No:

(d) Distribution function of $Y_{(n)}$,

$$P(Y_{(n)} \leq y) = P(Y_1 \leq y) P(Y_2 \leq y) \cdots P(Y_n \leq y)$$
$$= \left(\frac{y}{N}\right)^n$$

$$P(Y_{(n)} \geq y) = 1 - \left(\frac{y}{N}\right)^n$$

$$E(\hat{N}_2) = \sum_{y=1}^{N} P(Y_{(n)} \geq y)$$
$$= \sum_{y=1}^{N} \left[1 - \left(\frac{y}{N}\right)^n\right]$$
$$= N - \frac{1}{N^n} \sum_{y=1}^{N} y^n$$

$$\sum_{y=1}^{N} y^n \approx \int_0^N x^n \, dx = \frac{x^{n+1}}{n+1}\Big|_0^N$$
$$= \frac{N^{n+1}}{n+1}$$

$$\sum_{y=1}^{N} y^n \approx \frac{N^{n+1}}{n+1}$$

$$E(\hat{N}_2) = N - \frac{1}{N^n} \sum_{y=1}^{N} y^n$$
$$\approx N - \frac{1}{N^n}\left(\frac{N^{n+1}}{n+1}\right)$$
$$\approx N - \frac{N}{n+1}$$
$$\approx \frac{nN + N - N}{n+1}$$
$$\approx \left(\frac{n}{n+1}\right) N$$

$$E\left(\frac{n+1}{n} \cdot \hat{N}_2\right) \approx N$$

Let $\hat{N}_3 = \frac{n+1}{n} \cdot \hat{N}_2 = \frac{n+1}{n} \cdot Y_{(n)}$

$$E(\hat{N}_3) = E\left(\frac{n+1}{n} \cdot \hat{N}_2\right) \approx N$$

$\therefore$ $\hat{N}_3$ is approximately unbiased for N.