In quantile regression, equations are designed to estimate the relation of X (number of germlings/disc) with Y (survival), conditional on quantiles (or percentiles) of Y. In other words, this technique examines how the relation of X with Y changes depending on the score of Y.

QR results in two pieces of information at each estimated Quantile:

1) The intercept coefficient, which is an estimate of survival score at that quantile of survival score.

2) The slope coefficient, which represents the incremental change in Survival (Y) for a one-unit change Number of recruits (X) at that quantile of Survival.

Variability explained, as measured in terms of variances, is essentially a least-squares concept.

Firstly, we should use the concept adjusted R2 for quantile regression.

The pseudo-R2 measure suggested by [Koenker and Machado (1999)](http://ajbuckeconbikesail.net/Econ616/Quantile/JASA1999.pdf) in JASA measures goodness of fit by comparing the sum of weighted deviations for the model of interest with the same sum from a model in which only the intercept appears.

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R1(τ) should lie in [0,1], where 1 would correspond to a perfect fit since the numerator which consists of the weighted sum of deviations would be zero. It a *local* measure of fit for quantile regressions since it depends on τ, unlike the global R2 from OLS. That is arguably the source of the warnings about using it: if you model fits in the tail, there's not guarantee that it fits well anywhere else.

In theory these measures assume values from the interval [0,1], but they cannot be interpreted as coefficients of determination from classical linear regression. They are only a local measure of goodness of fit between the model and a particular quantile rather than the global measure of goodness of fit in the total conditional distribution. The higher the value of the measures is, the better the model was estimated.

However, explaining variance about the mean' is really not what we are doing with quantile regression, so you shouldn't expect to have a really equivalent measure.