

# The Use of a Treatment Package to Reduce Caffeine Intake and Increase Water Intake with a 21-Year-Old College Student

Betty Jo Wood and T.F. McLaughlin

The purpose of this research was to determine the effectiveness of physical prompts, self-monitoring, leaving money for soft drinks at home, and carrying water bottles to school, as well as daily assessment and self-charting to modify the caffeine intake of a 21 year old female college student. An ABAC single-subject design (Kazdin, 1982) was employed to evaluate the impact on caffeine intake, as well as to increase water consumption. Throughout the study the student monitored number of Cokes consumed, as well as number of 8 oz. glasses of water drunk.

During baseline the number of glasses of water consumed was highly variable (M= 1.25; range 0-2), while the number of Coca Colas drunk was high (M= 3.75; range 3-5). When self-recording, bringing two water bottles to school, charting, and daily assessment were employed (Treatment Package 1), the number of glasses of water consumed increased (M=3.6; range 2-5), and the number of cans of Coke drunk declined (M=1.6; range 1-2). A return to baseline produced a small decrease in the amount of water consumed (M= 3.3; range 3-4), as well as an increase in Coke consumption (M=2.6; range 2-3). Treatment Package 2 consisted of the reintroduction of self-monitoring, daily charting and assessment along with leaving change to use in the pop machine at home. During Treatment Package 1, water consumption increased (M=4.79; range 3-6) while Coke consumption decreased (M=1.32; range 1-3).

A Wilcoxon Signed Ranks Test (Siegel, 1956) between the two baselines and the intervention packages was significant for both the number of glasses of water ( $Z=3.032$ ;  $p=.0422$ ) and of Cokes consumed ( $Z= -2.014$ ;  $p= .016$ ).

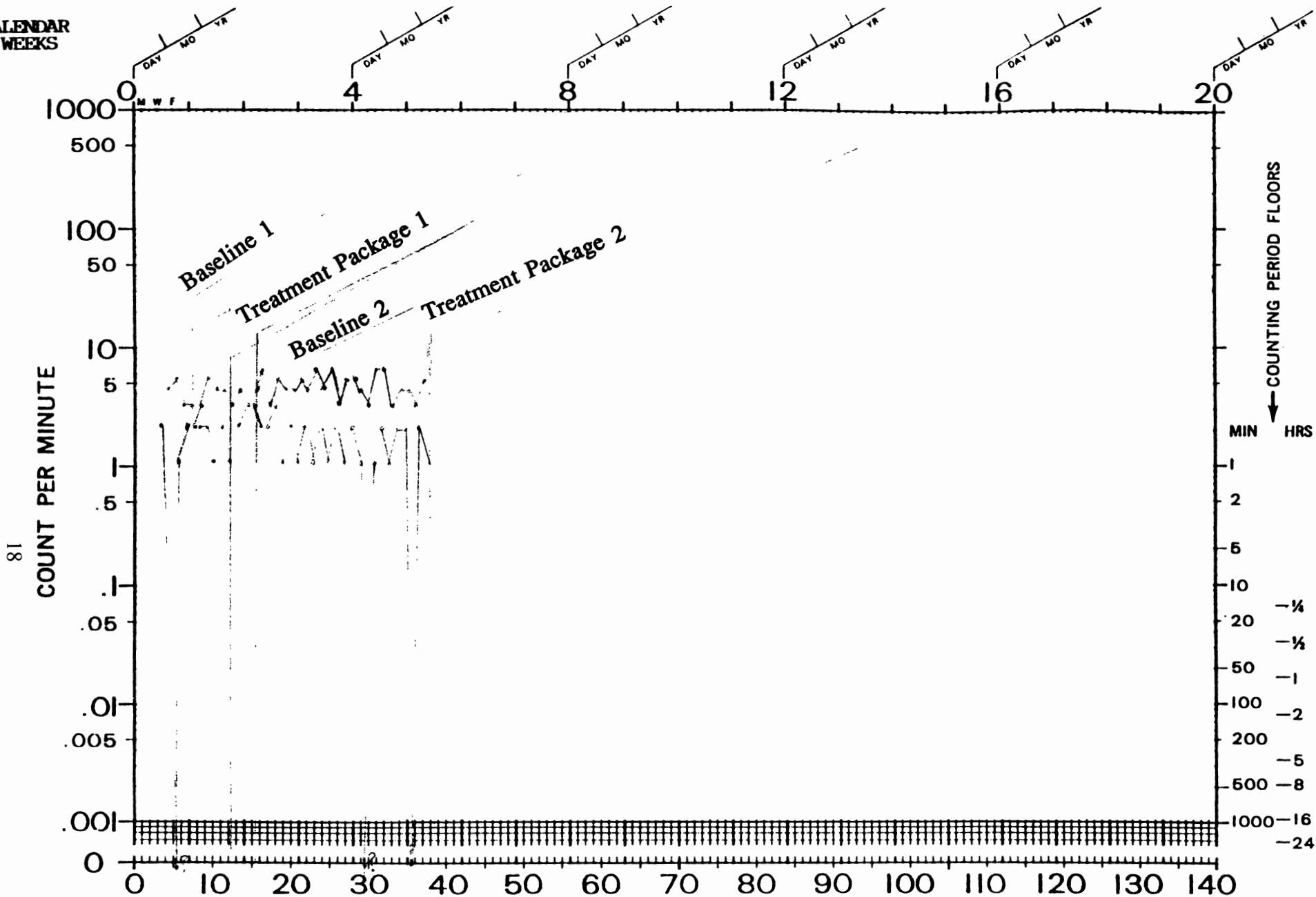
The study indicated that the use of a treatment package was effective in reducing the caffeine intake of a college student. In addition, the amount of water that the participant ingested increased. Other factors contributing to the differential improvements might have been variability in the participant's life. On test days, for example, she felt an increased need for caffeine.

As Fisher and Jensen (1990) have indicated, increasing one's intake of water is healthy and aids in many bodily functions ranging from digestion to circulation. The participant's goal was to drink six glasses of water and only one Coke a day. This goal was not reached for three consecutive data days, but the participant felt better physically. This should motivate her to continue the program. At this writing, the student continues to carry out the procedures.

## References

- Fisher, A.G., & Jensen, C.R. (1990). *Scientific basis for athletic conditioning*. Malvern, PA: Lea & Febiger.
- Kazdin, A.E. (1982). *Single case research designs: Methods for clinical and applied settings*. New York: Oxford.
- Siegel, S. (1956). *Non-parametric statistics for the behavioral sciences*. New York: McGraw-Hill.

CALENDAR WEEKS



81

McLaughlin  
SUPERVISOR

McLaughlin  
ADVISER

McLaughlin  
MANAGER

Gonzaga University  
AGENCY

WOOD  
TIMER

WOOD  
COUNTER

WOOD  
CHARTER

21  
AGE

None  
LABEL

Water vs.  
COUNTED  
Cokes drank