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CYCLING IN THE AFRICAN AMERICAN COMMUNITY SAFETY TRAINING GUIDELINES AND FINDINGS

Talia McCray
Assistant Professor
The University of Texas at Austin
School of Architecture Community and Regional Planning Program

Teri Durden
Graduate Research Assistant
The University of Texas at Austin
School of Architecture Community and Regional Planning Program

and

Eileen Schaubert
Cycling Educator and Advocate

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Developing a Research Agenda to Increase Cycling in the African American Community:
A Case Study of Austin, Texas

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Southwest Region University Transportation Center
Center for Transportation Research
The University of Texas at Austin
Austin, Texas 78712

Abstract

This report is a program user’s manual for the Cycling in the African American Community (CAAC) safety training intervention. The CAAC safety training intervention was designed to “nudge” more African Americans, who are often beginning cyclists or non-cyclists, to participate in a physical activity that promotes health and builds community. One of the most cited reasons for not riding is that cycling is perceived as being unsafe. The CAAC intervention attempts to address this issue through a carefully designed safety intervention that encompasses a pre and post survey, used in conjunction with an on-road cycling curriculum. The report includes best practices for staging the intervention and analyzing outcomes. Preliminary findings show that the safety training is significantly improving perceptions of cycling.

Executive Summary

This report is formatted as a program user’s manual for the Cycling in the African American Community (CAAC) safety training intervention. Cycling among adults has been shown to be positively correlated with recommended exercise levels and lower rates of obesity and diabetes. The goal of the CAAC safety training intervention is to promote cycling as an alternative transportation mode, a way to achieve recommended exercise levels, and a way to build community.

Changing negative perceptions of cycling is the framework of the pre and post survey tools, which are used in conjunction with the cycling curriculum. The authors of this study desire to nudge beginning cyclists and non-cyclists to take part in beneficial behaviors that improve health outcomes.

Each section of this report includes a list of ‘things you’ll need’ and detailed notes concerning best practices and/or other adjustments made over the course of this study. **Step 1** outlines the pre-intervention process, which includes planning for ride dates and times, announcements, and recruitment. **Step 2** outlines the system developed to carry out the intervention, which includes the training curriculum and the designated bike route used. **Step 3** outlines the post-intervention process, which includes data collection, data entry, and a summary of the data obtained and analyzed. **Step 4** outlines follow-up materials and other post-intervention resources available to study participants, and concludes with a list of recommendations for moving forward and increasing participation. This report is designed to guide individuals who desire to replicate this safety training intervention/study elsewhere.

Preliminary results from 79 study participants show that the CAAC bicycle safety training significantly improved participants’ comfort levels and perceptions of safety in various locations. After training, participants’ comfort levels of riding in surrounding neighborhoods, on bike paths/trails, on sidewalks, on a street with a speed limit of 35 mph or lower, and in a bike lane on a 35 mph street significantly changed for the better.

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Disclaimer

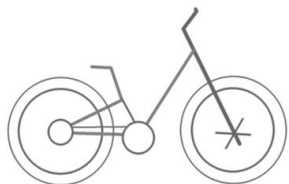
The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented herein. This document is disseminated under the sponsorship of the Department of Transportation, University Transportation Centers Program in the interest of information exchange. The U.S. Government assumes no liability for the contents or use thereof.

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The authors recognize that support for this research was provided by a grant from the U.S. Department of Transportation, University Transportation Centers Program to the Southwest Region University Transportation Center which is funded, in part, with general revenue funds from the State of Texas. During the springs of 2011 and 2012, Nadia and Eileen worked with Talia in leading her graduate students in the Transportation, Access, and Equity Course to better understand and document the barriers to cycling in the African American community. Out of these classes, the CAAC project was born. All members of the CAAC team contributed to the content of this document. Teri Durden, a graduate research assistant, led the compilation of this document and served as the photographer. Lauren Tuttle and Marcus Waters, graduate research assistants, led the survey data entry efforts. Eileen Schaubert developed the Bike Shop Curriculum with assistance from Allan Dunlap, a bicycle enthusiast and LCI. Finally, the CAAC team is thankful to Mellow Johnny's Bike Shop for their support of the project by allowing the project to use their facilities and to rent bikes for CAAC participants at a reduced price.



Illustration 1 - Teri Durden, Dr. Talia McCray (PI)



"An athlete must have ability to reach the top, but many who have ability and who do not live clean lives never have and never will be champions for obvious reasons."

Marshall Walter "Major" Taylor won the world one-mile track cycling championship in 1899. He was the first African American athlete to achieve the level of world champion. 1878-1932

Introduction

"Biking is a sport for white people. We don't want to dress up like white people and ride on a bicycle."

