An Inside Look at Active Transportation in Bogotá: A Qualitative Study

Janeth Mosquera, Diana C. Parra, Luis Fernando Gomez, Olga Sarmiento, Tom Schmid, and Enrique Jacoby

Background: The health benefits of physical activity are well documented in scientific literature. Bicycling for transportation is a modality of physical activity that people can incorporate easily into their daily lives.

Methods: A qualitative study using 11 semi-structured individual interviews and 5 focus groups was conducted among 31 male and 13 female adult residents of Bogotá, Colombia in 2006, to explore barriers and facilitators of bicycle use for transportation purposes. People were selected based on socioeconomic status, age, and gender. Thematic analysis complemented with thematic network analysis was used to analyze the data.

Results: Six main themes emerged from the study: 1) general acknowledgment of individual and collective benefits of bicycle use, 2) built environment conditions were linked with bicycle use, 3) some social factors affect bicycling negatively, 4) people perceived conflicts over public space related to the use of bike-paths, 5) general negative public perception of bicyclists, and 6) gender differences influence patterns of bicycle use.

Conclusion: The findings from this qualitative study show that various social and physical barriers must be addressed to increase bicycle use as a means of transportation in Bogotá.

Keywords: active commuting, bicycling, physical activity, Ciclorutas, Colombia

The health benefits of moderate and vigorous physical activity (PA) are extensively documented in scientific literature.1 PA has been associated with a lower risk of cardiovascular diseases,2,3 obesity,4,5 diabetes,6,7 and the reduction of mental health problems.8 In spite of this growing body of knowledge, physical inactivity is a serious health risk factor, especially in large urban settings.9 In most cases, the infrastructure of urban cities is not designed to stimulate and support alternative means of active transport such as walking or bicycling.10

There has been a growing interest in the health and environmental benefits of bicycle use as a means of transportation.11 Bicycling is a modality of PA that people can easily incorporate into their daily lives and that can contribute to reduce greenhouse gas emissions, car noise, and traffic congestion.12 In addition, bicycling is a nonmotorized mode of travel with low access costs compared with cars and is efficient in covering moderate distances within and between both urban and suburban areas.13

Despite the practicality and health benefits of bicycling, its prevalence is declining worldwide as “modernization” gives priority to motorized means of transportation, especially to the use of private cars. However, these trends are not universal. For instance, in Canada many efforts have been made to increase bicycle use, and it is reported that 1.2% of all trips to work are made by bicycle, representing an increase of 10% in comparison with previous years.14 In the Netherlands, 28% of urban trips are made by bicycle.15 The situation is different in the United States (U.S.), where only 0.3% of all trips are made by bicycle. This discrepancy can be explained in part by different land-use and transportation policies, which encourage the use of private automobiles.16

In recent years there has been an increasing interest in the potential influence of policy and environmental interventions on active transportation.17–19 Specifically, the construction of bike-paths, the accessibility to parking and shower facilities at the work place, the improvement of safety conditions for bicycle users, and the use of economic incentives, may all play an important role in increasing bicycle use as an active means of transportation.20,21 One study confirms that both perceived and objective environmental conditions can act either as barriers or facilitators of bicycle use.22

Many cities in Latin America encourage bicycle use through the Ciclovias-recreativas programs, which temporarily closes streets to motorized transportation and allow access only to pedestrians and cyclists.23,24
Particularly, the city of Bogotá has developed initiatives to promote bicycling as a strategy to improve urban mobility and reduce traffic congestion.25

Bicycle Use as a Means of Transportation in Bogotá

Bogotá, the capital of Colombia, has more than 7 million inhabitants, of which 28% live in poverty, and only about 20% of households own a car.26 As a result of the decentralization process of the country that began in the mid-Eighties, Colombian municipalities have greater political and fiscal autonomy. Moreover, municipalities have been granted new authority, including control over urban planning regulations. These reforms and other social factors have enabled Bogotá to undertake important social and physical urban changes that have started to be implemented since 1990.27

Changes intended to promote urban mobility include the development of a mass transit system using buses that operate in exclusive lanes (TransMilenio), a network of bike-paths throughout the city (Ciclorutas), and strategies to restrict public and private car use such as “Car free day” and other car use restriction policies. Complementing TransMilenio, the city has begun an extensive project involving the creation of a network of approximately 316 km of Ciclorutas (Figure 1). This project encourages bicycle use as a means of transportation with the goals of reducing air pollution, traffic congestion, and automobile dependence. The city’s goal is to have 400,000 bicycles in use per day. The majority of bike-paths are separated

Figure 1 — Bogotá Ciclorutas Map, 2006.
from motorized transit (Figure 2) and about 25% are located in shared sections of the road. Although in its original design, the TransMilenio system was to be linked with the Ciclorutas network, only a few stations provide bike-racks and only 5 have free parking lots.

