

# Using Social Marketing to Increase the Use of Helmets Among Bicyclists

Timothy D. Ludwig, PhD; Chris Buchholz, PhD; Steven W. Clarke, MA

**Abstract.** In this study, the authors investigated a social marketing intervention to increase the use of bicycle helmets on a university campus in the southeastern United States. Focus groups of students developed a bicycle helmet program slogan and logo (ie, "The Grateful Head"). The authors trained student bicyclists who already used helmets ( $n = 15$ ) as peer agents. These agents provided bicycle helmet information and asked fellow bicyclists to sign a pledge card to wear a helmet. They gave a coupon for a free helmet to those who pledged to wear a helmet. The authors received a total of 379 pledge cards and distributed 259 helmets. Bicycle helmet use rose from a baseline mean of 27.6% to a mean of 49.3% by the last week of the intervention.

**Key Words:** bicycle helmets, social marketing, injury control

In 1999, 750 bicyclists died and an additional 51,000 were injured as a result of bicycle accidents in the United States.<sup>1</sup> Approximately 450,000 to 587,000 emergency room visits occur annually because of bicycle-related accidents.<sup>2,3</sup> It is likely that these crash-related outcomes are underestimated given that those involved in the crashes only report approximately 33% of biking injuries.<sup>4,5</sup> Other estimates suggest as many as 1,600 bicyclists may die and 175,000 may be injured annually in bicycle accidents.<sup>6,7</sup> Injury to the head is the cause of 70% to 85% of bicycle crash deaths.<sup>8-10</sup>

Research studies estimate that wearing a bicycle helmet can reduce the risk of head injury by 45% to 85%, the risk of head trauma by 45% to 88%, the risk of brain injury by 33%,<sup>8,11-13</sup> and deaths from head injury by at least 29%<sup>11</sup> and as much as 90%,<sup>14</sup> depending on helmet type. To trans-

late this into real numbers, bicyclists could avoid as many as 500 deaths and 150,000 head injuries each year if they wore safety helmets.<sup>3,15</sup>

Despite its effectiveness in preventing serious injury and death, helmet use remains alarmingly low among bicyclists.<sup>16</sup> Only an estimated 18% of bicyclists report wearing their helmets all the time, and 76% report never wearing helmets. Of those who have helmets, only 49% report wearing them all the time, and 13% never wear them.<sup>17</sup> Because of this evidence, the Task Force on National Health Objectives set a goal (objectives 15 to 23 published in *Healthy Campus 2010*) to reach 24% for on-campus bicycle helmet use, or an increase of 13 percentage points.<sup>18</sup> Additionally, the National Highway Traffic Safety Administration (NHTSA) set a goal for bicyclist helmet use in their *National Strategies for Advancing Bicycle Safety*.<sup>19</sup> One of the strategies that the NHTSA outlined in this goal was to promote and monitor the effectiveness of community and school-based bicycle helmet programs.

Most promotion campaigns focus on school-aged children's bicycle helmet use. However, college students are an especially relevant at-risk population for biking injuries. In a small convenience sample of 100 college students, Fullerton and Becker<sup>20</sup> found that 18% of college student bicyclists reported being hospitalized as a result of bicycling injuries and 65% reported suffering minor injuries on bicycles. Another study found that 66% of college student helmet users knew someone who had been in a bicycle accident.<sup>21</sup> Furthermore, although studies show that around 30% of college students own helmets, only 5% to 11% of regular bicyclists report that they wear their helmet frequently.<sup>18,22,23</sup>

## Social Marketing as an Injury Control Strategy

Prohibitive cost, lack of comfort, and peer disapproval are major reasons bicyclists give for not wearing a safety

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helmet.<sup>17,20,24,25</sup> This suggests that interventions designed to increase bicycle helmet use should increase the availability of low-cost bicycle helmets and attempt to counteract negative peer influence.

