ABSTRACT

Bicycling is considered as one of the most efficient mode of sustainable transportation for shorter commutes. European countries such as the Netherlands, Denmark, and Germany are the global leaders in this context with higher modal share of bicycling for commute. They achieved it by providing safe and efficient bicycling infrastructure over the years. On the contrary, in India, modal share of bicycling is declining year by year. Although it is expected to be attractive option for short commute trips in India due to its extremely low cost of operation, studies have shown that it is not an attractive mode among commuter belonging to high and middle income group. Bicycle users in India are predominantly captive users such as lower income group people and students. In order to promote bicycling, development/improvement of bicycle friendly infrastructure is highly essential. For a developing country like India, which depends heavily on imported fossil fuels for transportation, promoting bicycling for shorter commutes will have long term influence on its economy as well. This study aims to find the potential impacts of some of the bicycle friendly infrastructures and policies on urban Indian bicycling from the user perspective. A questionnaire survey was conducted in four major Indian cities to collect data for this study. Using the collected data, an ordinal logistic regression model was developed to to rank some bicycle friendly infrastructures and policies based on public opinion. Dedicated bicycle lane was found to be the most preferred bicycle friendly infrastructures based on the public opinion and whereas facility to carry bicycle on public transportation was found to be the least preferred one. A bicycle ridership model is also developed in this study using the data collected. Income, gender, travel distance and safety and feasibility of bicycling were found to be most important determinants of bicycling. The findings from this study could be used by various policy makers and stakeholders to improve bicycling in their region.