In 1999, the city government created the Ciclorutas Master Plan with the goal of encouraging daily bicycle use. This Master Plan has 3 components: infrastructure, social support, and legislative and institutional support. The Plan also aims to link the system with other means of transportation like walking, bicycling, and public transportation. It also intends to build more public infrastructure such as parking facilities, implement efficient street signals, and increase intermunicipal connections.28

Bicycle use in Bogotá appears to be increasing modestly. In 1995, only 0.6% of people used the bicycle regularly; this percentage increased to 2% in 1999 and peaked at 4.4% in 2003.29 Moreover, an earlier study found that only 3.3% of adults in Bogotá were sufficiently active to meet health guidelines (ie, biking at least 30 minutes per day for 5 days or more per week) when using the bicycle, and 15.6% reported using the bicycle for at least 10 minutes during the week.30 The present qualitative study reveals that despite the significant investment in infrastructure for the development of the Ciclorutas and the efforts in enacting bicycle-friendly policies, there are still many perceived barriers for the use of the bicycle in Bogotá. In addition, this study showed that bicycle use

Figure 2 — Designated bike-paths in Bogotá, Colombia, 2006.
was more common among young adult males from low or middle socioeconomic strata who resided in neighborhoods with low slope of the terrain and with low rates of vehicular-pedestrian accidents.

Moreover, Bogotá is experiencing a rapid increase in the number of motorcycles and private cars traveling the streets. During 2004 to 2007, at least 74,108 new motorcycles were registered in the city; in 1995, the city had 82.6 cars per 1000 inhabitants, a rate that increased to 84.7 in 2005. Current trends of increasing number of motorcycles and motor vehicles may produce a negative influence on the likelihood of bicycle use.

Despite growing interest in bicycle use in Bogotá, little qualitative information exists about the barriers and facilitators related to its use. Accordingly, the aim of this study was to document perceived barriers and facilitators of bicycle use as a means of transportation among citizens of Bogotá. In a city that is trying to prioritize alternative and active means of transportation, this qualitative approach may provide a number of valuable insights for policymakers and stakeholders regarding barriers and facilitators of bicycle use in Bogotá.

Methods

This qualitative study was part of a broader study conducted in Bogotá to explore associations between the built environment and physical activity and quality of life. The study in mention used a cross-sectional multistage stratified sampling design and included 30 neighborhoods and 1334 adults 18 to 65 years of age. The present qualitative study is guided by several ecological approaches to behavioral science and public health which focus on the interaction between individuals and their physical and sociocultural context. Sallis et al emphasized the inclusion of an additional layer that includes the physical environment and that is relevant for the promotion of active living. The study was reviewed and approved the IRB of Universidad de los Andes in Bogotá.

Sample

Participants included both male (13) and female (31) adults (20–64 years) from Bogotá (Table 1). Five participants in the focus groups and individual interviews were selected from the larger quantitative study based on regular bicycle use as a means of transportation. The remaining participants were gathered through a snowball sampling technique which is a nonprobability purposeful sampling.

Data Sources and Procedures

Eleven semi-structured individual interviews and 5 focus groups were conducted during May–December 2006, in 6 out of the 30 neighborhoods selected for the broader quantitative study. Four of the five focus groups were a mix of men and women (42% and 58%, respectively) and 1 group was comprised only by women. Within each group participants were from the same socioeconomic status to maintain intrahomogeneity. Each focus group and individual interview session lasted an average of 2 hours and took place at different community sites in the selected neighborhoods of Bogotá.

Saturation of information was the criteria used to conclude the collection of information; that is, collection of information was finished when ideas and opinions began to be repeated or when no additional or new information emerged about the topic under inquiry.

A flexible interview guide was used to foster discussion; the guide allowed questions to be tailored according to participants’ responses and ensured that critical topics were covered during each interview. Among the topics addressed were perceptions of bicycle use as well as reasons, barriers, and facilitators of bicycle use (Table 2).

