



Why do teens abandon bicycling? A retrospective look at attitudes and behaviors



Sarah K. Underwood^a, Susan L. Handy^{b,*}, Debora A. Paterniti^c, Amy E. Lee^b

^a Department of Public Health Sciences, University of California Davis, Davis, CA 95616, USA

^b Department of Environmental Science and Policy, University of California Davis, Davis, CA 95616, USA

^c Department of Internal Medicine, Center for Healthcare Policy and Research, University of California Davis, Davis, CA 95616, USA

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ABSTRACT

Bicycling as a form of “active travel” is an easy way to integrate physical activity into daily life, with many benefits for health. Yet this potential is largely untapped in the U.S., where less than 1% of workers commute by bicycle. The problem may start as early as childhood, given a steep decline in bicycling to school among children in the U.S., particularly among high school students. This paper examines childhood and teenage experiences with and attitudes towards bicycling as seen in retrospect from adulthood. The results are drawn from a larger study that set out to explore the effect of experiences throughout life on the formation of attitudes towards bicycling. Fifty-four adult participants responded to open-ended interview questions regarding their bicycling experiences throughout their life course, starting from childhood. Results show that the way in which participants thought about bicycling changed from elementary school to high school, leading to decreased bicycling in teenage years and influencing attitudes and behavior as adults. High school students, especially females, were particularly sensitive to negative images associated with bicycling. The strong influence of social norms has important implications for policy.

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1. Introduction

Bicycling as a form of “active travel” is an easy way to integrate physical activity into a person’s daily life, thereby helping to reduce the risk of heart disease, improve mental health, lower blood pressure, and reduce risk of overweight and obesity (Frank et al., 2004). Riding a bicycle can raise the heart rate sufficiently to improve cardiovascular fitness, which is linked to improved health outcomes for both young people and adults (Cooper et al., 2008; Hamer and Chida, 2008; Shephard, 2008; de Geus, Joncheere et al., 2009). The potential for bicycling to increase overall physical activity is especially important at a time when the prevalence of obesity has increased significantly in the United States and worldwide (World Health Organization, 2011; Centers for Disease Control and Prevention, 2010; Withrow and Alter, 2011).

Yet this potential is largely untapped in the U.S., where less than 1% of workers commute by bicycle (Pucher and Buehler, 2010). The problem may start as early as childhood. It appears that children living in bicycle-friendly countries, where bicycling levels increase over the course of childhood, are more likely to become bicycling adults (Pucher and Buehler, 2008). If so, the converse may also be true: the low level of bicycling among adults in the U.S.

could in part stem from unpleasant bicycling experiences in childhood, assuming any experience with bicycling at all. Indeed, the share of children (from kindergarten through grade 8) walking or bicycling to school dropped from 47.7% in 1969 to 10.7% in 2009, with bicycling accounting for just 1.1% of school trips in that year (McDonald et al., 2011). Bicycling declined significantly from 1969 to 2001 at the high school level, mirrored by an increase in driving to school (McDonald, 2007).

To explore these potential connections, we examine childhood and teenage experiences with and attitudes towards bicycling as seen in retrospect from adulthood. The results presented here are drawn from a larger study that set out to investigate the effect of experiences throughout life on the formation of attitudes towards bicycling. Fifty-four adults living in Davis, California participated in semi-structured interviews regarding their bicycling experiences throughout their life course, starting from childhood. Our analysis of these interviews shows that the way in which participants viewed bicycling changed over the course of their youth, leading to decreased bicycling as teenagers and influencing attitudes and behavior as adults.

2. Background

An attitude is “an evaluative response to some object which disposes a person to behave in a certain way toward it” (Ajzen, 1991). Attitude formation is complex, and varies over time, across

* Corresponding author. Tel.: +1 530 752 5878.

E-mail address: slhandy@ucdavis.edu (S.L. Handy).

situations, and according to individual experiences (Krosnik et al., 2005). Social psychologists suggest that attitudes are formed through a combination of socialization experiences and cultural influences, and people may be highly conscious of their attitudes toward an object, or their attitudes may be completely outside of their awareness (Albarracin et al., 2005; Devos, 2008).

Previous work has established the important role that attitudes play in shaping decisions about daily travel (Fujii and Kitamura, 2003; Sunkanapalli et al., 2003; Parkany et al., 2005; Johansson et al., 2006; Beirão and Sarsfield Cabral, 2007; Domarchi et al., 2008). Several studies document the importance of attitudes in explaining bicycling behavior in particular. For example, a study from the Netherlands found that a positive attitude toward bicycling was positively associated with bicycle commuting (Heinen et al., 2011). Similarly, a study in Davis, California, renowned for its extensive bicycle infrastructure and otherwise supportive bicycling conditions, found a strong connection between “liking biking” and both bicycle ownership and regular bicycle use, as well as bicycle commuting (Handy et al., 2010). Positive attitudes towards bicycling were also found to be important predictors of bicycle commuting in Portland (Dill and Voros, 2007). Jensen (2008) concluded that attitudes are an important factor in mode choice among children in Denmark.

