

Pedestrians at risk! The Pedestrian Behaviour Questionnaire (PBQ) in a Brazilian Sample

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Traffic Accidents Statistic

Population Brazil: 191.480.630 millions (IBGE, 2009)

Traffic Accidents in 2007 (CNM, 2009):

- 383.371 Traffic accidents with victims
- 37.407 deaths (102 deaths per day – 4.27 per hour)
 - 18.023 car occupants (48%)
 - 9.657 pedestrians (26%)
 - 8.078 motorcyclists (22%)



Problems ...

- Education
- Infrastructure
- Lack of studies concerning pedestrian behaviour and the risk factors (Velloso & Jacques, 2005; Cardoso et al., 2003).
- Most knowledge based on foreign experience without studies of local needs to our reality (Faria & Braga, 2003).



Risk Behaviour:

Driver Behaviour Questionnaire

(Reason et al., 1990)

- ? Violations: deliberate actions to infringe the rules such as exceeding the speed limit or close driving.
- ? Errors: failure of planned actions to achieve their intended consequences and are unintentional, such as breaking too quickly on slippery road.
- ? Lapses: memory and attention problems, including behaviours such as forgetting where the car is parked or using the wrong gear of the car.



Studies using DBQ

- Reason, et al., 1990; Rimmö & Åberg, 1999; Bianchi & Summala, 2002; Özkan et al., 2006
 - ? Men reported committing more violations than women.
 - ? Women reported committing more lapses than men.
 - ? Young drivers reported committing more violations than adults.
 - ? Older drivers reported committing fewer violations but more errors.
 - ? Those who consider themselves good drivers reported committing more violations.
 - ? Those who drive frequently reported committing more violations.



Studies with pedestrians

- Moyano-Diaz, 2002 - Chile:
 - ? Developed a questionnaire Pedestrian Behavior Questionnaire: 16 six-point Likert type items.
 - ? Men reported committing more violation than women, as young people more violations than adults.
 - ? Errors and lapses did not show significant differences between gender and age.



Studies with pedestrians

- Torquato & Bianchi, 2010 - Brazil
 - ? Backtranslation of the PBQ to Portuguese
 - ? Undergraduate students
 - ? Men reported committing more violations and errors than women, as young people more violations and errors than adults.
 - ? Lapses did not show differences between gender and age.
 - ? Problem with the factorial structure of the PBQ



Studies with pedestrians

- ? Problem with the factorial structure of the PBQ



Pedestrians' Behaviour Questionnaire (PBQ-30)

- 30 items, each item described a specific behaviour that could be conducted by a pedestrian (error, violation or lapses):
 - ? Errors: e.g. "I walk on the side of the sidewalks nearest the curb."
 - ? Violations: e.g. "I wait the traffic lights change to green light stopped on the track and not on the sidewalk."
 - ? Lapses: e.g. "Suddenly, I realize that I traveled several streets and intersections without paying attention on the traffic."



Method

Materials

- ? Pedestrians' Behaviour Questionnaire (PBQ)

New items

Old items

Participants and Procedures

- ? 300 undergraduate students from the city of Curitiba (Brazil)



Results

Psychometric Properties

- ? Reliability
- ? Factorial Structure

Discussion

- ? New instrument to research in the pedestrian behaviour.
- ? The knowledge about violations, errors and lapses might be able to improve educators and authority's actions concerning traffic issues
- ? Be used as a framework to design targeted interventions.



Thank You!
Obrigada!



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