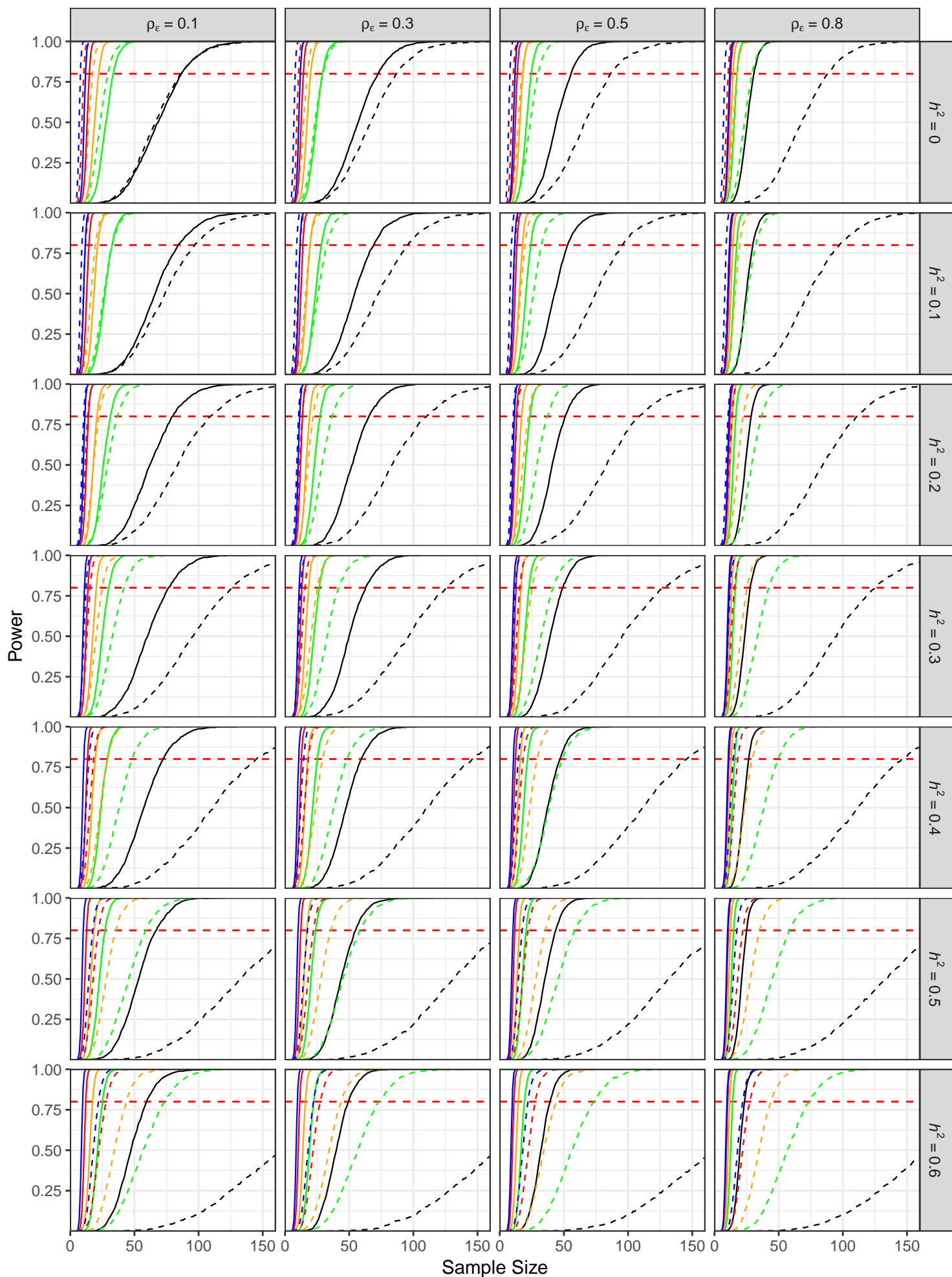
$P_K = 0.4$ ,  $E(M) = -3.78$ ,  $\text{Var}(M) = 4$