Although few studies focus on the formation of these attitudes, those that do suggest an important role for social factors. A seminal report by Davies et al. (1997) found that attitudes towards bicycling in the UK are influenced by life stage, gender, peer pressure, societal norms, and other factors. Pucher et al. (1999) pointed out an inherent relationship between the “public image” of bicycling and the general attitude toward bicycling within a particular country or region. More recently, a study in the UK found that those who use a bicycle are likely to have a more positive view of a typical cyclist than those who do not bicycle (Gatersleben and Haddad, 2010). Similarly, the Safe Routes to School National Partnership (2011) states that, “Bicycling may have the stigma, similar to riding the city bus, of being something that only the desperate use, or only a sport for middle class white males, or even the symbol of gentrification in some communities.” Steinbach et al. (2011) suggest that the meaning people give to bicycling might resonate differently across gender, ethnic, and class identities. Aldred (2012) takes this idea further in her discussion of “cyclist identities” and the many forms of stigma associated with bicycling in the UK. In other words, individual attitudes toward bicycling are inextricably linked to bicycling image and community norms.

The few studies that focus on teenagers and bicycling suggest that image plays an especially important role at this stage of life. A study in the United Kingdom (UK) showed that for young girls in North Liverpool, “cycling has significant image problems, with many saying that they would not consider cycling as a regular mode of transport” (Cavill and Watkins, 2007). In contrast, a study in Canada concluded that teenage participants continued to bicycle into their mid-teens because early motivating factors (independence, fun, speed, and time efficiency) as well as fitness

and health outweighed any negative comments from peers (Orsini, 2007). A life-course study in Australia found that bicycling as a form of mobility is often abandoned after childhood and that teenage girls abandon bicycling not because of the lack of “coolness” but because other modes of transportation are more social (Bonham and Wilson, 2012).

The way teens feel about bicycling may be confounded by prevailing attitudes towards cars and driving. Getting a driver’s license at 16 years old has long been an American rite of passage. Using data from the National Young Driver Survey of 2007, the Children’s Hospital of Philadelphia reports that to teens, driving is considered an essential coming of age experience, and it has become an established aspect of teens’ maturation and socialization process (Children’s Hospital of Philadelphia, 2007). In that regard, adolescent attitudes towards bicycling are likely to be closely and inversely related to attitudes towards driving.

This study examines childhood and teenage experience with and attitudes towards bicycling as seen in retrospect from adulthood. We address several questions in our exploration. How do attitudes towards and images of bicycling evolve from elementary school through middle school and on to high school? In high school, what is the relationship between attitudes towards bicycling and attitudes towards driving and other modes? Finally, to what degree are attitudes towards bicycling in high school tied to attitudes towards bicycling in adulthood? The following sections present our methods and results, as well as a discussion of their implications for policy.

3. Methods

This study employed a qualitative, retrospective approach to exploring experiences with and attitudes towards bicycling during youth and their influence on attitudes towards bicycling activity in adulthood.

3.1. Sample

Study participants were a convenience sample of residents of Davis, California, a small city well known for its high level of bicycling by U.S. standards (Buehler and Handy, 2008; Handy et al., 2012). We recruited participants through advertisements posted in the local newspaper and through fliers that were posted at downtown businesses and distributed at a local farmer’s market. The recruitment notice solicited people interested in “participating in a study concerned with people’s attitudes toward transportation”; bicycling was not mentioned in the notice. All participants were required to be English-speaking residents of Davis between the ages of 25–65 years old. Participants were offered a \$20 gift card in exchange for participation. Our goal was to recruit 50 participants; after achieving this goal we recruited four additional male participants to achieve a more equal gender balance, for a final sample size of 54.

The sample of participants was fairly representative of both Davis, California as well as the U.S. population based on income and race (Table 1). The educational achievement level of the sample was significantly higher than that of the U.S. population, and somewhat higher than that of the Davis population. The 25–35 year age bracket was over-represented in the sample, and we interviewed more women than men (Table 2). Note that while all participants lived in Davis at the time of the interviews, only 5 grew up in Davis, and the average length of time living in Davis was 6–10 years. Only one participant had never owned a bicycle or bicycled.

Table 1
Comparing demographic characteristics ($n=54$).

	Participant sample	Davis ^a	U.S. ^a
Median age ^a	38	25.2	37.2
Median household income ^b	\$45,000	\$59,517	\$51,914
Percent white ^a (%)	74	64.9	72.4
Educational achievement: bachelor’s degree or higher ^b (%)	81	68.4	27.9

^a Census 2010 (U.S. Census Bureau, 2010a).

^b American Community Survey (ACS) 5-year estimates (U.S. Census Bureau, 2010b).

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