Do As I Say Not As I Do: Observed Compliance vs. Stated
Understanding of Pedestrian Crossing Laws in Florida

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Outline

• Introduction
• Study Methodology
• Analysis and Results
• Summary and Findings
• Future Work
Introduction

• Florida had the highest number of pedestrian fatalities and fatality rate in the US since 1994. Slight drop to #5 in 2012 (latest FARS data).

![Graph showing pedestrian fatality rate per 100K population from 2008 to 2012 for Florida and the U.S.]

Introduction

• In 2011, FDOT launched the Pedestrian and Bicycle Safety Focused Initiative to reduce the number of crashes, fatalities and injuries.

• Through the teamwork of the members of the Pedestrian and Bicycle Safety Coalition, the Pedestrian and Bicycle Strategic Safety Plan (PBSSP) was created.
Introduction

• Team created safety awareness campaign to educate the public about pedestrian and bicycle related traffic laws.

• This study was conducted as part of the effectiveness evaluation of the campaign “Alert Today, Alive Tomorrow” and increased awareness of the pedestrian and bicycle safety issue.

www.AlertTodayFlorida.com
Study Methodology: Process

1. Select intersections of high pedestrian crash frequency
2. Observe how pedestrians cross the road and interact with vehicles
3. Stop the observed pedestrians and ask them questions about pedestrian related traffic laws
4. Link the answers with the observed behavior to find missing links

Study Methodology: Steps to select sites

Select Intersections
- Map crashes
- Create high crash frequency clusters
- Overlay last year’s sites (this was the 2nd year)
- Overlay High Visibility Law Enforcement activities
- Overlay Engineering treatment activities
- Select top 10 for each county
Study Methodology: Overlay of data

[Map with various symbols and labels indicating crash intersections, engineering treatments, survey sites, and law enforcement corridors.]

Study Methodology: Overlay of data

[Map with symbols and labels for crash intersections, engineering treatments, survey sites, crash segments, engineering treatments, and law enforcement corridors.]

Pedestrian and Bicycle Safety Focused Initiative Activities
Hillsborough County

Law Enforcement Corridors

Survey Sites

Crash Intersections
Engineering Treatments

Media Outreach

Crash Segments
Engineering Treatments
Study Methodology

Collect Data
- Observe behavior
- Take survey
- Link data

<table>
<thead>
<tr>
<th>No.</th>
<th>First Step</th>
<th>Second Step</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Observation</td>
<td>Survey taken</td>
<td>885</td>
</tr>
<tr>
<td>2</td>
<td>Survey taken</td>
<td>Observation</td>
<td>594</td>
</tr>
<tr>
<td>3</td>
<td>Observation</td>
<td>Survey refused</td>
<td>6,422</td>
</tr>
<tr>
<td>4</td>
<td>Survey refused</td>
<td>Observation</td>
<td>20</td>
</tr>
</tbody>
</table>
Data Collected

Observations
Pedestrians were observed on the following:
• Mode (pedestrian/bicycle)
• Crossing location (crosswalk/away from CW)
• Pedestrian signal when crossing at CW (flashing, don’t walk, walk)
• Pressed the push button if it was available (at the CW)
• Potentially distracted
• Gender
• Perceived age
• Part of a group or alone

Surveys
Pedestrians were asked about the following:
• Have they seen the messages and where
• Which direction to walk in the road
• On which pedestrian signal should they start crossing (option given in images)
• If crossing midblock between two signalized intersections is legal in FL
• If crossing at unmarked crosswalks is legal in FL
• If they push the button, when present
• If they have access to a vehicle and used it regularly
• Demographics (gender, age, zip code, ethnicity, and race)
### Data Collected

