Data in brief 25 (2019) 104329



Contents lists available at ScienceDirect

Data in brief

journal homepage: www.elsevier.com/locate/dib

Data Article

Data on unsafe riding behaviors among 1960 shared bicycle riders in urban China



Xiaolin Wu ^{a, 1}, Wangxin Xiao ^{b, 1}, Conghui Deng ^c, David C. Schwebel ^d, Guoqing Hu ^{b, *}

^a Zhou Enlai School of Government, Nankai University, Tianjin, 300071, China

^b Department of Epidemiology and Health Statistics, Xiangya School of Public Health, Central South University. Changsha, 410078, Hunan, China

^c Department of Administration Management, School of Public Administration, Central South University,

Changsha, 410083, Hunan, China

^d Department of Psychology, University of Alabama at Birmingham, Birmingham, AL, 35294, USA

ARTICLE INFO

Article history: Received 17 June 2019 Received in revised form 21 July 2019 Accepted 22 July 2019 Available online 27 July 2019

Keywords: Shared bicycle Riding behaviors China Urban area

ABSTRACT

This data article quantifies the extent of shared bicycle riding risks for shared-bicycle riders in urban China. The data were collected through a WeChat-based online survey, with a valid sample of 1960 respondents. It reports the basic descriptive statistics through eight tables concerning various unsafe shared bicycle riding behaviors, and complete frequency data from riders concerning eight unsafe riding behaviors. The data can be used for comparisons with other studies using the same outcome measures, which are valuable to generate specialized and targeted solutions to reduce unsafe riding behaviors. For further information, please refer to the full article entitled "Unsafe riding behaviors of shared-bicycle riders in urban China: A retrospective survey".(Wu et al., 2019).

© 2019 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons. org/licenses/by/4.0/).

DOI of original article: https://doi.org/10.1016/j.aap.2019.06.002.

* Corresponding author.

https://doi.org/10.1016/j.dib.2019.104329

E-mail address: huguoqing009@gmail.com (G. Hu).

¹ Equal contributors.

^{2352-3409/© 2019} The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (http:// creativecommons.org/licenses/by/4.0/).

Subject Specific subject area	Public health and health policy Road traffic injury (RTI)
Type of data	Tables
How data were acquired	Self-report survey from researcher-designed electronic questionnaire
Data format	Raw, filtered, analyzed, descriptive statistical data
Parameters for data collection	Sample consisted of shared-bicycle users in urban China. The researchers used an electronic questionnaire to investigate whether participants self-report engaging in eight unsafe shared-bicycle riding behaviors in the past month.
Description of data collection	We estimated a priori experimental needs for a one-month survey period and used an iterative sampling through a "snowball technique" recruitment strategy through a WeChat-based online survey for a month, from September 7, 2017 to October 6, 2017.
Data source location	Urban China
Data accessibility	Data are accessible with the article
Related research article	The associated research article to this data set is [1].

Value of the data

• The data provide the first published epidemiological report about eight unsafe bicycle riding behaviors and basic characteristics from a sample of 1960 shared bicycle riders in urban China.

• The data allow anyone to duplicate the results of comparisons for each behavior across sex, age, education, city of shared bicycle use and shared bicycle travel-related information.

• The data could be used for comparisons with other studies using the same or similar outcome measures.

1. Data

Tables 1–8 show the complete frequencies of eight unsafe riding behaviors: not wearing helmets, running red lights, cycling against the traffic flow, riding in a motor vehicle lane, riding in a pedestrian lane, carrying passengers, using a cell phone while riding and eating while riding, among 1960 surveyed shared-bicycle riders in the past month in urban China. The data allow researchers to conduct further analyses for specific research purposes. The sample had a mean age of 27.63 years (standard deviation: 9.50 years).

2. Experimental design, materials and methods

2.1. Study recruitment and participants

Almost all shared bicycles in urban China are rented from smartphone applications [2], so we used an iterative sampling process to recruit study participants through WeChat, the most popular smartphone-based social media program in China. Non-probability sampling has advantages in recruiting study samples compared to probability sampling when random samples are unlikely to be obtained [3]. Initial survey invitations were sent to a convenience sample of colleagues, family members, classmates, and friends who had WeChat contact with members of the research group. Many of these individuals chose to participate, and they then were asked to send information about the survey to people in their own WeChat contact list. This "snowball" recruitment process was iterated for a month, from September 7, 2017 to October 6, 2017, at which point the sample size was deemed sufficient and data collection was terminated.

In total, 1960 riders participated in the retrospective research survey. Of them, individuals aged \leq 25 years old, 26–35 years old, and \geq 36 years accounted for 54%, 32%, and 14% of participants, respectively. Males constituted 43% of participants. 50% and 39% of respondents respectively reported having received an undergraduate degree and postgraduate education or higher. The majority of respondents came from provincial capitals (56%) and central municipalities (23%). Geographically, the participants

Table 1

Proportion of riders not wearing helmets.