Table 1  Characteristics of Participants in Focus Groups and Interviews Related to Bicycle Use in Bogotá, Colombia, 2006

| • Men who reported bicycling to work or school daily |
| • Women and men who live in neighborhoods with Ciclorutas but who did not report using the bicycle regularly |
| • Women and men who live in neighborhoods with Ciclorutas and who reported using the bicycle regularly |
| • Women who live in neighborhoods with Ciclorutas but who did not report using the bicycle |

Table 2  Topics Used to Promote Discussion in Focus Groups and Interviews About Bicycle Use in Bogotá, Colombia, 2006

| • Means of transportation for daily use |
| • General reasons for biking |
| • Reasons for biking to school or work |
| • Perceptions about people who ride bicycles |
| • Reasons for not using the bicycle |
| • Advantages and disadvantages of bicycle use in Bogotá |
During the interviews field notes were taken and reviewed afterward.

Data Analysis

All interviews were tape recorded after obtaining oral informed consent. Verbatim transcriptions of the recordings were made. Thematic analysis complemented with thematic network was used to analyze the information. Thematic network is a practical step-by-step strategy to organize information from thematic analysis and it is also useful to portray information in web-figures. Following this technique, each transcript was read and reread to codify the material into preliminary categories which were created based on the main interest of this research (barriers and facilitators of bicycling in Bogotá) and relevant and recurrent segments of text were compiled within these categories. Then, main themes in each text were identified, and those emergent themes were used to create 2 main thematic networks based on 2 global themes: the social aspects associated with bicycling and the physical infrastructure to support bicycling. Finally, thematic networks were described and analyzed considering similarities in the experiences and perceptions among participants in focus group and individual interviews about bicycling as a means of transportation in Bogotá.

Findings

Occupations of participants included teachers, housewives, bank workers, retired workers, and informal workers (self-employed and street vendors). The main reasons for bicycle use included travel to work, to shopping malls, to grocery stores or supermarkets, and occasionally for recreation purposes. Those who reported cycling to work on a daily basis also reported minimal bicycle use for recreational purposes during the weekends. Six major themes emerged regarding bicycle use as a means of transportation in Bogotá:

1. Recognition of individual and collective benefits of bicycle use
2. Built environmental conditions associated with bicycle use
3. Social factors that affect bicycling negatively
4. Invasion of designated bike-paths by pedestrians, cars, and motorcyclists
5. Preconceptions attached to bicycle users

Recognition of Individual and Collective Benefits of Bicycle Use

Five subthemes have emerged in this study that serve to illustrate the benefits of bicycle use.

Bicycle Use Improves Health. Participants reported that bicycling, like any other exercise has health benefits, especially for cardiovascular and mental health. For example, a participant expressed that bicycle use “increases pulmonary capacity and makes the heart stronger.” Another participant stated that “bicycling is an opportunity to escape the daily stress” and that “cyclists’ experience a feeling of freedom when riding a bicycle.”

Bicycle Use Improves Physical Appearance. Women tended to recognize the aesthetic benefits of bicycling more than men. A common response among females was that bicycle use “strengthens the muscles and helps to lose weight.” In this study, the perception of individual benefits in cycling is mediated by gender, in this sense, most women associated use of bicycles with improving physical appearance and weight management while men associated bicycle use with physical ability and a sense of freedom.

Bicycle Reduces Air Pollution. In addition, participants recognized bicycling as an activity that “improves air quality” due to the lower number of private cars on the street.

Bicycle Use Reduces Cost of Transportation. Participants identified bicycle use as “a good opportunity to save money in comparison to other means of transportation.” In fact, some participants provided an average of how much money they could save per week using bicycle trips instead of public transportation (buses, Transmilenio or taxi).

Bicycle Use Increases Mobility and Contributes to Save Time. Participants mentioned the importance of bicycle use in saving time when compared with the use of motorized vehicles, particularly during rush hours in a city like Bogotá where traffic congestion has been a critical issue. In fact, participants reported that “using the bicycle is the best way to spend less time sitting in traffic.”

Overall, study participants clearly perceive individual benefits of bicycle use related to greater mobility, savings, and mental and physical health; however, the environmental benefits of cycling were not clearly expressed. For instance, none of the participants mentioned the potential impact of bicycle use in controlling global warming by reducing carbon emissions derived from the use of motorized vehicles.

Built Environmental Conditions Associated With Bicycle Use

Two subthemes illustrate built environment facilitators of bicycle use.

