

## 28 UNDERGRADUATE RESEARCH CRITIQUE

### Research Critique on “Parents and Children’s Physical Activity Relationship”

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#### ABSTRACT

**Introduction:** The physical activity (PA) of parents' is often correlated with the PA of their children and is referred to as role modeling, however studies have shown inconsistent results. With the child obesity rate in America at a record high of 19%, finding out whether PA role modeling can increase PA in children or if other variables moderate this relationship is critical.

**Purpose:** The purpose of this study was to examine the parent-child PA relationship and potential moderators through tracking the amounts of steps taken per day between the parents' and their children.

**Methods:** A total of 612 7-8-year-olds along with one of their parents volunteered to wear a Steps Count (SC)-T2 pedometer for four consecutive days, consisting of three weekdays and one day on the weekend. Nightly, the participants were required to document their steps within a logbook and reset their pedometer. Self-reported questionnaires were completed by the parent and assessed their PA during the last 7 days along with their child's usual PA. Additional variables such as socioeconomic status (SES), weight status (parent and child), weight status homogeneity, gender (parent and child), and gender homogeneity were evaluated to see whether they impacted the relationship between the PA of the parent and their child. All analyses were done through linear regressions on SPSS.

**Results:** Overall, once all the data was collected and measured there was significant evidence to suggest a correlation between the PA participation of parents and their children. The results of the pedometer testing showed that for every 1000 steps increased by the parents then the children would take an extra 260 steps. The results were collected as the bivariate, unadjusted Pearson's correlation which showed parents and children's steps to be  $r = .25$ ,  $p < .001$  (partial  $r = .24$ ). For the questionnaire portion of the study the PA relationship of parents and children was slightly smaller at (partial  $r = .14$ ).

Boys ( $M=9,075$ ,  $SD=4,832$ ) took more steps than girls ( $M=8,095$ ,  $SD=4,507$ ), while there was no significant difference between mothers ( $M=7,773$ ,  $SD=3,136$ ) and fathers ( $M=7,568$ ,  $SD=7,737$ ) in steps per day.

**Conclusion:** Rising rates of child obesity in America have continuously grown over the past decades and will continue to grow unless changes are made. The data clearly shows significant correlations between the amount of PA between parents and children and why it is important to not only have children be active on their own but also set the example as parents and be active alongside them. The data shows the increase of PA in children when they have parents modeling the desired behavior, in this instance with the pedometer step count per day. Setting this type of example for children at a young age can help lead them down a healthier lifestyle filled with less health issues as they continue to grow.

**Critique:** Although the findings of this study showed a highly significant relationship between the PA of the parents' and their children while evaluating additional potential moderators, this study does not prove a causal relationship. By objectively measuring the PA with pedometers, it reduces biases. Contradictory, using pedometers to measure PA can lead to inaccurate results even though the SC-T2 pedometers, used within this study, are shown to be reliable and accurate. For instance, this study relied solely on the logbooks and unknowingly the participants could track inaccurate steps taken throughout the day and the pedometers do not track missing wear time. The use of pedometers can also increase the participants' activity levels since they know they are being monitored and with this study consisting of only four days, there is uncertainty of whether the PA reported is from an initial increase. Lastly, most of the parents within the study had a greater education and were from high-income families. Previous studies have shown that parents with a greater education along with being high-income earners tend to be more physically active due to more resources available. Therefore, a longitudinal objective study would need to be done on a diverse population to develop a causal relationship.

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