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Total	1960 (100)	95.4	2.2	0.9	1.5
Sex					
Male	833 (43)	93.2	3.1	1.3	2.4
Female	1127 (58)	97.0	1.6	0.5	0.9
Age group					
\leq 25 years	1056 (54)	97.3	1.8	0.5	0.5
26~35 years	623 (32)	94.9	2.4	1.0	1.8
\geq 36 years	281 (14)	89.3	3.6	2.1	5.0
Level of education					
Postgraduate or higher	769 (39)	97.4	1.6	0.4	0.7
Undergraduate	970 (50)	96.5	2.0	0.7	0.8
All others	221 (11)	83.3	5.9	3.2	7.7
Type of urban area of bicycle use					
Central municipality	450 (23)	97.8	0.7	0.4	1.1
Provincial capital	1092 (56)	96.9	1.7	0.6	0.7
Deputy provincial city	90 (5)	93.3	3.3	1.1	2.2
All others	328 (17)	87.5	5.8	2.1	4.6
Province/City of bicycle use					
Hunan	579 (30)	95.2	2.2	1.0	1.6
Guangdong	230 (12)	96.1	1.7	0.9	1.3
Beijing	164 (8)	98.8	0.0	0.6	0.6
Tianjin	144 (7)	98.6	1.4	0.0	0.0
All others	843 (43)	94.1	3.0	0.9	2.0
Reason for travel					
Commuting to work/school	1070 (55)	97.6	1.1	0.5	0.8
Entertainment	544 (28)	94.9	3.3	0.7	1.1
Physical exercise	180 (9)	82.8	7.2	3.3	6.7
Others	166 (9)	96.4	0.6	1.2	1.8
Riding hours per week					
<1 hour	240 (12)	98.8	0.4	0.0	0.8
1–2 hours	732 (37)	97.5	1.4	1.0	0.1
3–5 hours	877 (45)	93.5	3.0	0.8	2.7
>5 hours	111 (6)	88.3	6.3	2.7	2.7
Type of typical riding days					
Weekday	1105 (56)	97.2	1.4	0.6	0.7
Weekend or holiday	855 (44)	93.0	3.3	1.2	2.6
Typical riding time					
Morning rush hours	399 (20)	93.7	2.5	1.3	2.5
Evening rush hours	698 (36)	96.3	1.9	0.7	1.1
Other times	863 (44)	95.4	2.4	0.8	1.4

Table 2

Proportion of riders running red lights.

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Total	1960 (100)	0.5	1.4	18.3	79.8
Sex					
Male	833 (43)	0.5	1.9	22.3	75.3
Female	1127 (58)	0.5	1.1	15.3	83.1
Age group					
≤25 years	1056 (54)	0.3	1.4	18.1	80.2
26~35 years	623 (32)	0.5	1.3	19.4	78.8
≥36 years	281 (14)	1.4	1.8	16.4	80.4
Level of education					
Postgraduate or higher	769 (39)	0.7	1.6	20.5	77.2
				<i>.</i>	

(continued on next page)

Table 2 (continued)

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Undergraduate	970 (50)	0.2	1.4	16.7	81.6
All others	221 (11)	1.4	0.9	17.2	80.5
Type of urban area of bicycle use					
Central municipality	450 (23)	0.7	0.9	24.0	74.4
Provincial capital	1092 (56)	0.2	1.5	17.1	81.2
Deputy provincial city	90 (5)	1.1	1.1	14.4	83.3
All others	328 (17)	1.2	2.1	15.2	81.4
Province/City of bicycle use					
Hunan	579 (30)	0.0	1.7	15.7	82.6
Guangdong	230 (12)	0.4	0.4	20.9	78.3
Beijing	164 (8)	1.2	1.2	31.7	65.9
Tianjin	144 (7)	0.0	0.7	15.3	84.0
All others	843 (43)	0.8	1.7	17.2	80.3
Reason for travel					
Commuting to work/school	1070 (55)	0.4	1.7	22.1	75.8
Entertainment	544 (28)	0.4	1.5	11.9	86.2
Physical exercise	180 (9)	1.7	1.1	16.1	81.1
Others	166 (9)	0.6	0.0	16.3	83.1
Riding hours per week					
<1 hour	240 (12)	0.0	0.8	14.2	85.0
1–2 hours	732 (37)	0.4	1.5	17.9	80.2
3–5 hours	877 (45)	0.2	1.6	19.3	78.9
>5 hours	111 (6)	4.5	0.9	21.6	73.0
Type of typical riding days					
Weekday	1105 (56)	0.5	1.6	21.6	76.3
Weekend or holiday	855 (44)	0.6	1.2	13.9	84.3
Typical riding time					
Morning rush hours	399 (20)	0.3	1.8	23.8	74.2
Evening rush hours	698 (36)	0.7	1.9	16.5	80.9
Other times	863 (44)	0.5	0.9	17.1	81.5

Table 3

Proportion of riders cycling against the traffic flow.

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Total	1960 (100)	0.8	2.6	42.0	54.5
Sex					
Male	833 (43)	1.2	3.6	45.6	49.6
Female	1127 (58)	0.5	1.9	39.4	58.2
Age group					
≤25 years	1056 (54)	0.5	2.6	40.5	56.4
26~35 years	623 (32)	0.8	2.9	45.9	50.4
≥36 years	281 (14)	2.1	2.1	39.1	56.6
Level of education					
Postgraduate or higher	769 (39)	0.5	2.9	45.0	51.6
Undergraduate	970 (50)	0.7	2.5	41.9	54.9
All others	221 (11)	2.3	2.3	32.6	62.9
Type of urban area of bicycle use					
Central municipality	450 (23)	0.9	2.9	51.3	44.9
Provincial capital	1092 (56)	0.5	2.3	41.8	55.4
Deputy provincial city	90 (5)	0.0	4.4	33.3	62.2
All others	328 (17)	1.8	2.7	32.6	62.8
Province/City of bicycle use					
Hunan	579 (30)	0.3	2.2	40.9	56.5
Guangdong	230 (12)	0.9	3.0	41.3	54.8
Beijing	164 (8)	1.2	4.9	64.6	29.3

Table 3 (continued)

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Tianjin	144 (7)	0.7	1.4	35.4	62.5
All others	843 (43)	1.1	2.5	39.7	56.7
Reason for travel					
Commuting to work/school	1070 (55)	0.8	3.4	46.3	49.5
Entertainment	544 (28)	0.7	1.5	35.7	62.1
Physical exercise	180 (9)	1.7	2.2	33.3	62.8
Others	166 (9)	0.0	1.8	45.2	53.0
Riding hours per week					
<1 hour	240 (12)	0.4	2.5	42.1	55.0
1–2 hours	732 (37)	0.7	3.0	43.3	53.0
3–5 hours	877 (45)	0.6	2.1	41.5	55.9
>5 hours	111 (6)	4.5	4.5	37.8	53.2
Type of typical riding days					
Weekday	1105 (56)	0.7	3.3	45.7	50.2
Weekend or holiday	855 (44)	0.9	1.6	37.3	60.1
Typical riding time					
Morning rush hours	399 (20)	0.5	5.5	45.1	48.9
Evening rush hours	698 (36)	1.1	1.6	41.7	55.6
Other times	863 (44)	0.7	2.1	40.9	56.3

Table 4

Proportion of riders riding in a motor vehicle lane.

