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INCREASING SEAT BELT USE ON A COLLEGE CAMPUS: AN EVALUATION OF TWO PROMPTING PROCEDURES

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Seat belt use is an important factor in the prevention of automobile accidents involving injuries and fatalities. The current study used a multielement design to compare the ''Click It or Ticket'' and ''Please Buckle Up—I Care'' procedures. Results indicate that the Click It or Ticket prompt resulted in a 20-percentage-point increase in seat belt use, and Please Buckle Up—I Care resulted in a 14-percentage-point increase.

DESCRIPTORS: prompting, safety, Click It or Ticket, seat belts

Research has shown that the use of seat belts reduces the risk of fatal injury to front-seat-passenger car occupants (National Highway Traffic Safety Administration, 2004). Even though seat belt use has increased significantly over the past decade, there are still many drivers who do not buckle up.

One familiar approach to the promotion of seat belt use is known as the ''Click It or Ticket'' program. This campaign uses multiple media (television, billboards, radio) to convey a rule (Click It or Ticket), along with increased law enforcement for failure to comply, to increase seat belt use. Wells, Malenfant, Williams, and Van Houten (2000) augmented the Click It or Ticket program using feedback, posters, and flyers and found an 11% increase in seat belt use.

Another approach, called active prompting, involves individuals presenting a sign (e.g., ''Please Buckle Up—I Care'') to drivers and flipping the sign to reveal a consequence (e.g., ''Thank You'') following compliance. This procedure has been used to increase seat belt use (Thyer, Geller, Williams, & Purcell, 1987) as well as compliance with stop signs (Austin, Hackett, Gravina, & Lebbon, 2006).

The active prompting procedure and the Click It or Ticket program have both been shown to be effective for increasing seat belt use (Thyer et al., 1987; Wells et al., 2000). Both programs incorporate a rule; active prompting follows that rule with an immediate consequence (''Thank You'') and the Click It or Ticket program relies on an implied consequence (monetary fine). The present study attempted to systematically compare the efficacy of the two programs for increasing seat belt use by drivers exiting a large university parking lot.

METHOD

Setting and Participants

This study was conducted on the campus of a medium-sized university (approximately 9,000 students). Participants included drivers of automobiles who drove through a one-way exit on campus. A total of 3,299 drivers were observed over the course of the study, about 127 per hour during data collection. Data

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collection took place Monday through Friday between 11:00 a.m. and 12:00 p.m.

Materials

A data-collection sheet (available from the first author) and three two-sided white poster boards (74 cm by 50 cm) with black lettering (15 cm high) were used. During baseline, a one-sided sign stating "Have a Nice Day" was used and consisted of white text on a black background. During the intervention phase, a one-sided poster that read "Click It or Ticket" and a two-sided poster that read "Please Buckle Up—I Care" and "Thank You" were used. The Click It or Ticket sign consisted of black text on a yellow background. The Please Buckle Up—I Care sign consisted of black text on a white background.

Data Collection

Two female students, standing immediately to the side of the roadway, were responsible for conducting the interventions and data collection. One student held the sign, and the other recorded whether the driver in each approaching vehicle was wearing a seat belt, and if not, whether he or she buckled up in the presence of the observers (i.e., while stopped at the traffic signal in the presence of the sign). Passengers were not included. During interobserver agreement sessions, a third trained observer was present (also a female student).

Interobserver Agreement

Interobserver agreement data were collected for 50% of the observation sessions. The observer recorded an occurrence of seat belt use when a shoulder strap was visible over the driver's shoulder. The observer recorded an occurrence of buckling up when she observed a driver putting on his or her seat belt, usually within 9.1 m (or less) of the observer. Agreement was calculated by dividing the total number of agreements by the total number of agreements plus disagreements and converting this ratio to a percentage. Mean agreement for seat belt use was 96% overall and 97% and 96% for the Please Buckle Up—I Care and Click It or Ticket treatments, respectively. Mean agreement for buckling up was 94% overall and 95% and 93% for Please Buckle Up—I Care and Click It or Ticket, respectively.

Design and Procedure

A multielement design was used in which the two treatments were alternated following a random schedule. During baseline, which lasted for 9 consecutive days, experimenters presented a sign stating, "Have a Nice Day!" to all oncoming drivers. This was done to minimize the effect of the observers' presence when the two interventions were implemented. Otherwise, the presence of students holding clipboards during baseline would have been out of the ordinary and might have prompted drivers to alter their behavior.

During the Please Buckle Up—I Care phase, a student stood facing traffic and held a sign stating, "Please Buckle Up—I Care" at chest level. If a driver proceeded to fasten his or her seat belt, then the student quickly flipped the sign over to reveal the "Thank You!" message. This phase lasted for a total of 9 nonconsecutive days.

During the Click It or Ticket phase, which lasted for a total of 8 nonconsecutive days, a student stood facing traffic and held a sign stating "Click It or Ticket" at chest level. Unlike in the first intervention, there was no explicit consequence for compliance during this intervention. Also, there was no attempt by the students to prompt or reinforce the drivers in any way other than by displaying the sign. Finally, unlike typical Click It or Ticket campaigns, there was no obvious police presence.

