

**Title: Effect of Sport Education in University Required PE on Students'
Perceived Physical Literacy and Physical Activity Level**

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Statistical Analysis Plan

ActiLife 6 software (ActiGraph LLC), a designated software for transferring data from accelerometers to computers, was used to transfer physical activity data with a metabolic cut point of Freedson et al. (1998). IBM SPSS statistics version 22 for Windows (IBM SPSS) was used for all data analysis (Field 2009). One-way analyses of variance (ANOVAs) were used to assess differences between groups in the baseline measures of demographic information, each outcome measure, as well as the mean percentage of physical activity levels, lesson context, and teacher involvement during PE lessons. Pearson's correlation was used to compute the association between self-report and objective physical activity levels. To evaluate the effect of the different types of curriculum interventions on outcome measures, a series of repeated-measures multivariate analysis of variance (MANOVAs) were used with time (baseline, post-intervention, and follow-up) as the within-subjects factor and group (intervention group and control group) as the between-subjects factors. MANOVA analyses are the most appropriate analyses to discern differences between groups over time and to establish any potential group by time interaction effects (Tabachnick and Fidell 2014). Specifically, MANOVA is likely to prevent type I error when dependent outcomes may be correlated and thus potentially share some of the same variances. Post hoc Scheffe analyses were conducted to determine contributing factors to significant MANOVA F values. The significance level was set at 95% for all analyses.

References

Field, A. (2009). *Discovering statistics using SPSS*. London: SAGE Publications Ltd.

Freedson, P. S., Melanson, E., & Sirard, J. (1998). Calibration of the computer science and applications, inc. accelerometer. *Medicine and Science in Sports and Exercise*, 30(5), 777–781.

Tabachnick, B. G., & Fidell, L. S. (2014). *Using multivariate statistics*. Harlow: Pearson Education Limited.