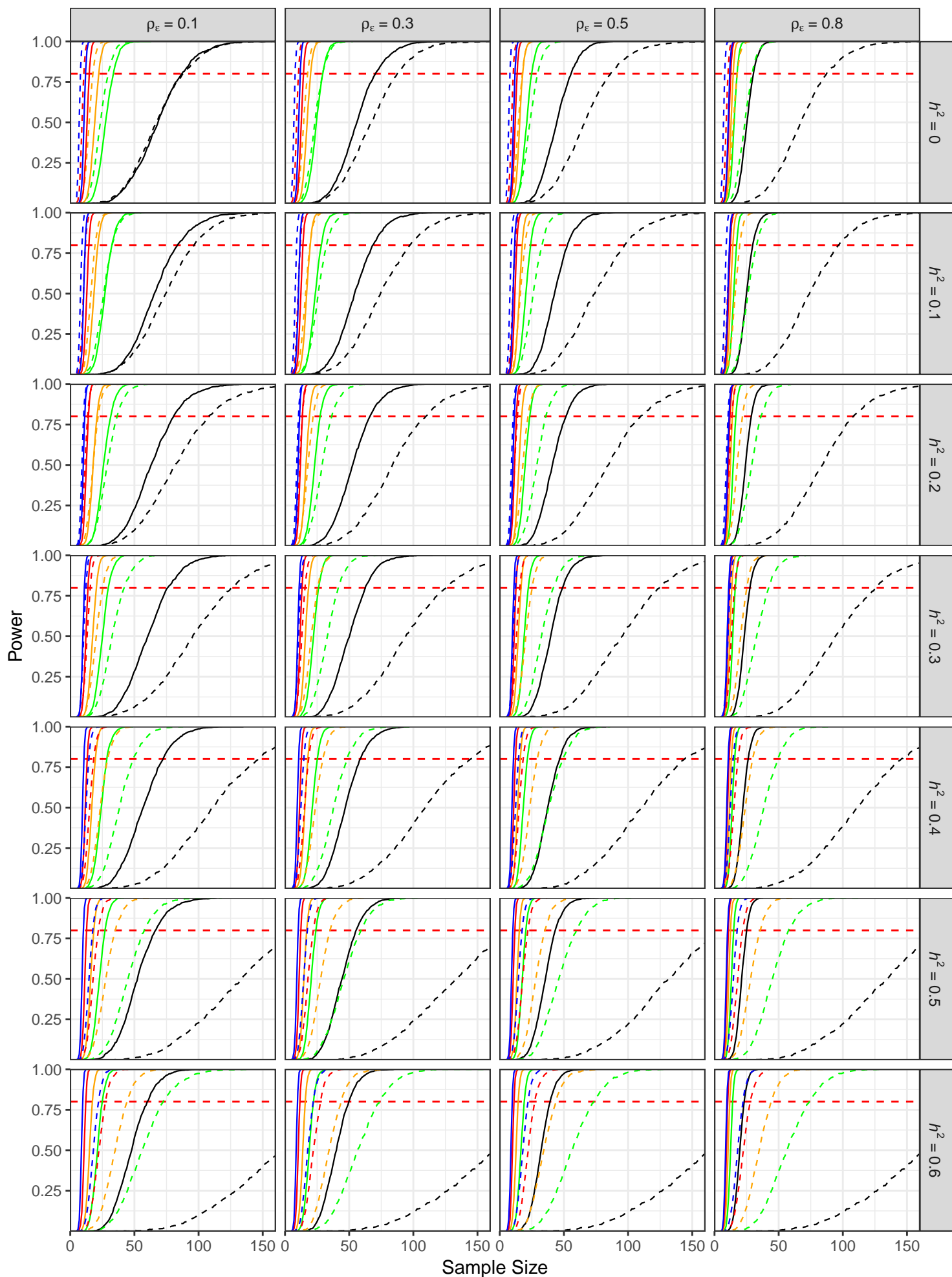
$P_K = 0.4$ ,  $E(M) = 3.36$ ,  $Var(M) = 0.06$