A "social marketing" approach that suggests market intervention strategies for the target population has special potential to benefit safety promotion interventions.<sup>26</sup> Health promotion interventions frequently use social marketing.<sup>27,28</sup> It is also a strong approach for promoting social action in numerous societal problem areas such as cancer detection, forest fire prevention, dental hygiene, transportation safety, alcohol abuse, child abuse, family planning, famine, and environmental preservation.<sup>29,30</sup>

Social marketing is described as customer driven. It seeks to segment the population; reduce the influence of competing behaviors and "barriers" to the desired behavior; and combine key intervention components of correct product, price, place, and promotion.<sup>31,32</sup> Geller<sup>26</sup> integrated social marketing techniques with those of psychology to include behavioral components such as prompts, contingencies, and attitude change (see also McKenzie-Mohr and Smith<sup>30</sup>). This integration of psychology and marketing differs from education-only approaches in which knowledge is the primary outcome and is distinguished from regulatory methods (eg, helmet use laws) that use policy and enforcement to change behavior.<sup>33</sup> Colleges have successfully used social marketing to promote smoking cessation on campus through point-of-purchase advertising and the use of peer agents.<sup>34</sup> Similarly, many colleges have used the technique of social norm marketing in attempts to reduce high-risk drinking on college campuses.<sup>35,36</sup>

We developed our multifaceted bicycle helmet program according to the social marketing approach and followed Geller's<sup>26</sup> suggestion that the success of a prevention intervention depends on 4 methods: (1) Packaging the process in a format that is desirable and acceptable to the target audience; (2) promoting the intervention in a way that makes the desired behavior change familiar, acceptable, and desirable; (3) conducting the intervention in a manner that facilitates communication between change agents and target individuals; and (4) minimizing barriers (eg, cost of owning a helmet) that prohibit individuals from engaging in desired behaviors.

### Peer Agents

Evidence suggests that both adults and children tend to adapt their helmet use behaviors to that of their fellow bicyclists.<sup>37-39</sup> College student bicyclists who have friends who wear helmets are significantly more likely to report helmet use themselves.<sup>21</sup> Coron and McLaughlin's<sup>21</sup> survey of 272 college students found that 72% of helmet users had received recommendations from other bicyclists to wear their helmet. If these helmet-wearing bicyclists in turn promoted helmet use among their peers, we would expect an even greater impact.

Research in behavior change often makes a clear distinction between the target of an intervention and the agent of

change.<sup>40,41</sup> Peer agents are responsible for conducting the intervention program and promoting the desirable behavior. There are numerous examples of successful community behavior change projects in which the police,<sup>42</sup> industry workers,<sup>43</sup> supermarket employees,<sup>44</sup> and fast food employees<sup>45</sup> function as agents to advocate change.

Indeed, Coron and McLaughlin<sup>21</sup> suggest that bicycle helmet promotions on college campuses should include college students recommending helmets to other college students. In the intervention in the present study, we enrolled student bicyclists to promote bicycle helmet use among their peers on a university campus. In addition, the employees of the participating bicycle store delivered the intervention's safety messages to store patrons. By recruiting and using agents indigenous to the population to deliver the intervention, our goal was to reach more people and to do so in a culture-specific manner that was consistent with a social marketing approach.

### Pledge Cards

Peer agents in the present study encouraged their fellow student bicyclists to make a personal commitment to wear bicycle helmets. Students confirmed their commitment by signing a pledge card. If the student bicyclist signed the pledge card, the agents gave them a coupon for a free helmet. Past researchers have used pledge cards successfully to increase safe driving behaviors.<sup>46-49</sup> Pledge cards name the behavior to which the pledger is committing (eg, wearing a bicycle helmet), include a statement of commitment, and provide a place for participants to sign.

### Helmet Distribution

Fullerton and Becker<sup>20</sup> reported that only 31% of college-aged bicyclists in their sample even owned a helmet. Because of the low prevalence of bicycle helmet ownership among college students, any intervention targeting this population has to first increase the ownership of helmets. There is some evidence that discounting or providing free helmets is related to higher helmet ownership and use. According to Page and colleagues,<sup>50</sup> college students who only occasionally used bicycle helmets reported that helmets were too expensive to own. Liller, et al<sup>51</sup> showed that helmet purchases increased significantly when helmets were discounted in the context of community education programs. Furthermore, community-wide educational campaigns paired with helmet discount coupons increased helmet use from 5% to 40% over 5 years.<sup>52</sup> Parkin and colleagues<sup>39</sup> found similar results in Canada.

However, past research suggests that distributing free helmets increases bicycle helmet use only temporarily among children and may not be effective for older individuals.<sup>53</sup> Instead of simply distributing free helmets, Logan and colleagues<sup>53</sup> suggest that giveaways should be coordinated with other activities to be effective (see also Gilchrist and colleagues<sup>54</sup>). In the present study, we paired the distribution of free helmets with education literature and pledge cards.