<table>
<thead>
<tr>
<th>County</th>
<th># Sites</th>
<th># Observations</th>
<th># Surveys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hillsborough</td>
<td>10</td>
<td>826</td>
<td>165</td>
</tr>
<tr>
<td>Pinellas</td>
<td>10</td>
<td>883</td>
<td>145</td>
</tr>
<tr>
<td>Miami-Dade</td>
<td>15</td>
<td>2,109</td>
<td>361</td>
</tr>
<tr>
<td>Broward</td>
<td>10</td>
<td>838</td>
<td>138</td>
</tr>
<tr>
<td>Palm Beach</td>
<td>10</td>
<td>534</td>
<td>104</td>
</tr>
<tr>
<td>Lee</td>
<td>12</td>
<td>491</td>
<td>106</td>
</tr>
<tr>
<td>Orange</td>
<td>10</td>
<td>623</td>
<td>146</td>
</tr>
<tr>
<td>Volusia</td>
<td>10</td>
<td>604</td>
<td>156</td>
</tr>
<tr>
<td>Duval</td>
<td>12</td>
<td>494</td>
<td>128</td>
</tr>
<tr>
<td>Polk</td>
<td>8</td>
<td>215</td>
<td>59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>107</td>
<td><strong>7,617</strong></td>
<td><strong>1,508</strong></td>
</tr>
</tbody>
</table>

Note: * Totals do not match analyzed data.  
This is the raw data before cleanup.

### Results

**Attributes**

<table>
<thead>
<tr>
<th>Attributes</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations</td>
<td>7,617</td>
</tr>
<tr>
<td>Female</td>
<td>26%</td>
</tr>
<tr>
<td>Male</td>
<td>74%</td>
</tr>
<tr>
<td>Possibly distracted</td>
<td>19%</td>
</tr>
</tbody>
</table>

**Observed Age**

- <18: 6%
- 19-29: 26%
- 30-49: 25%
- 50-64: 41%
- 65+: 2%

**Crossing Location**

- Away from crosswalk: 30%
- Steady red hand: 7%
- Flashing red hand: 32%
- White man signal: 31%

40% pressed the button, 60% did not.
Results

Away from the crosswalk
31%

At the crosswalk
69%

Results

Vehicle yielded
86%

Vehicle did not yield
14%
Results

• Approximately 18% had seen the campaign messages before asked
• Where did you see the message?

![Bar chart showing where campaign messages were seen.](chart1)

Analysis: Reply to question: when walking along a road without sidewalks you should...

![Bar chart showing analysis results.](chart2)
### Analysis: Observations vs. Survey Responses

**Response to question:** Crossing midblock between two signalized intersections is Legal in FL

<table>
<thead>
<tr>
<th>Crossing Location</th>
<th>False</th>
<th>True</th>
</tr>
</thead>
<tbody>
<tr>
<td>Away from crosswalk</td>
<td>6%</td>
<td>1%</td>
</tr>
<tr>
<td>At the crosswalk</td>
<td>82%</td>
<td>11%</td>
</tr>
</tbody>
</table>

**Response to question:** Do you use the push button when it is available

<table>
<thead>
<tr>
<th>Pressed the button</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>7%</td>
<td>17%</td>
</tr>
<tr>
<td>Yes</td>
<td>3%</td>
<td>57%</td>
</tr>
<tr>
<td>N/A</td>
<td>3%</td>
<td>13%</td>
</tr>
</tbody>
</table>

**Response to question:** A pedestrian can START crossing with the following signal

<table>
<thead>
<tr>
<th>Signal</th>
<th>0.7%</th>
<th>7.6%</th>
<th>0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.0%</td>
<td>63.5%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2</td>
<td>2.2%</td>
<td>24.4%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>
Behavior Modification

Sequence
- Observe behavior then take survey
 OR
- Take survey then observe behavior

<table>
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Behavior Modification

Crossed at the crosswalk  
- Observation before survey: N=885
- Observation after survey: N=594

Crossed on green time
- Observation before survey: N=885
- Observation after survey: N=594

Pressed the button
- Observation before survey: N=885
- Observation after survey: N=594
Summary

Study aimed at collecting data to:
• Identify lack of understanding of the laws
• Observe unsafe behaviors that need to be addressed with engineering, enforcement, or education
• Observations of crossings were linked to the individual replies to survey questions

Findings

• 82% of pedestrians crossed at the crosswalk and knew about jaywalking.
• 64% crossed on green time and said they do.
• 57% pressed the button and said they do.
• Positive behavior modification observed when asked questions first, observed after.
Future Work

• Perform analysis with site characteristics to identify factors influencing unsafe behavior
• Change questions to ask specifically reasons behind unsafe behavior
• Include vehicle yielding behavior and surveys
• Include cycle length as a reason why pedestrians don’t wait for signal (in FL)

Thank you

For more information:

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