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Total	1960 (100)	1.7	4.4	42.0	51.9
Sex					
Male	833 (43)	2.0	5.2	46.2	46.6
Female	1127 (58)	1.4	3.8	39.0	55.8
Age group					
≤25 years	1056 (54)	1.7	5.2	43.7	49.4
26~35 years	623 (32)	1.3	3.9	42.5	52.3
\geq 36 years	281 (14)	2.5	2.5	34.9	60.1
Level of education					
Postgraduate or higher	769 (39)	1.4	3.8	43.8	51.0
Undergraduate	970 (50)	1.5	4.8	43.3	50.3
All others	221 (11)	3.2	4.5	30.3	62.0
Type of urban area of bicycle use	. ,				
Central municipality	450 (23)	2.0	2.9	39.1	56.0
Provincial capital	1092 (56)	1.5	4.7	44.5	49.4
Deputy provincial city	90 (5)	1.1	5.6	52.2	41.1
All others	328 (17)	2.1	5.2	35.1	57.6
Province/City of bicycle use					
Hunan	579 (30)	1.9	6.6	47.2	44.4
Guangdong	230 (12)	0.9	6.1	50.0	43.0
Beijing	164 (8)	1.2	2.4	49.4	47.0
Tianjin	144 (7)	2.8	3.5	30.6	63.2
All others	843 (43)	1.7	3.0	36.9	58.5
Reason for travel					
Commuting to work/school	1070 (55)	1.7	5.0	44.6	48.8
Entertainment	544 (28)	1.3	3.5	40.8	54.4
Physical exercise	180 (9)	3.9	2.8	30.0	63.3
Others	166 (9)	0.6	5.4	42.8	51.2
Riding hours per week					
<1 hour	240 (12)	1.2	3.8	43.3	51.7
1–2 hours	732 (37)	1.2	4.4	43.3	51.1

(continued on next page)

Table 4 (continued)

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
3–5 hours	877 (45)	1.6	4.4	40.7	53.2
>5 hours	111 (6)	6.3	5.4	41.4	46.8
Type of typical riding days					
Weekday	1105 (56)	2.0	5.0	43.4	49.6
Weekend or holiday	855 (44)	1.3	3.6	40.2	54.9
Typical riding time					
Morning rush hours	399 (20)	2.3	4.5	43.1	50.1
Evening rush hours	698 (36)	1.6	4.3	42.4	51.7
Other times	863 (44)	1.5	4.4	41.3	52.8

Table 5

Proportion of riders riding in a pedestrian lane.

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Total	1960 (100)	7.9	17.1	52.1	23.0
Sex	. ,				
Male	833 (43)	7.1	19.6	53.4	19.9
Female	1127 (58)	8.4	15.3	51.1	25.2
Age group					
<25 years	1056 (54)	7.4	17.1	51.9	23.6
26~35 years	623 (32)	6.3	18.3	53.1	22.3
\geq 36 years	281 (14)	13.2	14.2	50.5	22.1
Level of education					
Postgraduate or higher	769 (39)	6.9	16.6	54.9	21.6
Undergraduate	970 (50)	7.6	18.5	51.2	22.7
All others	221 (11)	12.2	12.7	46.2	29.0
Type of urban area of bicycle use					
Central municipality	450 (23)	6.7	11.3	55.8	26.2
Provincial capital	1092 (56)	7.3	18.7	52.6	21.4
Deputy provincial city	90 (5)	11.1	27.8	50.0	11.1
All others	328 (17)	10.4	16.8	46.0	26.8
Province/City of bicycle use					
Hunan	579 (30)	7.4	18.5	55.1	19.0
Guangdong	230 (12)	8.7	25.2	52.2	13.9
Beijing	164 (8)	7.9	10.4	62.2	19.5
Tianjin	144 (7)	7.6	9.0	50.0	33.3
All others	843 (43)	7.9	16.6	48.4	27.0
Reason for travel					
Commuting to work/school	1070 (55)	6.9	17.0	53.9	22.1
Entertainment	544 (28)	8.3	17.8	52.2	21.7
Physical exercise	180 (9)	11.7	16.7	40.0	31.7
Others	166 (9)	8.4	15.7	53.0	22.9
Riding hours per week	(-)				
<1 hour	240 (12)	4.2	20.4	51.7	23.8
1-2 hours	732 (37)	8.1	17.1	53.3	21.6
3-5 hours	877 (45)	7.6	17.1	51.3	23.9
>5 hours	111 (6)	16.2	9.9	51.4	22.5
Type of typical riding days	(-)				
Weekday	1105 (56)	72	16.1	54 4	22.3
Weekend or holiday	855 (44)	8.7	18.4	49.1	23.9
Typical riding time	()				
Morning rush hours	399 (20)	8.3	15.8	53.4	22.6
Evening rush hours	698 (36)	8.3	17.0	53.3	21.3
Other times	863 (44)	73	17.3	50.5	24.4

Table 6

Proportion of riders carrying passengers.

