Gender Differences in Physical Activity Levels among Elementary and University Students

Zeinab Mohamed (BSc Candidate, Kinesiology and Health Science) HH/KINE 3340: Growth, Maturation and Physical Activity

ABSTRACT

My research examined the differences in physical activity (PA) levels between male and female subjects in an elementary school setting (Grade 5) and a University setting. I hypothesized that males would exhibit higher levels of physically activity compared with females, in both the Elementary and University setting. The PA level was assessed using an Accelerometer (ACC), a digital device which measures the rate of movement of each subject. The University subjects were fitted with the ACC for the duration of one day (9:00-17:00) and the data was collected and analyzed using an Accelerometer Analysis Software. For the elementary school subjects, their physical activity data was collected over the span of two years through a cross-sectional method in a partnership program called KIN KIDS. The University subjects documented their activities throughout the day which included any social, educational and physical events. The results showed that males, both at the elementary and university level, showed higher levels of physical activity compared with females. This finding was consistent with current literature regarding physical activity. Several theories have been proposed to explain this discrepancy, with one main reason being that boys are more likely to participate in vigorous physical activities such as playing basketball, while girls prefer to engage in non-physical activities such as socializing in small groups.

METHOD

The children's data was narrowed down to Grade 5 students; a total of five subjects. The students were separated by gender; two males and three females. For the university students, the data was narrowed down to four students; two males and two females. Excel software was used to determine both the university and children's MET and Kcal's. The mean PA output data for both males and females were calculated. The steps were repeated to determine the Mv-PA % levels from their Accelerometer output (ACC) results. The total and mean energy expenditure (Kcal) output, as well as their total and mean physical activity output during the literacy session for the Grade 5's were calculated. The same steps were repeated for the university students during their educational activity session.

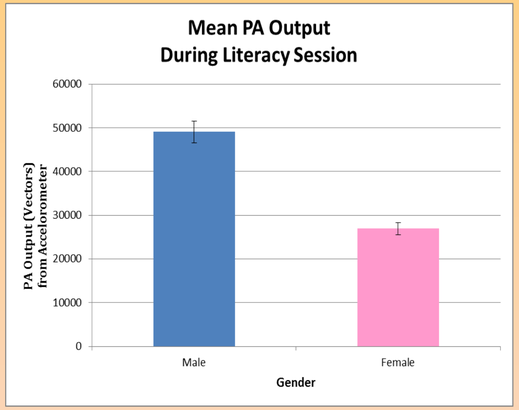

Figure 1. Elementary children's data shows that Physical Activity (PA) output is higher for Male subjects compared to Female subjects.

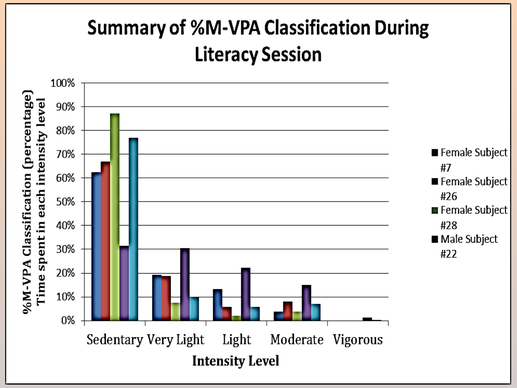

Figure 2. %M-VPA Classification of intensity levels for Male and Female Grade 5 students showing that the majority of the literacy session was spent at the sedentary level. As the intensity level increased, male students showed a higher percentage of participation in moderate to vigorous activity compared to Female students.

INTRODUCTION

- My research compared the physical activity level (PA) of boys and girls in Grade 5 during a one hour literacy class..
- Current literature suggests that in general, boys have higher PA levels than girls [1].
- University student information was collected from Undergraduate students enrolled in the KINE 3340A course.
- Current literature on PA show that more than one- half of University students in Canada do not meet the current physical health and activity guidelines [2].
- Women, especially those of colour, are considered to be the least physically active students [2].

RESULTS

The findings for the elementary school students showed males exhibiting higher levels of PA relative to females. As well, they produced a higher PA output (Figure 1). According to the Mv-Pa % level classification (Figure 2), female subjects spent more time engaging in activities at the sedentary level compared to boys, and no female subject showed activity at the vigorous intensity level. This was in contrast to boys, who showed small levels of activity at the vigorous intensity level.

Similar findings were imminent with the University students. Male subjects showed higher PA levels compared with females subjects.

CONCLUSION

•**Socialization:** One possibility is that boys are socialized to be more active than girls.

•**Self-efficacy:** Boys tend to believe that they are strong and capable of doing anything, which translated into higher levels of PA participation

For University students, body image and differences in activities /hobbies accounted for the differences in PA levels between genders.

REFERENCES

[1] Brusseau, T. A. (2015). The Intricacies of Children's Physical Activity. *Journal of Human Kinetics, 47, 269–275. http://doi.org/10.1515/hukin-2015-0082*

[2] Jennifer D. Irwin (2004). Prevalence of University Students' Sufficient Physical: A Systemic Review. Perceptual and Motor Skills: 98 (3), 927-943. doi: 10.2466/pms.98.3.927-943