"I was the only African American. I did not know any other African American riders. I was very lonely."

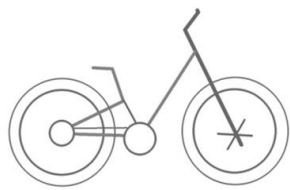
These sentiments were expressed by young African American female attendees at the University of Texas at Austin Anthony Taylor Luncheon during the spring of 2011. The luncheon was sponsored by the UT-Austin School of Architecture, the John L. Warfield Center for African and African American Studies, and Dr. Talia McCray's Transportation Access and Equity (TAE) Course. This luncheon became the impetus behind an innovative outreach/research project to better understand why African Americans cycle in very few numbers in Austin, Texas, and what interventions could be designed to increase their number in Austin, as well as serve as a model for other cities across the country. With the assistance of Eileen Schaubert, cycling educator and advocate, and Nadia M. Barrera, Bicycle/Pedestrian Project Coordinator, Public Works Department of the City of Austin, the TAE students explored innovative ways of encouraging African Americans to utilize new bicycle infrastructure in East Austin. http://soa.utexas.edu/faculty/mccray/files/McCray_TAE_Spr11.pdf.

Out of this the Cycling in the African American Community (CAAC) study was born. The CAAC study is designed to address negative perceptions of cycling that inhibit bicycle use, including experience levels, knowledge, and safety concerns. The CAAC intervention includes a pre-survey assessment of attitudes, modal use,

and socio-demographic factors of study participants; followed by a cycling training program; ending with a post-survey, a truncated version of the pre-survey. Our goal is to test whether CAAC training can change negative perceptions of cycling in order to nudge participants into cycling more often. Students enrolled in Dr. McCray's spring 2012 TAE Course helped to design and test the survey used in the CAAC study.

This document is the program user's manual for the CAAC safety training intervention. Our research found that cycling disparities are linked to negative perceptions held by African Americans, who are often inexperienced cyclists or non-cyclists. Some studies associate these disparities with poor exercise patterns and eating behaviors in African American communities. However, studies show that perceived barriers to cycling and exercise can be overcome by culturally-tailored interventions.

The goal of the safety intervention is to reduce the perception of danger, which often stems from human error and a lack of bicycle knowledge about cyclists and motorists through a culturally-tailored intervention. This report describes basic materials and procedures needed to stage the intervention and analyze its outcomes.



“Life is like riding a bicycle. To keep your balance you must keep moving.”

***Albert Einstein, Nobel Prize for Physics in 1921.
1879-1955***

Step 1 – Recruiting Participants

Things you'll need: calendar, promotion materials, and electronic registration forms

Planning, advertising, and recruiting are important parts of the safety training intervention. The following section highlights the basic procedures leading up to the intervention. It includes information about developing a ride calendar, making announcements, processing requests to join the study, prepping for the week of the intervention, and managing cancellations and no-shows. It also addresses best practices for each of these processes.

1.1 Ride Calendar

The ride calendar is designed to accommodate the schedules of the research team and to maximize participation in the study. The primary researcher coordinates ride dates and times with the research assistant(s) and the cycling instructor(s) each semester. Establishing a shared ride calendar allows the researcher to: (1) avoid scheduling conflicts among the research team, (2) avoid city-wide events that may disrupt rides on the designated route, and (3) share upcoming rides with prospective participants. It is important to have these dates and times on hand to create official ride announcements; however, additional dates and times may be added to the calendar as needed.

NOTES

Ride times and dates are primarily scheduled for the weekends. Saturday morning rides have the best turnout rates and Sunday rides work best in the afternoon. Midday rides should be avoided, particularly during

summer months, as high temperatures discourage participation in the study. Rides scheduled for the weekdays have lower turnout rates.

1.2 Announcements

Recruitment occurs through a combination of electronic, print, and word-of-mouth initiatives. Each announcement includes: (1) a summary of the intervention, (2) participation requirements, (3) upcoming ride dates and times, (4) a link to the registration form, and (5) the email address of the researcher. Electronic announcements are posted on the campus-wide events calendar, the websites of local businesses, and Facebook. Others are sent via email. Print announcements (e.g., flyers and info cards) are created and distributed to the research team by the research assistant(s). Word-of-mouth initiative (e.g., tabling and presentations) are accompanied by flyers and/or info cards.

NOTES

The most successful announcements are made by word-of-mouth initiatives. Although electronic announcements allow the research team to reach a broader audience, most individuals who agree to participate in the study have interacted with the team on a more personal level.

Prospective recruits are encouraged to join the study with family, friends, and/or co-workers. This increases the number of recruits and the likelihood that they will have the support needed to follow through with the intervention.