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Total	1960 (100)	0.5	0.7	4.3	94.6
Sex					
Male	833 (43)	0.6	0.7	5.6	93.0
Female	1127 (58)	0.4	0.6	3.3	95.7
Age group					
\leq 25 years	1056 (54)	0.2	0.8	3.3	95.7
26~35 years	623 (32)	0.8	0.8	5.5	92.9
\geq 36 years	281 (14)	0.7	0.0	5.3	94.0
Level of education					
Postgraduate or higher	769 (39)	0.1	0.4	3.3	96.2
Undergraduate	970 (50)	0.3	0.7	3.7	95.3
All others	221 (11)	2.3	1.4	10.4	86.0
Type of urban area of bicycle use					
Central municipality	450 (23)	0.9	1.3	3.6	94.2
Provincial capital	1092 (56)	0.2	0.4	3.0	96.4
Deputy provincial city	90 (5)	0.0	0.0	2.2	97.8
All others	328 (17)	0.9	0.9	10.1	88.1
Province/City of bicycle use					
Hunan	579 (30)	0.5	0.7	3.6	95.2
Guangdong	230 (12)	0.0	0.0	5.2	94.8
Beijing	164 (8)	0.6	0.6	4.3	94.5
Tianjin	144 (7)	0.0	0.7	3.5	95.8
All others	843 (43)	0.6	0.8	4.6	94.0
Reason for travel					
Commuting to work/school	1070 (55)	0.5	0.6	3.6	95.3
Entertainment	544 (28)	0.6	0.9	5.1	93.4
Physical exercise	180 (9)	0.6	1.1	8.3	90.0
Others	166 (9)	0.0	0.0	1.2	98.8
Riding hours per week					
<1 hour	240 (12)	0.0	0.0	2.5	97.5
1–2 hours	732 (37)	0.3	0.7	4.1	94.9
3–5 hours	877 (45)	0.5	0.8	4.6	94.2
>5 hours	111 (6)	2.7	0.9	7.2	89.2
Type of typical riding days					
Weekday	1105 (56)	0.3	0.4	3.1	96.3
Weekend or holiday	855 (44)	0.7	1.1	5.8	92.4
Typical riding time					
Morning rush hours	399 (20)	0.5	0.3	6.8	92.5
Evening rush hours	698 (36)	0.4	0.7	4.3	94.6
Other times	863 (44)	0.5	0.8	3.1	95.6

came primarily from Hunan Province (29.5%), Guangdong Province (11.7%), Beijing city (8.4%) and Tianjin city (7.3%), with the remainder spread across China.

2.2. Questionnaire

The questionnaire, which included three parts, was designed based on previous epidemiological surveys and empirical information from media reports. The first part of the survey questionnaire included variables concerning demographic traits (sex, age, level of education, type of city where they lived and rode shared bicycles). The second part consisted of shared bicycle travel-related information, such as typical purpose of shared bicycle travel, number of shared bicycle riding hours a week, and riding time for average shared bicycle rides. The third and final part of the survey asked about frequency of engaging in eight unsafe shared bicycle riding behaviors: (1) not wearing helmets [4–7], (2) running red lights [8], (3) cycling against the traffic flow [9], (4) riding in a motor vehicle lane where bicycles are prohibited, (5) riding in a pedestrian lane where bicycles are prohibited, (6) carrying

Table 7

Proportion of riders using a cell phone while riding.

Variable	Number (%)	Frequency of behavior (%)			
		Always	Often	Sometimes	Never
Total	1960 (100)	1.2	4.2	37.6	57.0
Sex					
Male	833 (43)	1.8	6.5	44.5	47.2
Female	1127 (58)	0.8	2.5	32.4	64.3
Age group					
≤ 25 years	1056 (54)	0.9	5.1	38.7	55.2
26~35 years	623 (32)	1.8	4.0	39.6	54.6
≥36 years	281 (14)	1.1	1.1	28.5	69.4
Level of education					
Postgraduate or higher	769 (39)	1.3	3.8	38.2	56.7
Undergraduate	970 (50)	0.8	4.8	36.9	57.4
All others	221 (11)	2.7	2.7	38.0	56.6
Type of urban area of bicycle use					
Central municipality	450 (23)	1.6	4.9	40.2	53.3
Provincial capital	1092 (56)	0.6	4.2	34.5	60.6
Deputy provincial city	90 (5)	2.2	4.4	35.6	57.8
All others	328 (17)	2.4	3.0	44.5	50.0
Province/City of bicycle use					
Hunan	579 (30)	0.9	2.6	32.0	64.6
Guangdong	230 (12)	1.3	4.3	33.0	61.3
Beijing	164 (8)	1.2	5.5	36.0	57.3
Tianjin	144 (7)	2.8	6.9	38.9	51.4
All others	843 (43)	1.2	4.5	42.7	51.6
Reason for travel					
Commuting to work/school	1070 (55)	1.2	5.4	39.3	54.0
Entertainment	544 (28)	1.5	3.5	35.8	59.2
Physical exercise	180 (9)	1.7	1.7	36.1	60.6
Others	166 (9)	0.0	1.2	33.1	65.7
Riding hours per week					
<1 hour	240 (12)	0.4	3.8	26.7	69.2
1–2 hours	732 (37)	1.1	3.8	41.8	53.3
3–5 hours	877 (45)	1.3	4.7	36.8	57.2
>5 hours	111 (6)	3.6	3.6	38.7	54.1
Type of typical riding days					
Weekday	1105 (56)	1.0	5.2	38.0	55.7
Weekend or holiday	855 (44)	1.5	2.8	37.0	58.7
Typical riding time					
Morning rush hours	399 (20)	1.3	4.0	41.4	53.4
Evening rush hours	698 (36)	1.9	3.9	36.5	57.7
Other times	863 (44)	0.7	4.5	36.6	58.2

passengers on a shared bicycle with only one seat [10], (7) using a cell phone while riding a shared bicycle, and (8) eating while riding a shared bicycle [11,12]. The eight risky behaviors were developed through a series of steps involving a thorough review of existing research literature and media reports, multi-round group discussions among the research team, and pilot testing. Participants responded to each survey item by identifying the frequency with which they engaged in each behavior over the past month using a 4-point scale (always, often, sometimes, never).

