Abstract: Power moments for the Riemann zeta function have enjoyed deep study over the past century. Dirichlet L-functions have natural analogues in the q-aspect, where $|L(1/2, \chi)|^{2k}$ is averaged over primitive characters $\chi$ modulo q. Power saving asymptotics are known unconditionally only up to the $k = 2$ case due to recent work by Young. This year, Nunes published work on a strong bound on the twelfth moment of Dirichlet L-functions to smooth squarefree moduli, an adaptation of the analogous result of Heath-Brown for the Riemann zeta function in the t-aspect. We will discuss how the framework of this proof can be applied to Dirichlet L-functions to prime power moduli and explore the rather different methods of evaluating and estimating exponential sums that arise in this setting. The content of this presentation is from recently submitted work with Djordje Milićević.