We did not make helmets readily available; the agents did not hand bicyclists a helmet directly. Instead, agents gave bicyclists who signed the pledge card an opportunity to act on their pledges by traveling to the participating bicycle shop to get their helmets. We presumed that bicyclists who made the extra effort to get their helmets would be more likely to wear them than if the agents handed out helmets on the spot.

### Overview

In the present study, we tested the hypothesis that a multicomponent intervention based on a social marketing approach would increase the prevalence of bicycle helmet use on a university campus in the southeastern United States. We conducted observations of bicycle helmet use before and during the intervention program. Trained peer agents provided student bicyclists with information regarding the benefits of using bicycle helmets. They also encouraged student bicyclists to make a pledge to wear a helmet each time they rode their bicycle. If the students signed the pledge card, the agent then gave the student a coupon for a free helmet at a local bicycle shop.

## METHOD

### Subjects and Settings

We targeted students at a midsized university in the southeastern United States for the bicycle helmet intervention. The university enrolls approximately 13,000 students and is located in a town of approximately 34,000. The surrounding community had an ordinance requiring the use of helmets for all bicyclists on town streets. However, the bicycle helmet use law did not extend to the target university campus, which had no policies concerning bicycle helmet use on the campus. In this study, we did not mention the town law in intervention materials, and we did not conduct any data on the town's enforcement of the law.

We also collected data at a nontreatment control university that enrolls approximately 23,000 students and is located in a town of approximately 30,000 about a 3-hour drive from the target university. We chose this university because of the similar characteristics of both the university and town, and an available research staff, led by the third author, that was familiar with the study design.

A local bicycle shop with 8 employees participated in the helmet promotion project by distributing helmets and safety information. The bicycle shop was located approximately 100 feet from the main entrance to the target university's campus.

The Institutional Review Board of both universities approved the conduct of this study prior to data collection. Because this was a naturalistic study observing bicycle helmet use of college students on and off campus, we did not gather informed consent.

### Research Design

We conducted this study over baseline, intervention, and withdrawal phases at the target university (ie, ABA Design), with 3 longer term follow-up "probes" of bicycle helmet

use. We collected data at the control site over the same period of time.

A team of 10 trained research assistants at each university collected the field data. The research assistants split each campus into 4 zones, each with a main street, parking area, and sidewalks. Assistants then patrolled these zones during random 1-hour blocks from 8 AM to 4 PM. At least 3 observation sessions per day occurred in each of the zones, Monday through Friday. We instructed the research assistants to pick points on the road or sidewalk and record data on the first bicyclist passing that point. After recording the data, they were to look back at that point until the next bicycle passed.

We collected interrater reliability intermittently by having 2 independent observers at the same site. The pair of observers picked a spot on the road or sidewalk and agreed on the bicycle to be observed. They then made independent recordings of the data without discussing what they saw.

These systematic field observations of bicycle helmet use occurred (1) during a baseline phase lasting 3 weeks before the initiation of the intervention program, (2) throughout the 5-week intervention period, and (3) 3 weeks after we withdrew the intervention. We determined follow-up probes at random between weeks 20 to 65. Consequently, we conducted observations for 1 week during weeks 32, 45, and 52 to determine the long-term maintenance of the program.

We observed bicycle helmet use throughout the study at the nontreatment control university as well. Research assistants at the control university received the same training, check sheets, and observation protocol as those at the treatment university. However, we did not conduct any follow-up observations at the control site.

For exploratory purposes, research assistants also recorded the type of road, bicyclist gender, type of bicycle (mountain, road, or trick), the presence of a backpack or bicycle pack, and the location of the observation (on campus or in town). They recorded the use of hand signals if the bicyclist made a turn of at least 45° during the observation.

## Materials

### Logo and Slogan Design

Five months before the beginning of the study, we recruited a focus group of 20 university students from patrons at the campus' Student Center as they passed our table. After assembling in a classroom, we asked focus group members to brainstorm slogans that promoted bicycle helmet use in a way that would gain the attention of their peers. The group created 5 different slogans. We then surveyed a group of 200 undergraduates as they passed our table in the campus' Student Center and asked which of the 5 slogans they felt was most likely to gain their attention and make them want to participate in a bicycle helmet safety campaign. The slogan "Grateful Head" received 78% of survey responses. We took the Grateful Head slogan and a rough logo design to a professional artist, who created the intervention materials.