2.3. Statistical analysis

Data analysis involved computation of basic descriptive statistics presenting the frequency of each of the eight unsafe riding behaviors, which were derived through participant self-report. SPSS (Statistical Product and Service Solutions) statistical software version 22.0 (IBM Corp, Armonk, NY, US) was used to perform all statistical analyses.

9

Table 8

Proportion of riders eating while riding.

AlwaysOftenSometimesNeverTotal Sex1960 (100)0.81.420.177.8Male Age group833 (43)1.12.825.071.2Female Age group1127 (58)0.50.416.582.6 ≤ 25 years1056 (54)0.61.620.976.9 ≥ 26 -35 years281 (14)1.80.412.185.8Level of education77.0Postgraduate on higher of 106 (23)0.80.820.278.3Undergraduate on higher of 970 (50)0.41.920.777.0Type of urban area of bicycle use79.2Central municipality450 (23)0.91.118.979.5Deputy provincial cipti of 1002 (56)0.51.218.579.8All others328 (17)1.52.126.569.8Provincial cipti al under90 (5)0.03.318.977.8Guangdong Equipantian230 (12)1.317.480.0Beijing164 (8)1.21.213.444.1Tanjin144 (7)0.02.119.478.5All others843 (43)0.81.423.474.4Reason for travel77.06.6Curntig to work/school1070 (55)0.91.11.770.6Entertainment540 (28)0.62.02.02 <td< th=""><th>Variable</th><th>Number (%)</th><th colspan="4">Frequency of behavior (%)</th></td<>	Variable	Number (%)	Frequency of behavior (%)			
Total Sex 1960 (100) 0.8 1.4 20.1 77.8 Male 833 (43) 1.1 2.8 25.0 71.2 Female 1127 (58) 0.5 0.4 16.5 82.6 Age group			Always	Often	Sometimes	Never
SexMale833 (43)1.12.825.071.2Female1127 (58)0.50.416.582.6Age group </td <td>Total</td> <td>1960 (100)</td> <td>0.8</td> <td>1.4</td> <td>20.1</td> <td>77.8</td>	Total	1960 (100)	0.8	1.4	20.1	77.8
Male833 (43)1.12.825.071.2Female1127 (58)0.50.416.582.6Age group ≤ 25 years1056 (54)0.61.620.976.926-35 years231 (14)1.80.412.185.8Level of education $=$ $=$ $=$ $=$ $=$ Postgraduate on higher769 (39)0.80.80.278.3Undergraduate on higher769 (39)0.41.920.777.0All others221 (11)2.31.417.279.2Type of urban area of bicycle use $=$ $=$ $=$ Central municipality450 (23)0.91.118.779.3Provincial capital1092 (56)0.03.318.977.8All others328 (17)1.52.126.569.8Provinciol (100 y 012)0.51.218.579.8Guangdong230 (12)1.31.317.480.0Beijing164 (8)1.21.213.484.1Tainin144 (7)0.02.119.478.5All others843 (43)0.81.423.474.4Reason for tavel $=$ $=$ $=$ Commuting to work/school1070 (55)0.91.11.676.9Charley Levercise180 (9)1.11.716.780.6Others166 (9)0.00.61.22.077.2 <td< td=""><td>Sex</td><td></td><td></td><td></td><td></td><td></td></td<>	Sex					
Female1127 (58)0.50.416.582.6Age group ≤ 25 years1056 (54)0.61.620.976.9 $26 > 35$ years623 (32)0.61.422.375.6 ≥ 36 years281 (14)1.80.412.185.8Level of education77.0Postgraduate or higher769 (39)0.80.820.278.3Undergraduate970 (50)0.41.920.777.0All others221 (11)2.31.417.279.2Type of urban are of bicycle use79.379.3Provincial capital1092 (56)0.51.118.779.3Deputy provincial city90 (5)0.03.318.977.8All others236 (17)1.52.126.569.8Province/City of bicycle use1.21.218.579.8Hunan579 (30)0.51.218.579.874.4Beijing164 (8)1.21.213.484.1Tanjin144 (7)0.02.119.478.5All others843 (43)0.81.423.474.4Reason for travel77.2Commuting to work/school1070 (55)0.91.11.776.9Entertainment544 (28)0.62.020.277.2Physical exercise180 (9)1.11.7	Male	833 (43)	1.1	2.8	25.0	71.2
Age group≤25 years1056 (54)0.61.620.976.926-35 years281 (14)1.80.412.185.8Level of education85.8Level of educate or higher769 (39)0.80.820.278.3Undergraduate or higher769 (39)0.41.920.777.0All others21 (11)2.31.417.779.2Type of urban area of bicycle use </td <td>Female</td> <td>1127 (58)</td> <td>0.5</td> <td>0.4</td> <td>16.5</td> <td>82.6</td>	Female	1127 (58)	0.5	0.4	16.5	82.6
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Age group					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	≤25 years	1056 (54)	0.6	1.6	20.9	76.9
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	26~35 years	623 (32)	0.6	1.4	22.3	75.6
Level of education Postgraduate or higher 769 (39) 0.8 0.8 20.2 78.3 Undergraduate 970 (50) 0.4 1.9 20.7 77.0 All others 221 (11) 2.3 1.4 17.2 79.2 Type of urban area of bicycle use	≥36 years	281 (14)	1.8	0.4	12.1	85.8