Recruitment should occur in person and target specific social groups and organizations. Venues may include churches, clubs, and other community-based

organizations interested in social and physical activities like a group safety training and bike ride. Past participants can help spread the word about the study, which typically results in more referrals.

1.3 Requests to Join

Requests to join the study are directed to the researcher and the research assistant(s). Once initial contact is made, a link to the online registration form is provided via email. This form requires the recruits' full names, email addresses, phone numbers, first and second time/date preferences (from a multiple choice selection), and height information. When a form is submitted, this information populates a spreadsheet that is accessible to the researcher, the research assistant(s), and the cycling instructor(s). In some instances, the recruits' registration information may be inserted manually by the research team.

NOTES

Recruits are not allowed to register one or more individuals unless they provide the full name(s) and contact information for them. It is important to communicate with all recruits regarding their registration as needed. This allows the team to confirm that the registration information is accurate. It also allows the team to communicate important information to recruits directly (e.g., scheduling conflicts).

Initially, the registration process occurred through email only, with a flyer attached for reference purposes. This process proved to be inefficient as recruits were more inclined to leave out important contact information. In some instances, registration information was lost in long email threads between the research team and recruits. Developing an official registration form ensured that all the

necessary registration information was received and tracked in one place, and that this information was accessible to those who need it (e.g., the cycling instructors).

1.4 Confirmations

Following the submission of a registration form, recruits receive a message indicating that someone will confirm their registration via email within 24 hours. This allows the research assistant(s) to confirm whether or not the recruits' time and date preferences are available. No more than five (5) recruits may sign up for one time slot (unless other arrangements have been made with the researcher) and all recruits must sign up individually. In rare instances, recruits are given their second time preference. Once a time/date is assigned, recruits receive an official confirmation email that serves as a confirmation receipt. This confirmation receipt includes the registration time/date, further instructions, and driving/parking directions to the host site.

1.5 Intervention Prep

During the week of the intervention, recruits receive an email notification to confirm that they will be in attendance as planned. If not, recruits are asked to give 24 hours' notice to the research assistant(s). This ensures that bicycle rentals are not reserved in excess. The cycling instructors pass on the height information to partners at Mellow Johnny's Bike Shop (i.e., the host site) where the recruits' bicycles are reserved with a free water bottle.

1.6 Cancellations and No-Shows

The research assistant(s) take note of any recruit who cancels or does not show up for the study. In place of a follow-up email, these individual receive an email asking whether or not they would like to reschedule

for another date. If the research assistant(s) do not hear from these individuals, another email is sent within two weeks. If no contact is made within the month, these individuals are removed from the contact list until further notice by the researcher.

1.7 Other Recruitment Tools

The research team utilized other recruitment tools in the second semester of the study. To jumpstart new recruitment, the team increased its visibility throughout the community, primarily on campus and in East Austin. After compiling a list of organizations geared toward African Americans, the main contacts for these organizations received email announcements and flyers from the research assistant(s). These announcements included a link to the newly-launched CAAC Facebook Page. The team also secured a booth at the annual African American Heritage Festival. In addition to distributing information about the study, the team participated in a joint African American heritage ride in East Austin. At the booth, 25 individuals signed up to receive more information about the study by sharing their name and contact info on a contact sheet. From this list, the team successfully followed up with 60% of the new contacts, and 48% agreed to join the study.

The results of these efforts included: (1) promotion by local fitness groups such as *Black Girls Run* and *Sisters Tri-ing*, (2) increased reliance on past participants for referrals, and (3) increased walk-ins, i.e., person showing up for rides without prior registration.

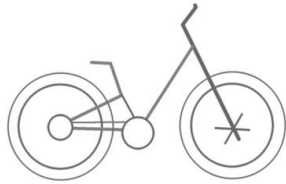
1.8 Final Thoughts on Recruitment

Keeping an open line of communication with recruits is important, particularly during the week of their scheduled rides. This creates opportunities for recruits to ask questions, address scheduling conflicts, and/or invite others to come along with them for the ride (provided space is available). A follow-up phone call may be appropriate if a recruit has not confirmed via email within 24 hours of their scheduled ride time. This helps the research assistant(s) to determine whether or not the recruit did in fact receive an email reminder.

During the second semester of the study, follow-up emails and phone calls were crucial as cold weather and rain threatened to disrupt rides. In some instances, weather conditions increased the number of no-shows, including some individuals who had already confirmed that they would be in attendance. Taking these precautions gave the research team time to advertise and fill newly-opened slots. It also increased efficiency in re-grouping recruits and re-scheduling rides.



Illustration 2 - CAAC booth at the African American Heritage Festival



“He who is being carried does not realize how far the town is.”