## Intervention Brochure

The intervention brochure was a glossy gold and white trifold pamphlet that featured the Grateful Head slogan and logo. Figure 1 shows the brochure cover. The inside of the front fold of the brochure provided facts concerning bicycle-related injuries, especially head trauma, and the benefits of bicycle helmet use, followed by a description of the bicycle helmet promotion. The back of the brochure contained a pledge card and a free helmet coupon, both of which could be detached.

The pledge card contained response panels for the bicyclist's name, e-mail address, and university status. It also had a signature panel where the bicyclist could sign under the statement, "I PLEDGE to wear my bicycle helmet during the semester and to wear the Grateful Head sticker on my helmet as a sign of my commitment." The helmet

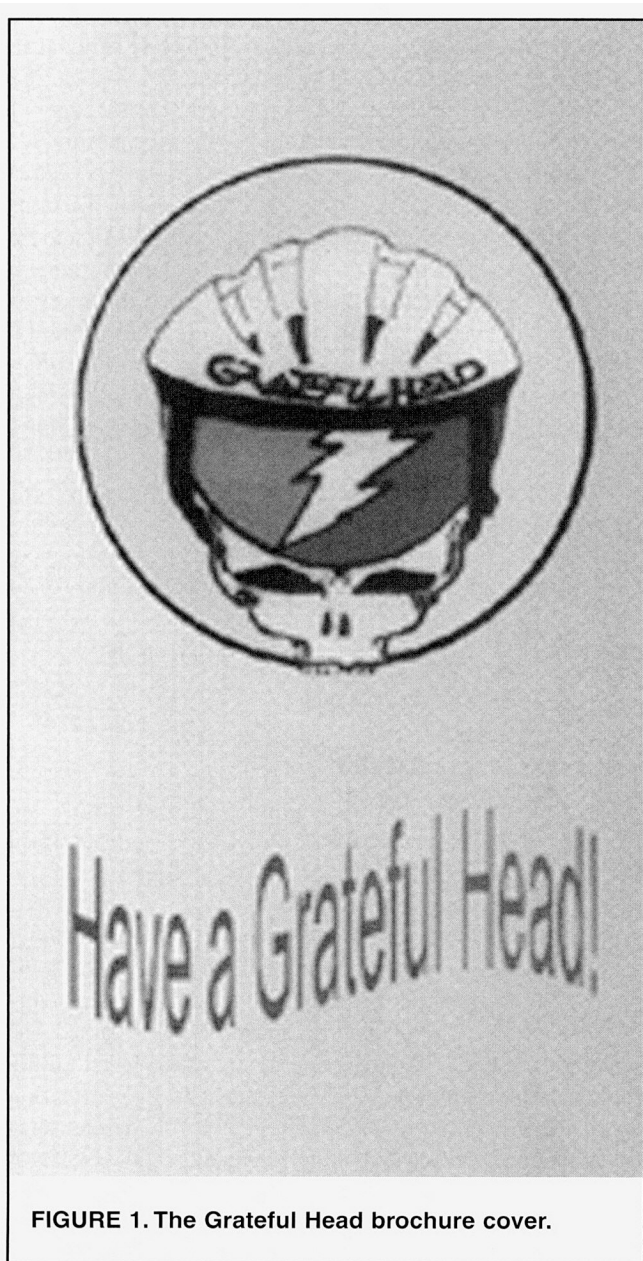


FIGURE 1. The Grateful Head brochure cover.

coupon had the program logo printed on it adjacent to the logo of the bicycle shop participating in the project. The coupon was good for a free helmet or, if the bicyclist already had a helmet, for \$15 toward other safety equipment identified in advance by the shop personnel.

## Program Sticker

The program sticker was 2 inches in diameter and displayed the yellow Grateful Head logo. We affixed these stickers to the free helmets to help identify the bicyclist as a participant in the program.

## Intervention

### Recruitment and Training of Peer Agents

Prior to the intervention, we recruited 15 bicyclists who we had observed wearing their helmets as peer agents to promote and disseminate the interventions on campus. Agents earned a \$25 gift certificate to be used at the participating bicycle shop if they attended a short training session and then recruited at least 10 bicyclists to sign and return a pledge card confirming their intent to wear a bicycle helmet.

