

Reliability has to do with the quality of measurement. In its everyday sense, reliability is the "consistency" or "repeatability" of your measures. Before we can define reliability precisely we have to lay the groundwork. First, you have to learn about the foundation of reliability, the true score theory of measurement. Along with that, you need to understand the different types of measurement error because errors in measures play a key role in degrading reliability. With this foundation, you can consider the basic theory of reliability, including a precise definition of reliability. There you will find out that we cannot calculate reliability -- we can only estimate it. Because of this, there a variety of different types of reliability that each have multiple ways to estimate reliability for that type. In the end, it's important to integrate the idea of reliability with the other major criteria for the quality of measurement -- validity -- and develop an understanding of the relationships between reliability and validity in measurement.