Postgraduate or higher 769 (39) 0.8 0.8 20.2 78.3 Undergraduate 970 (50) 0.4 1.9 20.7 77.0 All others 221 (11) 2.3 1.4 17.2 79.2 Type of urban area of bicycle use 79.3 79.3 Provincial capital 1092 (56) 0.5 1.1 18.9 79.3 All others 328 (17) 1.5 2.1 26.5 69.8 Province/City of bicycle use 79.3 79.3 79.3 Hunan 579 (30) 0.5 1.2 18.5 79.8 Guangdong 230 (12) 1.3 1.3 17.4 80.0 Beijing 164 (8) 1.2 1.2 13.4 74.4 Reason for travel 76.9 77.2 Commuting to work/school 1070 (55) 0.9 1.1 21.0 76.9 Entertainment 544 (28) 0.6 2.0 20.2	Level of education					
Undergraduate 970 (50) 0.4 1.9 20.7 77.0 All others 221 (11) 2.3 1.4 17.2 79.2 Type of urban area of bicycle use 79.2 Central municipality 450 (23) 0.9 1.1 18.7 79.3 Provincial capital 1092 (56) 0.5 1.1 18.9 77.5 Deputy provincial city 90 (5) 0.0 3.3 18.9 77.8 All others 328 (17) 1.5 2.1 26.5 69.8 Province/City of bicycle use 48.5 79.8 Guangdong 230 (12) 1.3 1.3 17.4 80.0 Beijing 164 (8) 1.2 1.2 13.4 84.1 Tianjin 144 (7) 0.0 2.1 19.4 78.5 All others 843 (43) 0.8 1.4 23.4 74.4 Reason for travel	Postgraduate or higher	769 (39)	0.8	0.8	20.2	78.3
All others 221 (11) 2.3 1.4 17.2 79.2 Type of urban area of bicycle use	Undergraduate	970 (50)	0.4	1.9	20.7	77.0
Type of urban area of bicycle useCentral municipality $450 (23)$ 0.9 1.1 18.7 79.3 Provincial capital $1092 (56)$ 0.5 1.1 18.9 77.8 All others $328 (17)$ 1.5 2.1 26.5 69.8 Province/City ob bicycle use $77.9 (30)$ 0.5 1.2 18.5 79.8 Hunan $579 (30)$ 0.5 1.2 18.5 79.8 Guangdong $230 (12)$ 1.3 1.3 17.4 80.0 Beijing $164 (8)$ 1.2 1.2 13.4 84.1 Tianjin $144 (7)$ 0.0 2.1 19.4 78.5 All others $843 (43)$ 0.8 1.4 23.4 74.4 Reason for travel 77.2 77.2 Commuting to work/school $1070 (55)$ 0.9 1.1 21.0 76.9 Entertainment $544 (28)$ 0.6 2.0 20.2 77.2 Physical exercise $180 (9)$ 1.1 1.7 16.7 80.6 Others $166 (9)$ 0.0 0.8 12.9 86.2 $1 - 2$ hours $732 (37)$ 0.5 1.4 23.1 75.0 $3 - 5$ hours $111 (6)$ 4.5 0.9 17.1 77.5 Type of typical riding days 77.1 69.6 77.7 77.2 Weekday $1105 (56)$ 0.8 1.4 19.6 78.2 Weekday $855 (44)$ <td< td=""><td>All others</td><td>221 (11)</td><td>2.3</td><td>1.4</td><td>17.2</td><td>79.2</td></td<>	All others	221 (11)	2.3	1.4	17.2	79.2
Central municipality 450 (23) 0.9 1.1 18.7 79.3 Provincial capital 1092 (56) 0.5 1.1 18.9 79.5 Deputy provincial city 90 (5) 0.0 3.3 18.9 77.8 All others 328 (17) 1.5 2.1 26.5 69.8 Province/City of bicycle use 1.3 1.7.4 80.0 Beijing 164 (8) 1.2 1.2 13.4 84.1 Tianjin 144 (7) 0.0 2.1 19.4 78.5 All others 843 (43) 0.8 1.4 23.4 74.4 Reason for travel 76.9 1.1 19.4 78.5 Commuting to work/school 1070 (55) 0.9 1.1 21.0 76.9 Entertainment 544 (28) 0.6 2.0 20.2 77.2 Physical exercise 180 (9) 1.1 1.7 16.7 80.6 Others 166 (9)	Type of urban area of bicycle use					
Provincial capital 1092 (56) 0.5 1.1 18.9 79.5 Deputy provincial city 90 (5) 0.0 3.3 18.9 77.8 All others 328 (17) 1.5 2.1 26.5 69.8 Province/City of bicycle use 69.8 Hunan 579 (30) 0.5 1.2 18.5 79.8 Guangdong 230 (12) 1.3 1.3 17.4 80.0 Beijing 164 (8) 1.2 1.2 13.4 84.1 Tianjin 144 (7) 0.0 2.1 19.4 78.5 All others 843 (43) 0.8 1.4 23.4 74.4 Reason for travel Commuting to work/school 1070 (55) 0.9 1.1 21.0 76.9 Entertainment 544 (28) 0.6 2.0 20.2 77.2 Physical exercise 180 (9) 1.1 1.7 16.7 80.6 <	Central municipality	450 (23)	0.9	1.1	18.7	79.3
Deputy provincial city 90 (5) 0.0 3.3 18.9 77.8 All others 328 (17) 1.5 2.1 26.5 69.8 Province/City of bicycle use	Provincial capital	1092 (56)	0.5	1.1	18.9	79.5
All others 328 (17) 1.5 2.1 26.5 69.8 Province/City of bicycle use	Deputy provincial city	90 (5)	0.0	3.3	18.9	77.8
Province/City of bicycle useHunan $579(30)$ 0.5 1.2 18.5 79.8 Guangdong $230(12)$ 1.3 1.3 17.4 80.0 Beijing $164(8)$ 1.2 1.2 13.4 84.1 Tianjin $144(7)$ 0.0 2.1 19.4 78.5 All others $843(43)$ 0.8 1.4 23.4 74.4 Reason for travelCommuting to work/school $1070(55)$ 0.9 1.1 21.0 76.9 Entertainment $544(28)$ 0.6 2.0 20.2 77.2 Physical exercise $180(9)$ 1.1 1.7 16.7 80.6 Others $166(9)$ 0.0 0.6 17.5 81.9 Riding hours per week $-240(12)$ 0.0 0.8 12.9 86.2 $1-2$ hours $732(37)$ 0.5 1.4 23.1 75.0 $3-5$ hours $111(6)$ 4.5 0.9 17.1 77.5 Type of typical riding days $Weekday$ $1105(56)$ 0.8 1.4 19.6 78.2 Weekday $1105(56)$ 0.8 1.4 19.6 78.2 Typical riding time $Weeking riding time$ $Weeking riding time$ $Weeking riding time$ 77.7 Morning rush hours $399(20)$ 1.0 0.5 20.8 77.7 Evening rush hours $698(36)$ 1.0 2.1 19.8 77.1 Other times	All others	328 (17)	1.5	2.1	26.5	69.8