We then trained these peer agents, along with bicycle shop personnel, in a 1-hour meeting at the participating bicycle shop. The training session had the following components: (1) overview of the campus intervention; (2) explanation of the pledge intervention; (3) explanation of peer agent activities, including specifics about interactions with campus bicyclists and completion of the agent logs; (4) individual role-playing; (5) delineation of our goal setting the number of target contacts intended per week and the number of returned pledge cards (set at 10) agents needed to receive their gift certificate; and (6) information regarding a "safety hotline" phone to request answers to specific questions and receive updates on intervention progress. We tracked the peer agent's performance in getting pledges via identification numbers printed on the pledge cards.

During the training session, we distributed and explained promotional packets and agent logs. We instructed bicycle shop employees who attended the training on how to discuss correct bicycle helmet use, put a sticker with the Grateful Head logo on the helmet to signify the customer's pledge, and give a helmet to the coupon holder.

### Pledge Intervention

After the training session, peer agents approached individuals riding bicycles who they observed either not wearing a bicycle helmet or wearing a bicycle helmet without a pledge sticker. They explained that they were involved in a campus-wide safety campaign to get bicyclists to make pledges to wear bicycle helmets and to wear stickers on their helmets as a sign of their safety commitment. The peer agent then offered the intervention brochure, which was rolled inside of a bicycle water bottle that the bicyclist received for talking to the agent. If the bicyclist decided to participate in the program, the bicyclist signed the pledge

card and gave it to the intervention agent. The peer agent then handed the bicyclist the coupon for a free helmet. Peer agents interacted with students only on the target university campus and not in the surrounding town. Faculty and staff could participate in the program, but a review of the pledge cards revealed that none had participated.

The bicyclist could then go to the participating store to redeem their helmet from a Grateful Head display located prominently in the sales area. When the bicyclist approached the checkout, the employees gave them personal accounts of helmet use (eg, about a friend hurt in an accident), placed the Grateful Head sticker on the helmet, and turned the helmet over to the bicyclist. The employees did not offer a free helmet to patrons of the bicycle store who did not have a Grateful Head coupon. The bicycle shop participating in this study provided the helmets to the program at half their cost.

At the end of the 5-week program, peer agents stopped handing out information, pledge cards, and helmet coupons. The coupons expired a week later. We paid for all costs associated with the project, including half of the helmet costs, water bottles, information pamphlets, and gift certificates, with a grant from the University of North Carolina Injury Prevention Research Center.

**RESULTS**

**Pledge Cards**

Bicyclists signed a total of 379 pledge cards over the course of the 5-week program and redeemed a total of 242 coupons at the bicycle store. Therefore, 64% of those who signed pledge cards also redeemed their coupons. Bicyclists redeemed a total of 22 coupons the first week of the pro-

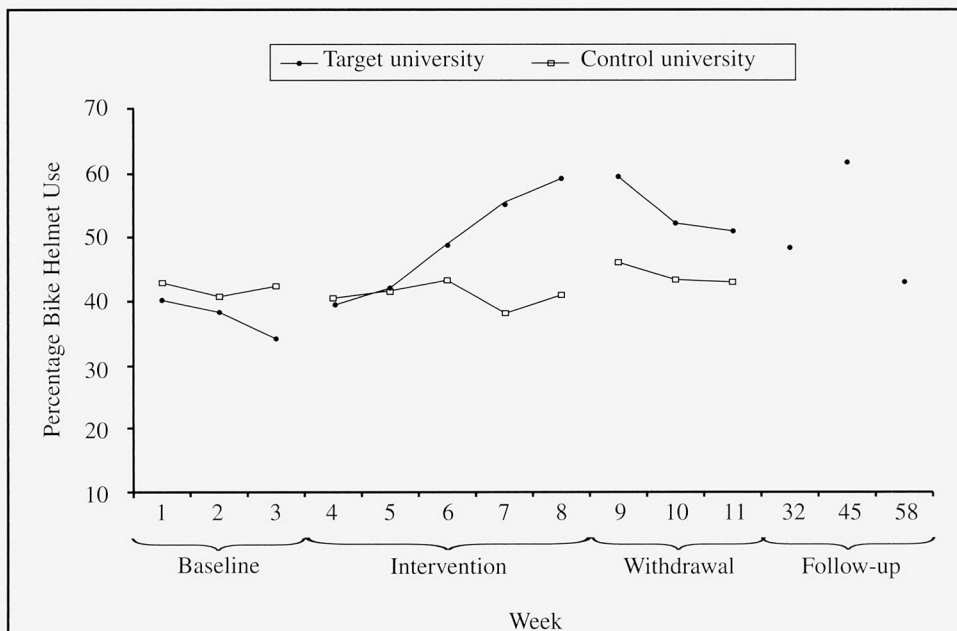
gram, an additional 21 the second week, 19 the third week, 36 the fourth week, and an additional 112 during the final week of the program. They redeemed an additional 32 the following week. Of the 242 coupons redeemed, bicyclists used 27 coupons for the \$15 of safety merchandise because they already owned a helmet.

