Walking Behavior in the Tel Aviv Metropolitan Area: Empirical Findings and Planning Implications of Walking Duration

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ABSTRACT

Studies show that promoting walking as a mode of transport can significantly contribute to the urban environment as well as to its residents and users. Planning walkable environments requires knowledge about factors influencing walking. Although many factors that affect walking behavior have been identified, studies indicate that the primary considerations underpinning pedestrian movement are the duration and length between trip origin and the destination. One of the key questions in this respect is what is the walking duration that may be considered as accessible for pedestrians in Israel? Although many walkable environment projects are being promoted today, there seems to be a lack of an empirical base to rely on. The current study aims to bridge this gap and establish reliable empirical knowledge about the walking duration in the Israeli context. The study is based on an extensive travel survey that documented about 70,000 pedestrian routes in the Tel Aviv metropolitan area. We found differences in walking duration frequency distribution between age groups and destination types. However, no differences were found between gender distinctions. The shape of walking duration frequency distribution, corresponding to the beta (β) distribution, reveals important trends related to pedestrian sensitivity to walking duration that should be considered for pedestrian planning guidelines.

Keywords: walking duration, walking time distribution, walking behavior, pedestrian movement, beta distribution, decay curve.

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