Hunan579 (30)0.51.218.579.8Guangdong230 (12)1.31.31.7.480.0Beijing164 (8)1.21.213.484.1Tianjin144 (7)0.02.119.478.5All others843 (43)0.81.423.474.4Reason for travel76.9Entertainment544 (28)0.62.020.277.2Physical exercise180 (9)1.11.716.780.6Others166 (9)0.00.617.581.9Riding hours per week732 (37)0.51.423.175.03 - 5 hours732 (37)0.51.423.175.075.575.575.577.777.2Weekday1105 (56)0.81.419.678.277.277.2Type of typical riding days1105 (56)0.81.419.678.2Weekday1105 (56)0.81.419.678.2Weekend or holiday855 (44)0.71.420.777.2Typical riding time77.177.2Morning rush hours399 (20)1.00.520.877.7Evening rush hours698 (36)1.02.119.877.1Other times863 (44)0.51.220.078.3	Province/City of bicycle use					
Guangdong230 (12)1.31.31.480.0Beijing164 (8)1.21.213.484.1Tianjin144 (7)0.02.119.478.5All others843 (43)0.81.423.474.4Reason for travel76.9Commuting to work/school1070 (55)0.91.121.076.9Entertainment544 (28)0.62.020.277.2Physical exercise180 (9)1.11.716.780.6Others166 (9)0.00.617.581.9Riding hours per week75.0<1-2 hours	Hunan	579 (30)	0.5	1.2	18.5	79.8
Beijing 164 (8) 1.2 1.2 1.3.4 84.1 Tianjin 144 (7) 0.0 2.1 19.4 78.5 All others 843 (43) 0.8 1.4 23.4 74.4 Reason for travel	Guangdong	230 (12)	1.3	1.3	17.4	80.0
Tianjin144 (7)0.02.119.478.5All others843 (43)0.81.423.474.4Reason for travel </td <td>Beijing</td> <td>164 (8)</td> <td>1.2</td> <td>1.2</td> <td>13.4</td> <td>84.1</td>	Beijing	164 (8)	1.2	1.2	13.4	84.1
All others843 (43)0.81.423.474.4Reason for travel	Tianjin	144 (7)	0.0	2.1	19.4	78.5
Reason for travelCommuting to work/school $1070 (55)$ 0.9 1.1 21.0 76.9 Entertainment $544 (28)$ 0.6 2.0 20.2 77.2 Physical exercise $180 (9)$ 1.1 1.7 16.7 80.6 Others $166 (9)$ 0.0 0.6 17.5 81.9 Riding hours per week $<1 hour$	All others	843 (43)	0.8	1.4	23.4	74.4
Commuting to work/school1070 (55)0.91.121.076.9Entertainment544 (28)0.62.020.277.2Physical exercise180 (9)1.11.716.780.6Others166 (9)0.00.617.581.9Riding hours per week	Reason for travel					
Entertainment544 (28)0.62.020.277.2Physical exercise180 (9)1.11.716.780.6Others166 (9)0.00.617.581.9Riding hours per week86.21-2 hours240 (12)0.00.812.986.21-2 hours732 (37)0.51.423.175.03-5 hours732 (37)0.71.620.077.8>5 hours111 (6)4.50.917.177.5Type of typical riding days77.277.2Weekday1105 (56)0.81.419.678.2Weekday1105 (56)0.81.419.677.2Typical riding time77.777.2Morning rush hours399 (20)1.00.520.877.7Evening rush hours698 (36)1.02.119.877.1Other times863 (44)0.51.220.078.3	Commuting to work/school	1070 (55)	0.9	1.1	21.0	76.9
Physical exercise 180 (9) 1.1 1.7 16.7 80.6 Others 166 (9) 0.0 0.6 17.5 81.9 Riding hours per week	Entertainment	544 (28)	0.6	2.0	20.2	77.2
Others 166 (9) 0.0 0.6 17.5 81.9 Riding hours per week -	Physical exercise	180 (9)	1.1	1.7	16.7	80.6
Riding hours per week<1 hour	Others	166 (9)	0.0	0.6	17.5	81.9
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Riding hours per week					
	<1 hour	240 (12)	0.0	0.8	12.9	86.2
3-5 hours 877 (45) 0.7 1.6 20.0 77.8 >5 hours 111 (6) 4.5 0.9 17.1 77.5 Type of typical riding days Weekday 1105 (56) 0.8 1.4 19.6 78.2 Weekday 1105 (56) 0.8 1.4 19.6 78.2 Weekend or holiday 855 (44) 0.7 1.4 20.7 77.2 Typical riding time	1–2 hours	732 (37)	0.5	1.4	23.1	75.0
>5 hours 111 (6) 4.5 0.9 17.1 77.5 Type of typical riding days	3–5 hours	877 (45)	0.7	1.6	20.0	77.8
Type of typical riding days Weekday 1105 (56) 0.8 1.4 19.6 78.2 Weekend or holiday 855 (44) 0.7 1.4 20.7 77.2 Typical riding time 77.2 77.2 77.2 77.2 Morning rush hours 399 (20) 1.0 0.5 20.8 77.7 Evening rush hours 698 (36) 1.0 2.1 19.8 77.1 Other times 863 (44) 0.5 1.2 20.0 78.3	>5 hours	111 (6)	4.5	0.9	17.1	77.5
Weekday 1105 (56) 0.8 1.4 19.6 78.2 Weekend or holiday 855 (44) 0.7 1.4 20.7 77.2 Typical riding time 7 1.4 20.7 77.2 Morning rush hours 399 (20) 1.0 0.5 20.8 77.7 Evening rush hours 698 (36) 1.0 2.1 19.8 77.1 Other times 863 (44) 0.5 1.2 20.0 78.3	Type of typical riding days					
Weekend or holiday 855 (44) 0.7 1.4 20.7 77.2 Typical riding time	Weekday	1105 (56)	0.8	1.4	19.6	78.2
Typical riding time399 (20)1.00.520.877.7Morning rush hours698 (36)1.02.119.877.1Other times863 (44)0.51.220.078.3	Weekend or holiday	855 (44)	0.7	1.4	20.7	77.2
Morning rush hours399 (20)1.00.520.877.7Evening rush hours698 (36)1.02.119.877.1Other times863 (44)0.51.220.078.3	Typical riding time					
Evening rush hours698 (36)1.02.119.877.1Other times863 (44)0.51.220.078.3	Morning rush hours	399 (20)	1.0	0.5	20.8	77.7
Other times 863 (44) 0.5 1.2 20.0 78.3	Evening rush hours	698 (36)	1.0	2.1	19.8	77.1
	Other times	863 (44)	0.5	1.2	20.0	78.3

