Evaluating distracted driving behaviors in parents of children in suburban and rural areas of Alabama

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BACKGROUND: Distracting driving is considered a dangerous epidemic in teenage drivers and adult drivers nationwide. Cell phone use, such as talking and texting is one of the most common driving distractions among adult and teenage drivers. Using the model of a previously published study from New Haven, Connecticut, we sought to investigate the driving behaviors of parents while transporting their children in Alabama.

METHODS: A comparison study was conducted of 150 participants from suburban (n = 86) and rural (n = 64) clinics in Alabama. Participants were recruited to complete a survey regarding their cell phone usage while driving with children. The inclusion criteria were having children younger than 18 years, a valid driver’s license, and cell phone and English speaking. The survey consisted of 10 questions focusing on parental driving behaviors. Following the survey, an educational intervention was provided. A Z test proportions was used to compare the responses.

RESULTS: Ninety percent of the suburban parents reported cell phone use while driving their children as compared with 86% of the rural parents. A significant difference was found between suburban parents and rural parents for cell phone use in speaker mode (Z = 3.35; p < 0.001; 95% confidence interval, 13–45), reading and sending texts while driving (Z = 4.1; p < 0.001; 95% CI, 19–51), and surfing the Internet (Z = 4.9; p < 0.001; 95% CI, 25–57). There was no statistical significance noted for the following: use of Bluetooth device, talking on the cell phone when parked/at red light, and texting while parked/at red light.

CONCLUSIONS: Cell phone use among parents while transporting children is common in the state of Alabama. Parents living in suburban areas use cell phones in the speaker mode, read and send text messages, and surf the Web more often when compared with parents in rural areas. Further research on how to best implement injury prevention interventions should be done to target high-risk areas with distracted driving behaviors. (J Trauma Acute Care Surg. 2016;81: S44–S47. Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved.)

LEVEL OF EVIDENCE: Epidemiologic study, level III.

KEY WORDS: Distracted driving; parents; rural; suburban.
Parents/caregivers are the number one influence on what kind of driver their teen becomes. Current research supports that parents frequently engage in distracted driving behaviors while driving children. Parents are among the most likely to text and talk behind the wheel. Current research supports that parents frequently engage in distracted driving behaviors while driving children.

The purpose of our study was to investigate the talking and texting behaviors of parents/caregivers with children younger than 18 years while transporting their children in Alabama. We also compared the frequency of these behaviors between parents from suburban areas and rural areas. Given what we know regarding data, we chose to look at the frequency of parents in those areas. We hypothesized that there is a difference in the driving behaviors in regards to suburban and rural areas in a southern state.

### METHODS

The study was conducted during July 2014 to August 2015; participants were recruited from two pediatric practices in a southern state. A total of 150 parents were enrolled, with n = 86 (57%) from the suburban practice and n = 64 (43%) from the rural practice. The survey responses were reported in answers of “never,” “rarely,” “often,” and “always.” The responses were compared using yes responses (rarely, often, and always) and no responses (never). Demographics of overall study were 36 males (24%) and 114 females (76%). Both groups reported high usage of cell phones while transporting their children (n = 77 [90%] for parents from the suburban group vs. n = 55 [86%] for the parents from the rural practice). For the parents who reported cell phone use, 76% (n = 65) of parents in suburban practice report using speaker mode while driving versus 47% (n = 30) of the parents in the rural practice (Fig. 1). Significantly more parents (n = 61 [76%]) from the suburban practice reported texting while transporting their children than parents (n = 23[36%]) in rural practice (Z = 4.1, p < 0.001; 95% CI, 19–51) (Table 2) (Fig. 1).

In regard to surfing the Internet, 59 of study participants reported using their cell phone to surf the Internet while driving.

### RESULTS

A total of 150 parents were enrolled, with n = 86 (57%) from the suburban practice and n = 64 (43%) from the rural practice. The survey responses were reported in answers of “never,” “rarely,” “often,” and “always.” The responses were compared using yes responses (rarely, often, and always) and no responses (never). Demographics of overall study were 36 males (24%) and 114 females (76%). Both groups reported high usage of cell phones while transporting their children (n = 77 [90%] for parents from the suburban group vs. n = 55 [86%] for the parents from the rural practice). For the parents who reported cell phone use, 76% (n = 65) of parents in suburban practice report using speaker mode while driving versus 47% (n = 30) of the parents in the rural practice (Fig. 1). Significantly more parents (n = 61 [76%]) from the suburban practice reported texting while transporting their children than parents (n = 23 [36%]) in rural practice (Z = 4.1, p < 0.001; 95% CI, 19–51) (Table 2) (Fig. 1).

In regard to surfing the Internet, 59 of study participants reported using their cell phone to surf the Internet while driving.

### TABLE 1. Sample Survey Questions

<table>
<thead>
<tr>
<th>Questions</th>
<th>Never</th>
<th>Rarely</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use hands-free cellular device</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talk on cell phone in speaker mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use cell phone at red light or stop sign</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surf Internet while driving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read/send text messages while driving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 2. The Z Scores, 95% CIs, and p Values of Texting While Driving, Using Speaker Mode, and Surfing the Internet

<table>
<thead>
<tr>
<th></th>
<th>Texting While Driving</th>
<th>Speaker Mode</th>
<th>Surfing the Internet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z score</td>
<td>4.1</td>
<td>3.35</td>
<td>4.9</td>
</tr>
<tr>
<td>95% CI</td>
<td>19–51</td>
<td>13–45</td>
<td>25–57</td>
</tr>
<tr>
<td>p</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