**Interobserver Reliability**

We conducted independent observations to assess interobserver reliability on 23% of the observations. We calculated interobserver agreement percentages by dividing the total number of observations agreed upon between the 2 observers by the total number of observations and multiplying the result by 100. There was 98% agreement on the occurrence of helmet use, 100% agreement on the use of backpacks, 89% agreement on the type of bicycle, 91% agreement on the type of road, and 72% agreement on the use of hand signals.

**Bicycle Helmet Use**

Overall, observers recorded 9,737 bicyclists' behaviors at the 2 universities (target university = 3,717; control university = 6,020). Figure 2 depicts the mean weekly bicycle helmet use at both universities. A Kruskal-Wallis analysis revealed a significant increase in bicycle helmet use at the target university over the course of the study ( $H = 25.085, p < .05$ ). The baseline mean helmet use at the target university was 26.1% (1,330 observations). Bicycle helmet use rose consistently during the 3 weeks of the baseline phase and the 5 weeks of the intervention to a mean of 49.3%, resulting in a bicycle helmet mean of 39.1% for the intervention phase (1,769 observations). Bicycle helmet use



**FIGURE 2. Percentage of bicycle helmet use across baseline, intervention, withdrawal, and follow-up phases.**



continued in the 3 weeks after the conclusion of the intervention (ie, withdrawal phase) to a mean of 44.4% (618 observations). Follow-up data collection revealed bicycle helmet use maintained at 38.6% at 32 weeks, 52% at 45 weeks, and 33.2% at 58 weeks into the study.

Bicycle helmet use at the control university remained stable over the same time period ( $H = 3.419$ ,  $p = .844$ ) with a mean of 11.8% (3,755 observations) during the target university's baseline, 11.2% (1,457 observations) during the intervention, and 14.2% (808 observations) during withdrawal. We did not conduct any follow-up observations at the control site.

### Exploratory Data

We explored correlates of bicycle helmet use in this study (presented in Table 1). There was a large difference between bicycle helmet use observed on the target university campus, where no helmet rules existed, and in the surrounding town, where a helmet use law was in effect,  $\chi^2(1, N = 3,694) = 39.19$ ,  $p < .05$ . Bicyclists wore their helmets significantly more when using roads than when riding in a parking lot or sidewalks prominent near class buildings on campus,  $\chi^2(3, N = 3,713) = 13.14$ ,  $p < .05$ . Bicyclists using trick bicycles wore their helmets significantly less than those riding other types of bicycles,  $\chi^2(2, N = 3,668) = 27.26$ ,  $p < .05$ . There was not a significant difference in bicycle helmet use between women and men,  $\chi^2(1, N = 3,710) = .219$ ,  $p = .64$ . There was a significant difference between bicycle helmet use observed by bicyclers wearing a backpack and those who were not,  $\chi^2(1, N = 3,710) = 10.86$ ,  $p < .05$ . Finally, a chi-square analysis revealed a significant relationship between the use of hand signals and the use of helmets,  $\chi^2(1, N = 386) = 15.06$ ,  $p < .05$ .

## COMMENT

### Overall Bicycle Helmet Use

Bicycle helmet use at the target university increased gradually but substantially over the 5 weeks during which agents were disseminating intervention materials. This increase continued during a subsequent withdrawal phase and longer term follow-up observations collected 22 weeks later. We presumed that the increase during the intervention was gradual because it took time to approach bicyclists with the pledge cards and for the bicyclists to go to the store to receive their helmets. Likewise, the maintained increase during the withdrawal phase, during which agents no longer solicited pledge cards, could be partially attributable to some individuals still retrieving their new helmets during the first week of this phase. Nevertheless, bicycle helmet use remained above baseline levels after the peer agents stopped soliciting pledges, indicating that bicyclists were still acting on their pledges.

