Urban health and Physical Activity: how urban design can improve cycling

Maddalena Buffoli

M Buffoli[1], S Capolongo[1], L Boati[2], A Rebecchi[1]
[1]Architecture, Built Environment and Construction Engineering, Politecnico di Milano, Milan, Italy
[2]Politecnico di Milano, Milan, Italy
Contact: maddalena.buffoli@polimi.it

Introduction:
It is well-known that physical inactivity is among the main risk factors that increases chronic degenerative diseases. The emergency is relevant in urban contexts, where, most transfers have a distance of less than 5 km, easily done by foot or bicycle. They would ensure an adequate daily physical activity. An increase of cycling would also lead to several other positive effects on the urban environment (air quality, less traffic, noise, etc.). Therefore, it is necessary to investigate which characteristics of the cycling and walking infrastructures encourage or not adequate lifestyles.

Methods:
Starting from an analysis of the State of the Art related to the correlation among active transport, physical activity and health, a questionnaire was handed out to collect data on the current level of urban cycling and to quantify the expected increase in case of the improvement of the bicycle path network. The questionnaire was circulated through on-line and paper forms (1675 users), for a period of 3 months in the city of Milan. The aim was to quantify the increase in physical activity related to a provisional improvement of the infrastructures.

Results:
The data collected subdivided into 9 districts show that the choice to use the bicycle, as an active means of transport, would significantly increase both in frequency and in duration: for example in the expected scenario 76.5% of the sample (over 21% more than the current one) would reach 150 minutes of physical activity per week, as WHO suggests. The main reasons for daily use or non-use of the bicycle were also identified.

Conclusions:
The survey conducted highlighted the direct correlation between urban planning and active mobility. Actions related to mobility redesign, especially small-scale ones, could play a key-role in reducing physical inactivity with positive effects on health. The methodology could be replicated in other realities in order to highlight the specific strategies to be adopted.

Key messages:
- Questionnaires for improving cycling in urban contexts.
- Data analysis on citizens' lifestyles for encouraging active mobility.