### TABLE 3. Z Scores, 95% CIs, and p Values for Use of Bluetooth Device, Cell Phone Use While Driving, Using Speaker Mode, and Surfing the Internet

<table>
<thead>
<tr>
<th></th>
<th>Bluetooth Device Use at Red Light</th>
<th>Cell Phone Use While Driving at Red Light</th>
<th>Texting While Driving at Red Light</th>
<th>Texting While Parked</th>
<th>Texting While Driving</th>
<th>Read But Do Not Send Texts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z score</td>
<td>0.8</td>
<td>2.7</td>
<td>2.9</td>
<td>0.3</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>95% CI</td>
<td>8 to 24</td>
<td>4 to 26</td>
<td>4 to 16</td>
<td>7 to 34</td>
<td>8 to 24</td>
<td>2 to 28</td>
</tr>
<tr>
<td>p</td>
<td>0.4</td>
<td>0.2</td>
<td>0.4</td>
<td>0.78</td>
<td>0.007</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Figure 1. Comparison of using speaker mode, texting while driving, and surfing the Internet among suburban and rural parents while driving children.
with their children in the car. Significantly more parents from the suburban practice (n = 49 [58%]) reported this activity than the parents from the rural practice (n = 10 [16%]) (Fig. 1).

There was no statistically significant difference between groups of parents from the suburban versus rural practice in terms of use of Bluetooth device ($Z = 0.8$, $p = 0.4$), cell phone use at red light ($Z = 2.7$, $p = 0.02$), texting while parked ($Z = 0.3$, $p = 0.78$), or texting while at a red light ($Z = 2.4$, $p = 0.007$) (Table 3) (Fig. 2).

**DISCUSSION**

This study revealed risky driving behaviors among parents/caregivers in both rural and suburban areas. In suburban areas, 90% of parents in suburban area used their cell phone when compared with the 86% of parents in rural area while driving children. Both areas showed risky behavior when it came to cell phone use when parked or at red light and texting while parked or at red light. The parents in suburban areas were noted to have increased distracted behaviors when compared with rural parents/caregivers, especially in using phone in speaker mode, texting while driving, and surfing the internet.

Distracted driving is a serious epidemic that occurs not only in young novice drivers but also in experienced adult drivers. This dangerous behavior poses a risk on drivers of motor vehicles, as well as bicyclists and pedestrians. Adult drivers are just as likely as teen drivers to have texted while driving and are substantially more likely to have talked on the phone while driving. In 2009, a Pew Research Center Internet and American Life study showed that nearly half (47%) of all texting adults say they have sent or read a text message while driving compared with one in three (34%) texting teens aged 16 to 17 years who said they had texted while driving. The National Safety Council Survey found that 91% of parents who use their cell phones while driving do so when their teens are in the car, despite the fact that 88% say they are one of the teens’ primary drivers. Parents are more likely than nonparents to say they have talked on a cell phone while driving; 82% of cell-owning parents report this, compared with 72% of nonparents. The National Safety Council Survey emphasizes the need for parents to break the habit of distracted driving and help them understand their role as a driving coach. Numerous studies show the positive impact parents/caregivers have on their teens’ driving habits.

The use of handheld phones and other portable devices increases the risk of getting into a crash by threefold. Currently, 14 states, the District of Columbia, Puerto Rico, the US Virgin Islands, and Guam prohibit all drivers from using handheld cell phone use, all are primary law enforcement laws. Currently, there are no state ban on cell phone use for all drivers. However, 38 states and the District of Columbia ban all cell phone use by novice drivers. In addition, 20 states and the District of Columbia prohibit it for school bus drivers. Currently, 46 states, the District of Columbia, Puerto Rico, Guam, and the US Virgin Islands ban texting for all driver, but five having primary enforcement laws.

On August 1, 2012, the state of Alabama passed its first law in regard to cellular phone use while driving. According to the Code of Alabama, Section 32-5A-350, it is illegal to write, send, or read a text-based communication while operating a vehicle in Alabama, regardless of the age of the driver. Novice drivers, defined as any driver aged 16 or 17 years, or any driver with a license for less than 6 months, are prohibited from using a cell phone for any form of communication while operating a vehicle in Alabama. Both laws are regarded as primary laws, allowing enforcement of the law even if no other offense is taking place. Our study was done in 2014–2015; despite having this law, a substantial amount of parents do not follow this law.
This study and the New Haven study shows that there is a problem with distracted driving in parents regardless of the state they reside in. It is important for community pediatricians to promote awareness regarding distracted driving and keeping parents and children safe. Parents provide an important model for their children and establish norms regarding acceptable behavior through the examples that they set. In addition, parents’ distracted driving behaviors can serve as a negative example for their teenagers’ driving behaviors.

LIMITATIONS

There were several limitations in this study. Parents were recruited from one designated clinic in each of the two areas. This would be considered a small sample size and representing a proportion of people in that area. All the data were self-reported behavior, and parents could have given an underestimated report of their true driving behaviors. In Alabama, it is illegal to engage in texting while driving; parents may have considered not providing actual practices.

CONCLUSIONS

Cell phone use among parents/caregivers while transporting children is common in the study population. Parents/caregivers living in suburban areas use cell phone in the speaker mode, read and send text messages, and surf the web more often as compared with the parents/caregivers in rural areas while children were in the car. Considering the abundance of parental/caregivers cell phone use while driving in Alabama, an educational awareness campaign must be directed toward parents. More studies need to be conducted on parental driving behaviors in different states to evaluate this risky behavior. Also, further intervention should be done to target high-risk areas with distracted driving behaviors.

AUTHORSHIP


DISCLOSURE

The authors declare no conflicts of interest.

REFERENCES