We used a control university to assess for potential history effects. For example, we conducted this study in the fall, when average temperatures dropped approximately 30°F over the 11 weeks of the study. It is possible that, as the weather became less inviting for the casual bicyclist, only more serious bicyclists were riding. It is possible that bicycle helmet use would change under these circumstances. However, a concomitant increase in helmet use did not occur at the control university, suggesting that seasonal changes may not have accounted for increased helmet use in this study.

We devised the tactics that we used to influence bicycle

**TABLE 1. Comparisons of College Students Using Helmets Before and During the Grateful Head Program**

Variable	Before program		During program	
	%	No. observations	%	No. observations
Location				
On campus	22	1,163	34	1,995
In town	67	158	68	378
Type of road				
4-lane	55	148	70	198
2-lane	48	199	54	350
Parking lot	18	844	34	1,538
Sidewalk	30	139	32	297
Type of bicycle				
Mountain	30	963	53	1,537
Road	25	274	39	662
Trick	1	78	18	154
Backpack use				
Backpack	22	1,027	37	1,883
No backpack	45	302	50	498
Gender				
Female	31	209	46	419
Male	27	1,119	38	1,963
Hand signal use	0.6	170	10	216

helmet use to be consistent with the social marketing technique shown to be successful in other community-based health and safety efforts.<sup>20,30</sup> In this study, university students helped create the intervention materials that we handed out to other students to use images and language appropriate for their culture. Additionally, we used information about bicycle helmet use, both written and orally presented by the student agents, as antecedent prompts to influence helmet use and to suggest that helmet use is approved and encouraged among the bicyclist's peer group. To emphasize this point further, employees of the bicycle shops also delivered bicycle helmet use information. We designed these tactics to create intervention materials and interactions that were more indigenous to the campus culture.

Enlisting people as intervention agents may be a very effective method in helping them maintain and increase their own desirable behaviors.<sup>40</sup> It is suggested that 78% of new helmet users would recommend helmets to other students.<sup>21</sup> Future studies should collect data to measure the behavior of the peer agents and the possible use of new helmet users as agents.

Green, et al.<sup>55</sup> suggested that community-based behavior change efforts should make available the resources necessary to perform the behavior. In the present study, we provided free bicycle helmets available at a conveniently located business. Results of another study<sup>52</sup> showed that bicycle helmet giveaways are moderately effective in increasing helmet use, but only for a short period of time. This intervention required students to devote some of their own time and effort to get the helmet. Because of this, we hoped they would be more likely to continue wearing the helmet as they bicycled in the future. In any case, simply getting bicycle helmets into the hands of college student bicyclists is a first step in promoting their on-road safety.

Green, et al.<sup>55</sup> also suggested using techniques that promote the institutionalization of an intervention process. Indeed, if the current intervention was institutionalized with similar results, the host university would have met their objective regarding the use of helmets by bicyclists as outlined in *Healthy Campus 2010*.<sup>18</sup>

The ideal is for a bicycle helmet program such as the one we evaluated in this study to continue without ceasing. Instead, bicycle clubs composed of student biking enthusiasts could conduct a program such as this at the beginning of each academic year. Likewise, some colleges and universities require the registration of bicycles that are intended to be used on campus. Students could be issued pledge cards and free-helmet coupons upon registration. More students may indeed register their bicycles if they might receive free bicycle equipment.

The availability of free bicycle helmets was an integral part of our helmet promotion. Local bicycle shops are an excellent source for this type of giveaway. Many bicycle shops may be willing to pay for some of the helmets (the bicycle shop participating in this study provided the helmets at half their cost) because this program draws new customers into their stores and allows their employees an

opportunity to help promote safe bicycle riding in general. This may also result in purchases of other safety equipment parts, such as gloves, tire pumps, and padding, as well as bicycle maintenance.

Future studies may want to investigate the implementation of bicycle helmet policies on college campuses. The universities in the current study did not have such a policy. We did discuss such a policy with the university police at the treatment university. The police indicated that, although the policy would be a good idea, they were not in favor of such a policy because they did not have the extra resources needed to enforce the rule.

We showed that the packaging of slogans, safety information, peer agents, free helmets, and pledge cards into a comprehensive intervention strategy is an effective method to increase bicycle helmet use on a university campus. Such interventions are worthy of future research and real-world application because they target a population that has a low prevalence rate of wearing bicycle helmets and is at risk for injury and death from head trauma. We encourage further research to determine which of the components of this intervention account for the greatest increase in helmet use.

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#### NOTE

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