RESULTS AND DISCUSSION

Figure 1 shows the overall percentage of drivers who wore a seat belt when exiting the parking lot and the percentage of drivers who buckled up in the presence of the signs. The latter is anchored to the right ordinate and

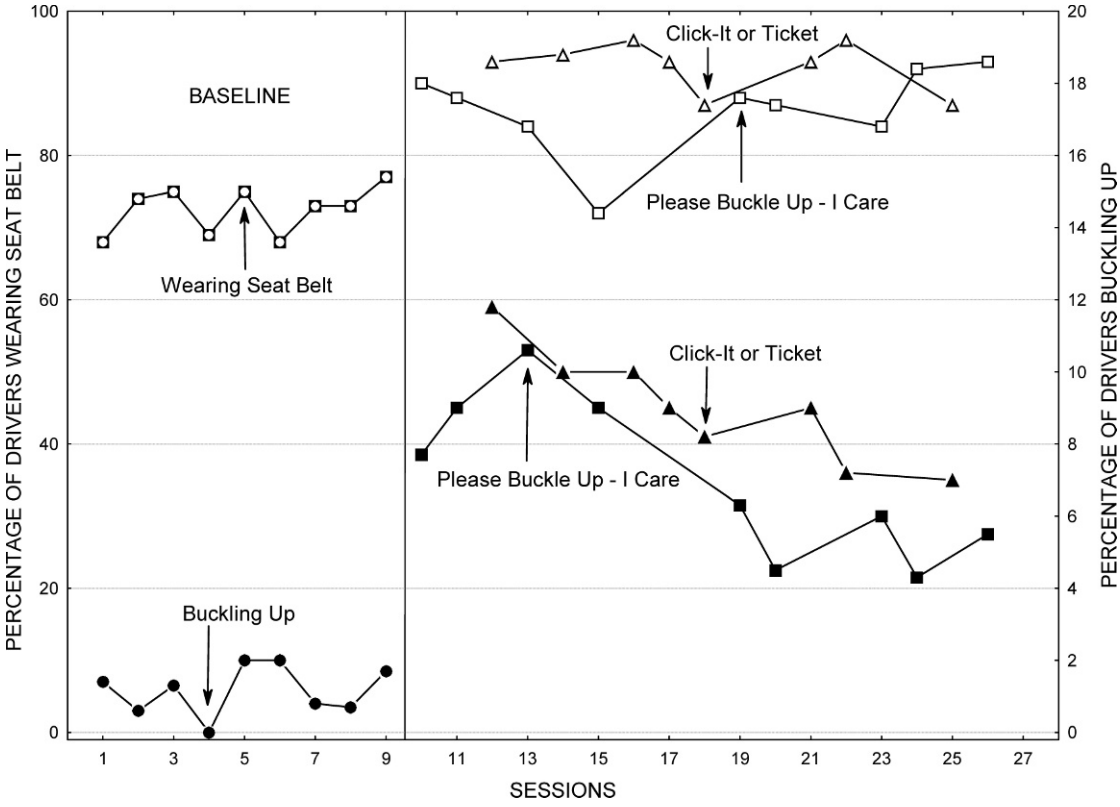

Figure 1. The percentage of drivers wearing a seat belt when exiting the parking lot (open data points), and the percentage of drivers buckling up as they approached the intervention site (filled data points). The filled data points are anchored to the right ordinate.

scaled to 20% for clarity. During the baseline phase, the mean percentage of seat belt use was 72% ($SD = 3.1$), and the mean percentage of drivers buckling up was 1.1% ($SD = 0.65$). During the Please Buckle Up—I Care phase, the mean percentage of seat belt use was 86% ($SD = 5.9$), and the mean percentage of drivers buckling up was 7% ($SD = 2.1$). During the Click It or Ticket phase, the mean percentage of seat belt use was 92% ($SD = 3.3$), and the mean for buckling up was 9% ($SD = 1.5$). Drivers exposed to the Click It or Ticket prompt were significantly more likely to wear seat belts ($M = 0.92$, $SD = 0.04$) than were drivers exposed to Please Buckle Up—I Care ($M = 0.86$, $SD = 0.06$) $t(15) = 2.36$, $p < .04$. Drivers exposed to the Click It or Ticket treatment were significantly more likely to buckle up ($M = 0.09$, $SD = 0.015$) than were drivers exposed to Please Buckle Up—I Care ($M = 0.07$, $SD = 0.02$) $t(15) = 2.16$, $p < .05$.

The results indicate that the Click It or Ticket prompt was more effective than the Please Buckle Up—I Care prompt. During the Click It or Ticket phase, compliance increased by 20 percentage points, compared to 14 percentage points during the Please Buckle Up—I Care phase. There are several possible reasons why the Click It or Ticket procedure was more effective. First, there was an ongoing Click It or Ticket campaign in the state during the course of this research, and most drivers were probably aware of the campaign and the consequences associated with the program (i.e., that noncompliance with seat belt laws is punished in the presence of police). Second,

drivers are more likely to comply with a campaign that results in a monetary fine than one that does not (Williams, Wells, McCartt, & Preusser, 2000). One problem with this type of campaign is that unless the authorities frequently and visibly penalize noncompliance, the procedure probably loses some effectiveness.

The relatively high rate of baseline seat belt use in this study could be accounted for by the fact that the Please Buckle Up—I Care procedure had been implemented and evaluated 6 months earlier (Clayton, Helms, & Simpson, 2006). The initial baseline rate of seat belt use during the earlier study was approximately 50%. This change in baseline rates of seat belt use following an intervention is not unheard of; Geller and Rudd (1985; see also Rudd & Geller, 1985) found that the active prompting campaign (e.g., Please Buckle Up—I Care) produced residual effects on each additional occurrence of the procedure. Each time an intervention was introduced, seat belt use increased 10 percentage points from the initial baseline, yet subsequent withdrawals produced response rates at least 5 percentage points higher than initial baseline responding.

This study demonstrated that the Click It or Ticket and the Please Buckle Up—I Care prompts both increase seat belt use. Even small increases in effectiveness of these procedures can translate into lives saved and injuries prevented.

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