Bike-Paths Network (Ciclorutas). Some participants (particularly mothers) perceived that traffic injuries related to bicycling have decreased as a result of the construction of the bike-paths. One mother noted, “Before the Ciclorutas were built, I was worried to let my son go out to ride his bike, but now that I know he uses the Ciclorutas I am less worried. . . .”
Parking Spaces for Bicycles With Security. Construction of bicycle parking spaces in locations like work places, shopping-malls, and convenience stores, as well as the provision of security to reduce the risk of bicycle theft were identified as facilitators of bicycle use.

Two subthemes have emerged in this study that illustrates built environment barriers for bicycle use.

Deficiency in the Design of Ciclorutas (Completeness and Connectivity). Lack of connectivity between bike-paths, and the limited number of routes throughout the city were the most cited barriers for bicycle use among participants that were aware of the Ciclorutas. One participant referred: “There are places in Bogotá that do not have Ciclorutas, so the cyclists must share the road and ride their bikes in between the cars where there is high risk of injury; this is why there are accidents, sometimes. For example, the south highway does not have bike-paths, and those cyclists are forced to ride on the road in the middle of cars, which is very dangerous.”

Deficiency in Ciclorutas Conditions. Participants reported lack of adequate physical infrastructure to promote bicycling. Some problems mentioned by participants were poor quality and deterioration of the streets where the Ciclorutas are located (eg, cracks in the pavement, lack of visibility of the painted lines on the pavement).

Social Factors Which Affect Bicycling

Two subthemes have emerged in this study related to social factors influencing bicycle use.

Safety Issues of Bicycle Use Related to Risk of Theft and Assault. An important barrier for bicycle use is negative past experiences of bicycle users or relatives who have had a bicycle stolen. This concern is illustrated by one participant’s remarks: “[To ride the bicycle] is to put your-self at risk for being a victim of a robbery. . . . For example, if I don’t have company to ride my bike, I don’t go by myself. This is why I do not take my bicycle out. I always have to have somebody by my side”

Safety Issues of Bicycle Use Related With Traffic (Risk of Accidents). Participants almost unanimously considered that the combination of motorized transit (private cars), public transportation, and bike-paths are dangerous to cyclists. All participants noted the risk of using the bicycle as a means of transportation in their daily life, particularly because of the fear of traffic injuries. This was related to the perception that both motorists and cyclists do not follow traffic norms and laws.

The situation described by participants in this study reflects a perception of social threat to cyclists, sometimes leading to self-limiting and limiting their relatives to ride the bike because they perceive a hostile environment to cyclists.

Invasion of Designated Bike-Paths by Pedestrians, Cars, and Motorcyclists

Two sub-themes emerged in this study to illustrate the conflict over the public space designated to the bike-paths, between pedestrians, cyclists, and motorists.

Pedestrians Walking on the Designated Bike-Paths (Ciclorutas). When the bike-paths are separated from motorized traffic, the cyclists reported problems like misuse of bike-paths “by pedestrians walking and by cars parked on the sidewalks and bike-paths.” In contrast, pedestrians perceived problems with bike-paths; 1 participant stated that the bike-paths are “invading the sidewalks” and “the space intended for pedestrians.”

Cars Do not Respect the Designated Bike-Paths and the Cyclists. Participants aware of the Ciclorutas also reported an invasion of the bike-paths, similar to the one mentioned above, but by cars. Especially when bike-paths and cars share the road, participants reported perceptions like “bicycling increases the risk of injuries because drivers do not respect cyclists.” Respondents reported that more education and information is needed for pedestrians and cyclists on the proper use of bike-paths, sidewalks, and shared roadways. One respondent added, “People lack culture in order to prevent accidents; they still don’t understand that the Ciclorutas are designed only for bicycles.”

Participant’s perceptions would indicate that Bogotá has not created the adequate social and political sense of public space. Every citizen feels entitled to their space and does not perceive public space as a shared space. In addition, disputes over public space could be showing perceptions of disparities in how the city has distributed their public space among different sectors of the population. For instance, most bike-paths are built on pedestrian sidewalks while traffic lanes are practically untouched. This shows the hegemony of the car, in which its designated space is constantly expanding.

Preconceptions Attached to Bicycle Users

Five subthemes emerged to illustrate the different preconceptions that bicycle users face.

Cyclists Are Frugal. A preconception that emerged in 1 of the interviews was the perception of people that use the bicycle as being frugal because “they do not want to spend money in transportation.” In this case “being a frugal cyclist” has a negative connotation in the sense that it implies having no money for other means of transportation.