Nigerian Proverb

Step 2 – Staging the Intervention

Things you'll need: liability and consent forms, pre and post surveys, bicycle rentals and helmets, city bicycle map, cycling instructors, and a safety training curriculum and route

The success of this study is centered on the safety training intervention. The following section outlines the key elements of the intervention, which includes distributing forms and surveys, teaching the safety training curriculum, and supporting study participants along the way.

2.1 Initial Paperwork

There are three forms that must be completed by each participant before the intervention begins. The research assistant(s) provides participants with a waiver and release of liability form, a consent form, and a pre survey. These documents ensure that participants are (1) aware of their rights and responsibilities before the intervention begins, (2) given an opportunity to ask questions or decline to participate in the study, and (3) able to provide the research team with the necessary data. The researcher requires consent to use all information provided by participants to further the study, particularly from the pre survey. Once the paperwork is complete and handed over to the research assistant(s), the cycling instructor(s) takes over.

NOTES

There should be at least one member of the research team available to welcome study participants and to assist with the flow of each session. This individual helps create an

inviting environment and directs study participants as needed (e.g., to the restroom).

It is necessary to ensure that all participants complete the required documents to the best of their ability, particularly the pre survey. In some instances, pages are overlooked for a variety of reasons. The nature of this error suggests that the research assistant(s) must take notice of it immediately. Identifying respondent errors early and while the research assistant(s) has the attention of the participants improves the quality of the collected data.

The “CODENAME” component of the pre survey is critical. Each participant is instructed to create a codename that cannot be associated with them. During the data entry stage, these codenames are translated into numbers that can be used in the survey database. The same codenames apply to the participants’ post surveys. Each participant is instructed to remember and use the same codename created for their pre survey. The pre and post codename must match.

Extra copies of each form should be brought to the intervention. This ensures that there are enough forms for “mess-ups” and for any potential walk-ins who desire to participate in the study. In some instances, participants arrive at the intervention with a friend or family member who did not officially register for the study. No participant is turned away.

2.2 Safety Training Curriculum

The safety training intervention combines a bicycle safety training class with an expert-guided bike ride. This intervention is designed for individuals who (1) may or may not have access to a bicycle at home,

and (2) have little to no experience and/or comfort navigating the city by bicycle. The remainder of this section includes information specific to the safety training.

The cycling instructors utilize a comprehensive curriculum, which includes a designated cycling route. This route incorporates multiple stops to allow for on-route instructions, rest stops, anxiety relief, and regrouping. It is designed to build in intensity and highlights some of the higher-comfort bicycle routes and examples of a variety of physical bike and pedestrian infrastructure surrounding well-known vehicle routes that lead to downtown destinations. The route is 4 miles long and takes 45 minutes to an hour to travel. Table 1 provides a minute-by-minute breakdown of the complete curriculum.

NOTES

Each ride requires a “sweep” rider. This individual rides along or behind the last rider to provide additional instructions and act as a buffer from vehicular traffic approaching from behind. The sweep rider is also tasked with watching participants for signs of distress.



Illustration 3 - Exploring the City bicycle map with Eileen Schaubert

2.3 Bike Shop Curriculum

The first portion of the curriculum is presented at Mellow Johnny’s Bike Shop. This curriculum is broken into six segments: (1) helmet fit, (2) interpreting the City of Austin bicycle map, (3) bike fit, (4) A.B.C. Quick Check, (5) a pre-ride demo, and (6) on-bike practice.

The first segment teaches participants how to properly fit and adjust a bicycle helmet. The second segment introduces participants to the contents of the City bicycle map, which includes a legend, estimated rides time radii, and an overview of basic safety information. The legend accounts for route comfort, street grade, sidewalks/off-road alternatives, and trail access points. Basic safety information includes hand signals, lane positioning, and the vulnerable road users/safe passing ordinance. Bike fit covers top tube clearance, leg extension/seat height, handlebar and brake lever reach, and seat width. *A.B.C. Quick Check* covers air (e.g., proper inflation/reading of tires), brakes (e.g., brake pad placements), chain and cassette cleaning and lubrication, and other gear-related checking points (e.g., lights). The pre-ride demo introduces participants to starting and stopping, shifting, power pedal position, smooth braking with both brakes, scanning, and signaling. On-bike practice includes braking, shifting, maintaining a straight line, balancing, and communicating with other road users.

