

0.1 Other Types of Studies

lewis categorize method comparison studies into three different types. The key difference between the first two is whether or not a ‘gold standard’ method is used. In situations where one instrument or method is known to be ‘accurate and precise’, it is considered as the ‘gold standard’ **lewis**. A method that is not considered to be a gold standard is referred to as an ‘approximate method’. In calibration studies they are referred to as criterion methods and test methods respectively.

1. Calibration problems. The purpose is to establish a relationship between methods, one of which is an approximate method, the other a gold standard. The results of the approximate method can be mapped to a known probability distribution of the results of the gold standard **lewis**. (In such studies, the gold standard method and corresponding approximate method are generally referred to as criterion method and test method respectively.) **BA83** make clear that their methodology is not intended for calibration problems.

2. Comparison problems. When two approximate methods, that use the same units of measurement, are to be compared. This is the case which the Bland-Altman methodology is specifically intended for, and therefore it is the most relevant of the three.

3. Conversion problems. When two approximate methods, that use different units of measurement, are to be compared. This situation would arise when the measurement methods use ‘different proxies’, i.e. different mechanisms of measurement. **lewis** deals specifically with this issue. In the context of this study, it is the least relevant of the three.