

1 Abstract

2 **Differences in execution and perception of training**  
3 **sessions as experienced by (semi-)professional cyclists**  
4 **and their coach**

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15 **Abstract:** This study aimed to investigate whether (semi-)professional cyclists' execution of a  
16 training program differs from the coach's designed training program. Also, the study sought to  
17 ascertain, in instances where the training sessions were indeed executed as designed by the  
18 coach, whether the perception of the cyclists differed from the intention of the coach. This study  
19 highlights the differences between the coach and the individual cyclist. In total 747 training  
20 sessions were collected from 11 (semi-)professional cyclists. Rating of Perceived Exertion (RPE)  
21 and session Rating of Perceived Exertion (sRPE) were compared with intended RPE (iRPE) and  
22 intended sRPE (isRPE), planned by the coach. Pearson's correlation, regression coefficients and  
23 Typical Error of Estimate (TEE) were used to identify differences between the executed and  
24 planned training sessions. Moderate to large TEEs were noted between executed and intended  
25 sRPE, which indicates that cyclists do not always execute the training program planned by the  
26 coach. Furthermore, when the training was executed as planned by the coach, very large  
27 correlations but moderate to very large TEEs were noted between cyclists' (s)RPE and the  
28 coach's i(s)RPE, with unique individual regression coefficients. This indicates that the  
29 relationship between RPE and iRPE is unique to each cyclist. Both the different execution and  
30 perception of the training program by the individual cyclists could cause an impaired training  
31 adaptation. Therefore, the coach must pay attention to the perception of training sessions by the  
32 individual cyclist. Improved individual management of training load could result in the  
33 optimization of the proposed training program.

34 **Keywords:** sRPE, RPE, load management, high-performance, monitoring