Activity	Total time	From	To
Settling in & Pre Survey	0:20	0:00	0:20
Knowledge: Gear -- Helmet Fit	0:10	0:20	0:30
Knowledge: Interpreting Bike Map	0:10	0:30	0:40
Knowledge: Gear -- Bike Fit	0:10	0:40	0:50
Knowledge: Gear -- ABC Quick Check	0:10	0:50	1:00
Skills: Pre-ride Demo of Basics	0:15	1:00	1:15
Skills: Guidelines for the Ride	0:05	1:15	1:20
Skills: On-Road Ride	1:00	1:20	2:20
Return of Bikes	0:10	2:20	2:30
Post Survey	0:20	2:30	2:50
	2:50		

Table 1: CAAC Safety Training Curriculum

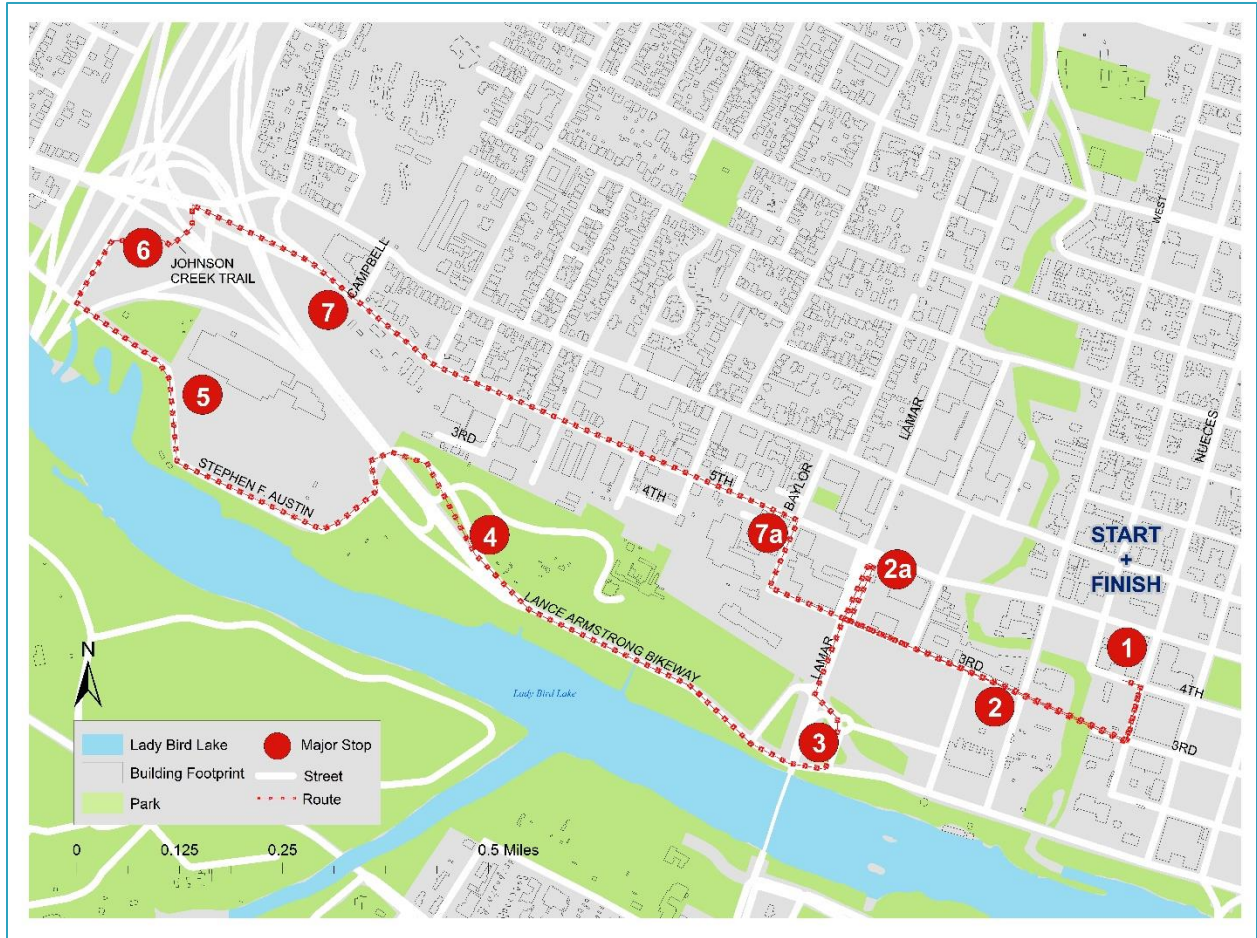


Figure 1 - Cycling Route and Major Stops in Austin, Texas

2.4 Road Curriculum

The second half of the intervention exposes study participants to different types of bicycle infrastructure and riding scenarios. The knowledge gained during the expert-guided bike ride includes: avoiding door zones, lane placement for visibility, route choices (e.g., calmer roads, bike routes/paths, etc.), sidewalk riding restrictions, anticipating conflict zones, differences in road markings (e.g., bike lanes, sharrows, and contra-flow bike lanes), and negotiating with drivers. Major stops and talking points are listed on the following page. →