$P_K = 0.4$ ,  $E(M) = 3.36$ ,  $Var(M) = 1$



$P_K = 0.4$ ,  $E(M) = 3.36$ ,  $Var(M) = 2$

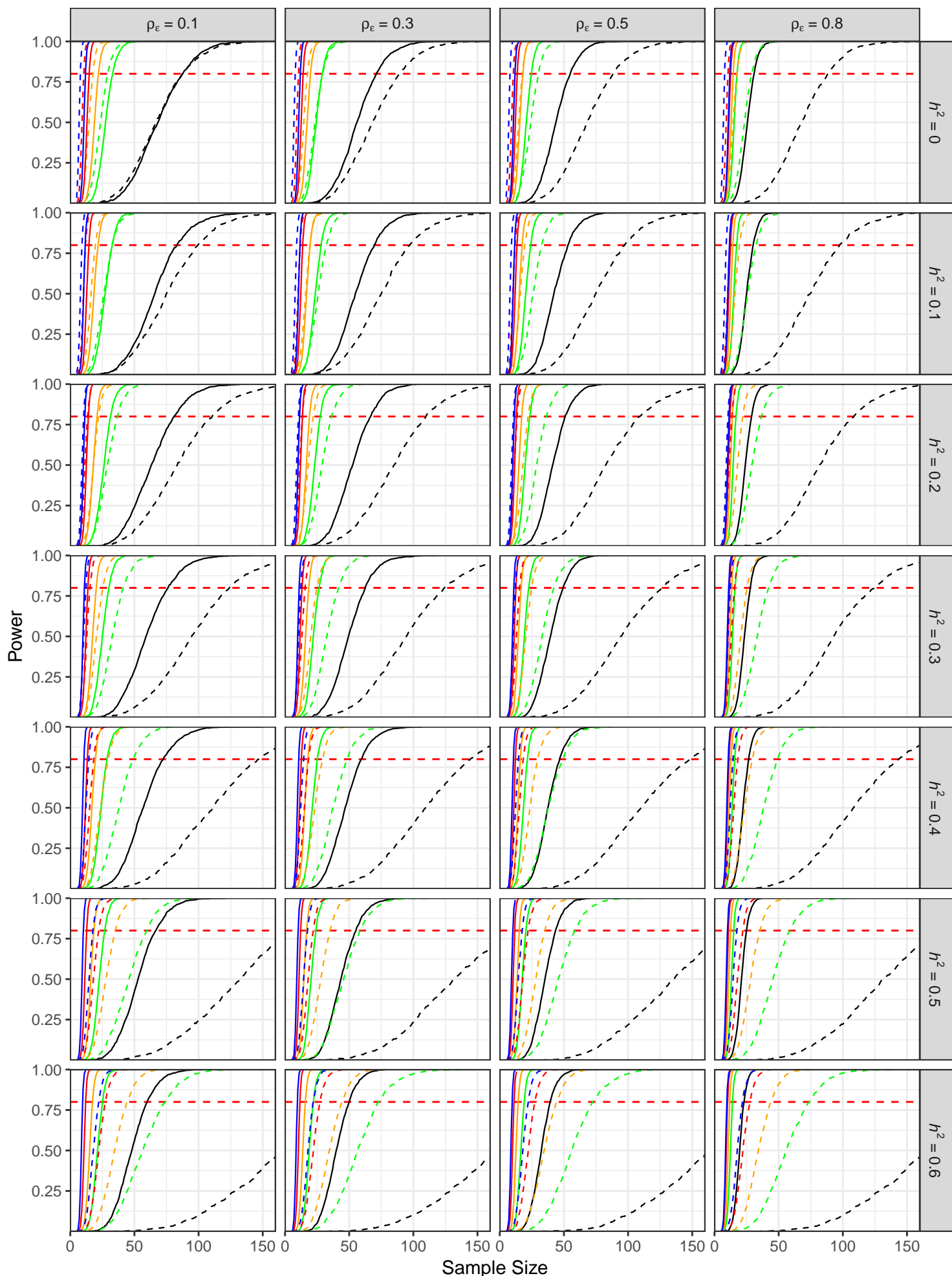


$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

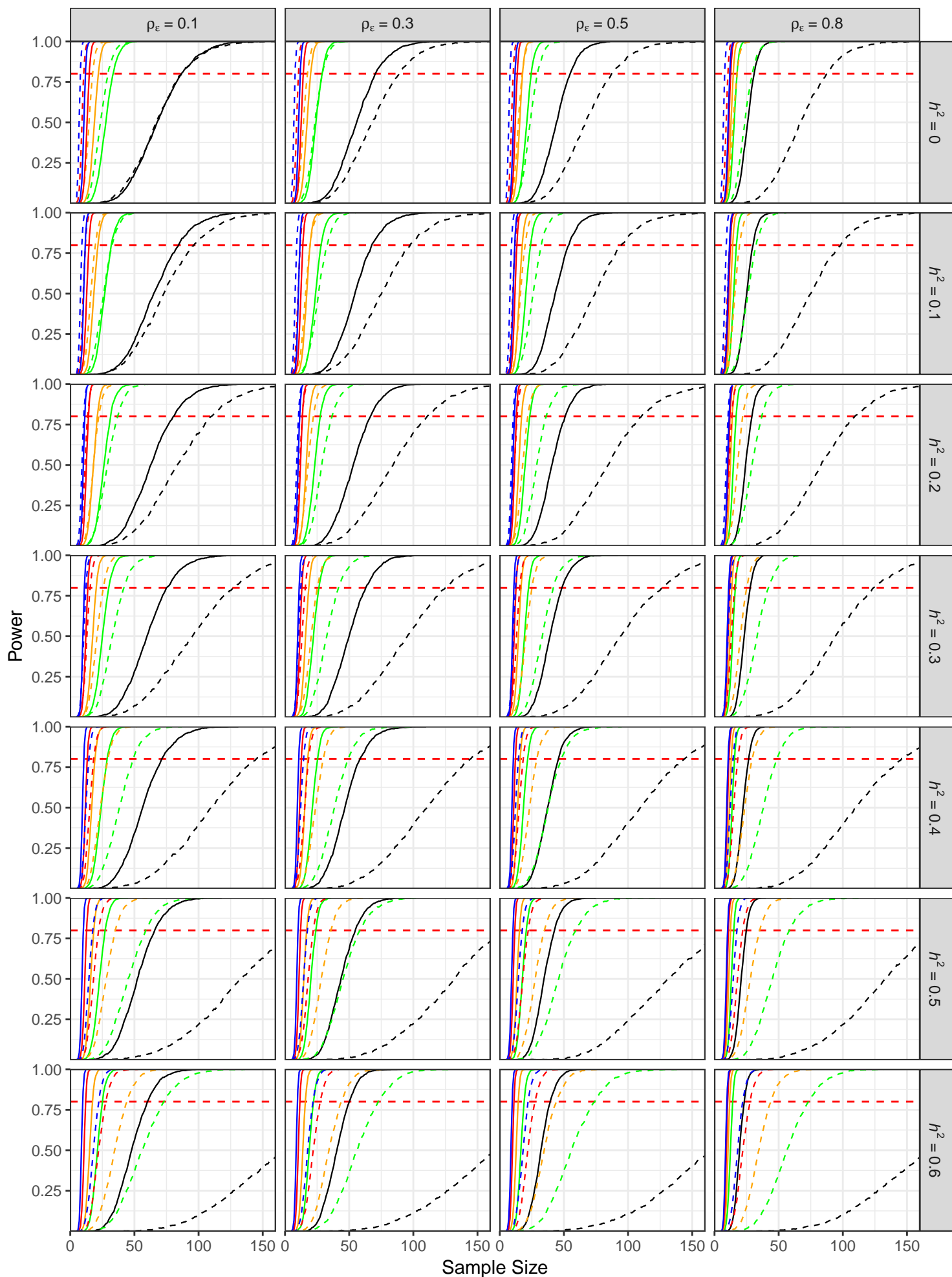
Design - - Ordinary Case-control — Discordant Twin



$P_K = 0.4$ ,  $E(M) = 3.36$ ,  $Var(M) = 3$



$P_K = 0.4$ ,  $E(M) = 3.36$ ,  $Var(M) = 4$



$R^2_{M,E}$  — 0.1 — 0.3 — 0.5 — 0.8 — 1

Design - - Ordinary Case-control — Discordant Twin