Cyclists Are of Low Socioeconomic Status. Common perceptions of cyclists included that they tend be from a low socioeconomic class. One participant noted that people assume “they cannot afford other means of transportation.”
Cyclists Are Reckless and Risk Takers. In addition, participants related that "cyclists have no respect for pedestrians" and "they use the bicycle in a reckless way." Another participant mentioned, “There are many irresponsible people, [such as] young boys that do not think about their own life or the lives of others; now you see in the bike-paths a lot of young boys riding like crazy. . . . There is a lot of irresponsibility among people who ride bicycles." Moreover, taking into account the continuous challenges that cyclists confront on the street, such as traffic congestion and uncivil behaviors of motorists and pedestrians, participants believed that bicyclists are intrepid and risk their lives daily. One participant said, “You must have a lot of courage to ride a bike, I personally don’t do it.” Another noted, “You have to be very courageous to ride the bicycle in this city, because here in Bogotá people are very careless and irresponsible . . . .”

Cyclists Are Associated With Delinquency. Participants mentioned that because some thieves use bicycles to commit their crimes to escape easily and quickly, people could associate cyclists with delinquency. However, as a participant noted, this perceived risk is mediated by the type of clothes the cyclists are wearing; “It is different for example if you are wearing a suit and are well dressed, people don’t think much . . . but if you are wearing a cap and jeans, then they keep an eye out for you.”

The negative perception of cyclists in Bogotá shows that bicycle use cannot be understood outside the context in which this practice occurs. The little social recognition of bicycling can act as a cultural barrier that competes with the status of other means of transportation such as the automobile. This social issue is different in European countries where cycling is related to individual physical and environmental responsibility, while in Bogotá is associated with crime, lack of money and boldness in a negative connotation. According to the results from this study, bicycle users in Bogotá are not seen with a positive image because this practice has little public recognition. Bicycle users in Bogotá not only need to cope with adverse physical infrastructure issues but also with negative preconceptions of the public.

Gender Differences in Bicycle Use

Two subthemes emerged in this study that illustrates gender differences in bicycle use.

Women Face More Barriers (Safety and Physical Aesthetics Aspects). Compared with men, women perceived greater risks as cyclists. These risks are related to perceived safety issues such as feeling more vulnerable to personal attacks, injuries, and theft. These feelings of vulnerability largely result from women’s perceptions of being physically weaker than men. As a female participant noted, “Some of us women as compared to men are relatively weak; if somebody comes to you with a knife, like it happened to a friend of mine, what can you do? You will probably not resist or try to get away, but a man can react more aggressively . . . . this is why I say that men are different in that sense . . . they can defend themselves easier.”

In addition, both men and women perceived disadvantages of bicycle use related for aesthetic reasons. A participant noted, “Let’s take a woman that has to go to work and dress very elegant. How is she going to ride a bicycle wearing high heel shoes? How is she going to carry her purse? How is she going to wear a skirt? . . . So how can you be elegant and go to work on a bicycle at the same time?”

Women Have a Later Learning Experience of Bicycle Use as Compared With Men. This study also found the existence of preconceptions about the ability of women to ride a bicycle. This preconception is associated with cultural factors, which includes the failure to teach girls how to ride a bicycle at a young age or to even teach them at all. In contrast, the majority of men learn to ride a bicycle during their childhood. This disparity causes women to have less practice riding a bicycle and creates a negative self-perception about their ability. Participants mentioned that one reason why girls are less encouraged to ride a bike compared with boys is because of parenting patterns. One participant stated, “Men are not as protected as women. Therefore if a boy says, ‘Mom I’m going out to play,’ parents respond, ‘Ok go’; but if a girl says, ‘Mom, I’m going out to play,’ parents respond, ‘No, go back inside right away. . . .’”

Conclusions and Implications

This qualitative study found that in addition to investments in physical infrastructure, there is a need for developing strategies to improve safety conditions, reduce gender disparities, and increase social recognition of bicyclists. These efforts may play a relevant role in increasing bicycle use as a means of transportation in Bogotá. Risk of traffic accidents involving cyclists has been reported as an important limitation for bicycle use in several studies.37,38 This study found that participants perceive that they put themselves at a greater risk of traffic accidents when using the bicycle. These perceptions are supported by objective information which shows that a high proportion of cyclists are involved in traffic accidents in Bogotá.39,40 The perceived high risk for accidents is particularly relevant for Ciclorutas that share the road with motorized transit. In addition, for Ciclorutas located on the sidewalk, pedestrians, bicycle users, and motorists need to be educated to reduce the existing conflict over public space identified by this study. Moreover, public space recovery efforts need to consider preserving proportional shares of space for the bike-paths and pedestrian sidewalks to prevent future conflicts.