1

*Mellow Johnny's Bike Shop
(4th & Nueces)*

- explain how to maintain space between riders
- demonstrate how to come to a full stop
- if riders' are comfortable, practice signaling

2

3rd Street & West Avenue

- double check riders' comfort levels on bikes
- explain how to ride downhill on a **sidewalk** along Lamar (2a)
- explain sidewalk restrictions
- demonstrate how to yield to pedestrians

3

*Stop light at Sandra
Muraida Way*

- demonstrate the use of the walk signal
- emphasize the need to watch for drivers in all directions
- practice shifting on the flat pavement

4

*Along the Lance
Armstrong Bikeway*

- practice yielding to other cyclists (and pedestrians) on the **bikeway/paved trail**
- practice shifting
- practice yielding to cars when transitioning from the bikeway to the road

5

Stephen F. Austin Drive

- stop to show the safe riding distance from open car doors on **a narrow/shared lane (<30 mph) with adjacent parking**
- demonstrate how to take the lane and pull over when appropriate on a **narrow/shared lane without parking**
- identify unsafe bike lanes

6

*Meadow at Johnson
Creek Trail*

- encourage riders to drink some water
- answer questions about shifting in order to ride uphill comfortably
- allow time for riders to catch their breath before riding uphill on a **shared-use path**

7

Stop before Campbell

- encourage riders to transition to **a multi-lane road (35 mph) with a standard bike lane and painted buffer** by slowing down, scanning back, and watching for cars
- turn right on Baylor and check in with everyone (7a)
- watch for oncoming traffic on 3rd St. **contra-flow bike lane**
- remind riders to acknowledge 4-way stops
- lead riders back to the bike shop

2.5 Post Survey and Conclusion of Intervention

Following the bike ride, the researcher assistant(s) provides participants with instruction on how to complete the post survey. This survey includes an additional contact sheet that is removed from the post survey after the participant has completed it. The contact sheet requests the participants' full names and email addresses. The information on this sheet is not to be associated with the post survey, and participants are not required to fill it out.

NOTES

The post survey has fewer questions than the pre survey and is printed on white paper as opposed to the colored paper used for the pre surveys. This makes the post survey more easily identifiable in the data collection and entry processes.

It is important to ensure that each participant fills out the post survey to the best of their ability, using the same codename. After the intervention, participants may be tired, and it is easy for them to rush through the post survey and make errors. Participants should be encouraged to relax, focus, and provide their best answers after returning from the ride. The post data-collection environment should support a good data collection process.

Following the completion of the post survey, each participant receives a copy of the official city bicycle map for keeps as an incentive to try new routes.



Illustration 4 - Discussing bike fit and comfort



Illustration 5 - Demonstrating A.B.C. Quick Check with Allan Dunlop



Illustration 6 - Answering questions about bike parts



Illustration 7 – Discussing guidelines for the ride



Illustration 10 - Practicing power pedal position



Illustration 8 - Distributing bikes to participants



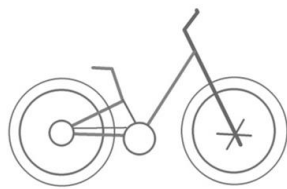
Illustration 11 – Testing bike fit



Illustration 9 - Adjusting bike seats for comfort



Illustration 12 – Debriefing after on-road curriculum



“If you never did, you should. These things are fun and fun is good!”

Theodor Seuss Geisel “Dr. Seuss”, American writer, poet and cartoonist for children’s picture books. 1904 - 1991

Step 3 – Analyzing the Data

Things you'll need: pre survey, post survey, survey question and answer codebook, Microsoft Excel, data analysis software

Data collection and entry are essential tasks carried out by the research assistant(s). The following sections outline basic procedures for numbering, coding, and entering the data in Excel. This portion of the report concludes with a summary of findings from the safety training intervention.

3.1 Numbering Surveys

After each training session, the pre and post surveys are grouped and assigned an ID number. The ID numbers of these surveys match according to the codenames that the participants provide. For example, if a participant's codename is 'APPLETREE', this name should appear on their pre and post survey, and each of these surveys should be labeled with the same ID number. This allows the researcher assistant(s) to better organize the surveys before entering the data into the spreadsheet.

3.2 Data Collection and Coding

The information provided in the pre and post surveys are recorded in a single spreadsheet. Each of the questions and answers in the pre and post surveys are coded for the analysis. The coding process is handled and double checked by each research assistant and reviewed by the researcher for errors.