Acknowledgements

This work was funded by the National Natural Science Foundation of China (No. 81573260) and the National Natural Science Foundation of Hunan province (2018JJ3696) (No. 71774175). The funding bodies had no role in the design, collection, analysis or interpretation of this study.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.dib.2019.104329.

References

- X. Wu, W. Xiao, C. Deng, D.C. Schwebel, G. Hu, Unsafe riding behaviors of shared-bicycle riders in urban China: a retrospective survey, Accid. Anal. Prev. 131 (2019) 1–7 [Epub ahead of print], https://doi.org/10.1016/j.aap.2019.06.002.
- [2] H. Liu, W. Chen, Shared bicycle electronic fence system based on intelligent terminals, Electronic Technology & Software Engineering (06), 2018, pp. 122–123 (in chinese).
- [3] Z. Sun, Y. Xu, Medical Statistics, fourth ed., People's Medical Publishing House, Beijing, 2014. ISBN 978-7-117-19109-8.
- [4] C.M. Fischer, C.E. Sanchez, M. Pittman, D. Milzman, K.A. Volz, H. Huang, S. Gautam, L.D. Sanchez, Prevalence of bicycle helmet use by users of public bikeshare programs, Ann. Emerg. Med. 60 (2) (2012) 228–231. http://doi.org/10.1016/j. annemergmed.2012.03.018.
- [5] A. Goodman, J. Green, J. Woodcock, The role of bicycle shared systems in normalising the image of cycling: an observational study of London cyclists, J Transp. Health 1 (1) (2014) 5–8. http://doi.org/10.1016/j.jth.2013.07.001.
- [6] J.D. Kraemer, J.S. Roffenbender, L. Anderko, Helmet wearing among users of a public bicycle-shared program in the District of Columbia and comparable riders on personal bicycles, Am. J. Public Health 102 (8) (2012) e23-e25. http://doi.org/10. 2105/AJPH.2012.300794.
- [7] A. Nanapragasam, A public health dilemma: urban bicycle-shared schemes, Can. J. Public Health 105 (3) (2014) e229.
- [8] C.W. Pai, R.C. Jou, Cyclists' red-light running behaviours: an examination of risk-taking, opportunistic, and law-obeying behaviours, Accid. Anal. Prev. 62 (2014) 191–198. https://doi.org/10.1016/j.aap.2013.09.008.
- [9] S.A. Useche, L. Montoro, J.M. Tomas, B. Cendales, Validation of the Cycling Behavior Questionnaire: a tool for measuring cyclists' road behaviors, Transp. Res. F Traffic Psychol. Behav. 58 (2018) 1021–1030. https://doi.org/10.1016/j.trf.2018.08. 003.
- [10] CCTV.COM, Shared Bicycles Can't Be Carried People, and We Must Attach Importance to the Travel Safety, 2017 (in chinese), http://news.cctv.com/2017/03/27/VIDEDRI6ae49QeDhQYgWeMtv170327.shtml.
- [11] E.S. Wolfe, S.S. Arabian, J.L. Breeze, M.J. Salzler, Distracted biking: an observational study, J. Trauma Nurs. 23 (2) (2016) 65-70. https://doi.org/10.1097/JTN.00000000000188.
- [12] S.A. Useche, F. Alonso, L. Montoro, C. Esteban, Distraction of cyclists: how does it influence their risky behaviors and traffic crashes? PeerJ 6 (2018) e5616, https://doi.org/10.7717/peerj.5616.