

## The effects of physical activity facilities on vigorous physical activity in gated and non-gated neighborhoods

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### ABSTRACT

Physical activity is important for health and it is believed that the availability of physical activity facilities (PAF) within the neighborhood encourages physical activity, especially vigorous physical activity (VPA). The main purpose of providing PAF, particularly in gated neighborhoods, is to encourage physical activity. However, there are few studies that investigate the differences of PAF in gated and non-gated neighborhoods and the effect of providing PAF on VPA in developing countries. Therefore, the objectives of this study are to compare PAF and VPA in gated and non-gated neighborhoods and to investigate the association between PAF and VPA in developing countries with special reference to Karachi, Pakistan. A subjective method (IPAQ-Short) was used to calculate VPA in a week ( $n = 1042$  adults), while PAF was measured through aerial maps and ground observations within  $1 \text{ km}^2$  areas of gated and non-gated neighborhoods. An independent sample  $t$ -test was used to compare PAF and VPA in gated and non-gated neighborhoods, whereas Gama tests were used to investigate the association of PAF with VPA. Results show that PAF and VPA are significantly higher in gated neighborhoods than non-gated neighborhoods. The results also show that 42.3% of people get  $>600$  MET-minutes in a week if the number of PAF is  $>6$  in a  $1 \text{ km}^2$  neighborhood area. It can be concluded that future neighborhoods should have an appropriate number of PAF for making residents as physically active as possible.

### KEYWORDS:

Physical activity facilities; Exercise facilities; Vigorous physical activity; Gated neighborhoods