3.3 Data Entry Set Up

Pre and post surveys are entered into a single Excel document. Subsequent worksheets are created to generate a

summary of demographic and modal use data, difference of means values, and basic statistics. The pre and post survey worksheets include columns for each participant's assigned ID_Number, codename, training program, and the month and year of their training. The data validation in Excel is set up to ensure that the answer codes entered in the cells are appropriate answer codes for each question.

3.4 Summary of Findings

At the conclusion of the preliminary case study, a total of 79 individuals (24.05% male, 75.95% female) completed both a pre and post survey. All participants were at least 18 years old, with a majority of participants 26-35 years old (25.32%) and 36-45 years old (25.32%). A majority of participants (88.61%) were African-American, with 10.13% of participants being of Hispanic, Latino or Spanish ethnicity. In terms of educational attainment, 41.77% of participants had at least a Bachelor's degree. The primary mode of transportation to work or school for 82.28% of the participants was a car or motorcycle, with 95.94% of participants having at least one car in their household. In term of bike access, 62.03% of the participants owned or had access to a bicycle, with 5.70% and 39.24% of the participants reporting their level of biking experience as beginner or intermediate, respectively, on the pre-survey.

The preliminary findings show that the bicycle safety training ride changed participants' comfort levels and perceptions of safety of cycling in various locations in a positive direction. After the training, participants' comfort levels of riding in surrounding neighborhoods, on a bike path/trail, on a sidewalk, on a street with a speed limit of 35 miles per hour (mph) or lower, and in a bike lane on a street with a

speed limit that exceeds 35 mph significantly changed ($t(77)=-3.27, p=0.002$, $t(75)=-2.55, p=0.01$, $t(74)=-3.82, p<0.001$, $t(75)=-4.57, p<0.001$, and $t(76)=-2.80, p=0.006$, respectively). However, there was no significant change in participants' comfort level of riding in their own neighborhood. It is possible that participants' comfort level of riding in these locations could increase after additional riding practice.

Participants' perception of safety of riding in various locations also significantly increased after the training. These locations included riding in a shared bicycle lane on a road with speed limits below 30 mph ($t(76)=-5.99, p<0.001$) or above 30 mph ($t(76)=-6.30, p<0.001$), riding at night ($t(74)=-6.39, p<0.001$), riding in a bike lane ($t(72)=-4.98, p<0.001$), and riding alone ($t(74)=-3.69, p<0.001$) or in a group of people ($t(76)=-3.60, p<0.001$).

Participants experienced all types of bicycle infrastructure during their bicycle safety training ride. After the training, there was a significant change in how much specific bicycle infrastructure would make the participants more likely to cycle. This infrastructure included bike lanes ($t(76)=-5.13, p<0.001$), specialized pavement markings ($t(76)=-6.29, p<0.001$), bike lanes with buffer zones or barriers ($t(76)=-3.95, p<0.001$), sidewalks ($t(75)=-3.78, p<0.001$), bicycle street signs ($t(75)=-4.25, p<0.001$), traffic signals for cyclists ($t(76)=-2.53, p=.01$), and better storage facilities for bicycles ($t(76)=-2.99, p=0.004$). However, there was no significant change in how multi-use paths or traffic signals for cyclists would make the participants more likely to cycle.

Exercise, social/group rides, the environment/air quality, and enjoying time

outdoors proved to be high motivators for cycling after the training. On a likert scale of 1 (not motivating) to 5 (very motivating), these motivating factors averaged 4.75, 4.55, 4.12, and 4.64, respectively, among the participants. Racing was less of a motivator for cycling ($M=2.45$) for the participants.

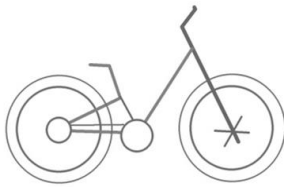
On the bicycle safety training ride, participants were exposed to a City of Austin bicycle map and an expert guided ride. The preliminary findings show that exposure to a bike map, an expert guided ride, and a bike safety class have a significant effect on these resources encouraging participants to cycle more ($t(77)=-4.20, p<0.001$, $t(77)=-4.55, p<0.001$, and $t(77)=-2.68, p=0.009$, respectively). In addition, participants' exposure to a bike map, an expert guided ride, and a bike safety class had a significant effect on these resources encouraging participants to try new routes ($t(76)=-3.81, p<0.001$, $t(76)=-2.86, p=0.005$, and $t(77)=-4.02, p<0.001$, respectively).



