Let $\mathcal{F}$ be a family of translates (or positive homothets) of a given convex body $K$ in $\mathbb{R}^n$. The transversal number $\tau(\mathcal{F})$ of $\mathcal{F}$ is the cardinality of a smallest set that intersects all members of $\mathcal{F}$. The independence number (aka. matching number) $\nu(\mathcal{F})$ of $\mathcal{F}$ is the maximum cardinality of a subfamily of $\mathcal{F}$ consisting of pairwise disjoint sets. We investigate the relationship of these two quantities and show how they are related to the problem of illuminating the boundary of a convex body $K$. (Received August 12, 2008)