Various studies have found that women are less likely to use the bicycle when compared with men.40,41 This study found that women faced more perceived barriers. They feel more vulnerable to theft, injuries, and personal
attacks. Unfortunately in Bogotá armed robbery and aggravated assaults are not uncommon and this reinforces the fear experienced not only by women but also by men. In addition, some participants believed that women have less opportunity to develop cycling skills due to a later learning experience when compared with men. This study showed that women have less opportunity to develop cycling skills, highlighting cultural differences in the Colombian society, which has different role expectations for each gender. All of these aspects may help explain the low prevalence of bicycling among women in Bogotá. Prevalence of bicycle use as a means of transportation among women is 0.8%, compared with 3.6% among men. Large differences in the prevalence of bicycle use between men and women have also been found in other studies from Latin America. A different scenario is seen in countries from Europe like Germany, the Netherlands, and Denmark where there is a relatively high prevalence of bicycle use among women. Two issues can help us understand these differences across countries. First, in European countries like the ones mentioned, there is a larger proportion of appropriate physical infrastructure for cycling, which could increase perceived safety among women as it relates to traffic accidents, injuries, and fatalities. Second, as found in this study, there are several preconceptions attached to the ability of women to ride bicycles in Bogotá, which complicates the adoption of this behavior among women. This study suggests the need to design initiatives that encourage women to use the bicycle for both leisure and transportation purposes. Urban planning efforts for construction of new bike-paths should consider that the likelihood that a woman will use the bike-paths is reduced if they are located in routes shared with motorized traffic or in unsafe neighborhoods.

Despite the recognition that the Ciclorutas facilitate bicycle use, several cultural and physical barriers should be considered when implementing efforts to promote and increase bicycle use as a means of transportation. While the investments in physical infrastructure are necessary, other considerations such as cultural norms (socially accepted behaviors, gender roles, and the social status of cyclists) need to be acknowledged if utilitarian bicycling is to be increased in Bogotá.

Several strengths can be identified in this study. The methodological approach contrasted the perceptions of residents from neighborhoods with different urban attributes, which provided opportunities for formulating hypotheses for future studies. Criteria for participating in the focus groups and interviews were established based on results from a previous quantitative study so that findings from that study could be better understood. In addition, we oversampled neighborhoods of low and middle socioeconomic groups because bicycle use is more prevalent among those neighborhoods when compared with those of higher socioeconomic status.

Some limitations of this study also deserve notice. Findings from this qualitative study should be interpreted bearing in mind the small sample size and the lack of variability between the participants in the study. Future studies should explore in more detail differences by age, gender, and educational level to better understand this phenomenon. Children, adolescents and older adults were not included in this study. It is likely that these age groups would provide different experiences and perspectives related to bicycle use in Bogotá which also need to be taken into account.

Some suggestions for policy makers may be drawn from this study’s results, keeping in mind the small sample size of the study. First, reducing gender disparities, as they related to bicycle use, by creating bicycling friendly environments for women, developing campaigns specifically tailored to women that focus on their needs and motivating factors (including improved safety). Second, continuing with the expansion and improvement of the Ciclorutas network in the city by increasing its connectivity, increasing the number of traffic signals on the bike-paths to inform pedestrians, cyclists, and motorists about the rules and regulations of bicycle use. Finally, increasing the number of parking facilities that have security seemed to be an important facilitator for bicycle use. This recommendation should be taken into account by work places, shopping malls, schools, and universities, among others.

Stronger efforts to advocate for increased bicycle use should be made by the public health sector partnering with nontraditional fields like urban planning, safety, and transportation, due to the potential influence that these fields have on health and quality of life.

Acknowledgments

The findings and conclusions in this report are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention. JMB and LFG planned the study design. DP contributed to the acquisition of data. JMB performed the analyses and wrote the first manuscript draft. DP and LFG also participated in the writing of the manuscript. OLS, TS, and EJ provided thoughtful discussions and revised the manuscript. All authors read and approved the final manuscript. This study was supported by a grant from the International Union for Health Promotion and Education and from the US Centers for Disease Control and Prevention. The authors thank all team members from the built environment study in Bogotá. We also thank the participants in this study who were cordial enough to give their time and relate their personal experiences.

References

3. Oguma Y, Shinoda-Tagawa T. Physical activity decreases cardiovascular disease risk in women: review and meta-


33. McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion pro-