Illustration 13 - Explaining different types of bicycle infrastructure

Demographics	Category	N (%)
Gender	Females	60 (75.95)
	Males	19 (24.05)
Age	18-25	8 (10.13)
	26-35	20 (25.32)
	36-45	20 (25.32)
	46-55	18 (22.78)
	56 and up	13 (16.46)
Race	African American	70 (88.61)
	non-African American	9 (11.40)
Education Level	Less than high school	1 (1.27)
	High school/GED	4 (5.06)
	Some College	8 (10.13)
	Associate Degree/Trade	5 (6.33)
	Bachelor Degree	33 (41.77)
	Graduate Degree	28 (35.44)
Cars in Household	None	4 (5.06)
	1 car	32 (40.41)
	2 or more cars	43 (54.43)
Primary Mode (Work/School)	Car/Motorcycle	65 (82.28)
	Public Transit	7 (8.86)
	Bicycle	4 (5.06)
	Other	3 (3.80)
Access to a bicycle	Yes	49 (62.03)
	No	30 (37.97)
Level of Skill (pre)	Never Ridden/Don't Know How	3 (3.80)
	Beginner	44 (55.70)
	Intermediate	31 (39.24)
	Expert	1 (1.27)
TOTAL		79 (100)

Table 2: Demographics and Modal Use Data



*“...I shall be telling this with a sigh
Somewhere ages and ages hence:
Two roads diverged in a wood, and I,
I took the one less traveled by,
And that has made all the difference.”*

Robert Frost, American poet. 1874–1963

Step 4 – Follow-Up

Things you'll need: electronic copy of consent form, list of local bike shops and resources, participants' contact information

Steps 1 through 3 guide program users on how to successfully implement the safety training intervention. Through trial and error, the research team has learned to plan and recruit more effectively. It has also allowed the team to make the most of each opportunity to spread the word about the study. The following section outlines follow-up interactions with participants and next steps for recruitment and outreach.

4.1 Follow-Up Email

Study participants receive a follow-up email within 5 days. This email expresses the gratitude of the research team and provides participants with: (1) a copy of the UT Austin consent form (for personal records), (2) a list of local bike shops, and (3) links to additional cycling resources. No other notifications are sent out without the consent of the researcher.

NOTES

It is important to follow up with each participant as this provides them with an opportunity to ask questions and receive additional resources to continue a positive cycling experience. Some participants respond to the follow-up email with questions about future events or to request more information for friends, family, and coworkers who have shown an interest in the study. These contacts are important in that they provide the team with an opportunity to recruit more participants.

Providing a comprehensive list of local bike shops is essential; it encourages past participants to purchase a bike that fits their needs and budgets. The follow-up email should include this list and links to additional cycling resources, such as ongoing training courses (provided they are available).

4.2 Additional Notifications

Participants who choose to fill out the contact sheet that is attached to the post survey may receive additional email notifications about social rides and other events associated with this study.

4.3 Conclusions

Find ways to recruit/retain male participants

In this study, the majority of participants were female. The research team made several efforts to increase the number of male participants; however, this proved to be a difficult task. Many of the male recruits were either (1) hesitant to sign up alone, (2) more willing to sign up with friends or significant others, (3) unresponsive to email and phone registration confirmations, (4) most likely to be no-shows, and (5) likely to cancel on the day of their scheduled ride. The research team has considered several options for recruiting and retaining male participants in the future. Although the team included one male cycling instructor and one male research assistant, none were active recruiters. In the future, the team recommends: (1) adding more men to the research team, particularly as recruiters, (2) adding more photos in the promotion material of male participants (e.g. flyers), and (3) recording a demo of the safety training with a male participant.

Target groups that engage in physical activity training

The research team has found that targeting specific groups with an interest in exercise and physical fitness brings more participants to the study. In the future, setting up tables at fun runs such as the Cap 10K would expose the team to larger crowds of people willing to attempt some level of physical activity. The larger community runs draw crowds of employees of corporate sponsors through their internal wellness programs.

Conduct more outreach initiatives

Early and continued outreach throughout the program is essential. Some prospective recruits thought the study had ended after the research team decreased its email announcements for new ride times and dates. In the future, the team recommends: (1) creating referrals that are easy to forward and share via email, (2) developing more sophisticated marketing of the study in traditional media channels, and (3) identifying local community champions early who will support efforts throughout the entire project.

4.4 Next Steps

CAAC Part 2, a scavenger hunt carried out in groups of two, has been designed and is being tested. This self-guided route-planning exercise is designed for individuals who have access to a functional bicycle, and who possess some level of comfort and/or experience navigating the city by bicycle. Like Part 1, the intervention is culturally tailored and challenges participants in groups to use the City of Austin's bike map to route a tour of several predetermined

historical sites relevant to African American history in Austin.

Ultimately, the CAAC project would like to see more African Americans using bicycles for exercise and the journey to work or school. A short follow-up survey is planned during the fall 2013 to identify those who are cycling more, or who need additional confidence building through small organized cycling groups.