

# **TOOL 1** KNOWLEDGE ATTITUDE AND PRACTICE (KAP) SURVEY





The Global Road Safety Partnership is hosted by:





WHO Collaborating Centre for Injury Prevention and Trauma Care

© International Federation of Red Cross and Red Crescent Societies 2021.

All rights reserved. This publication or any part thereof may not be reproduced, distributed, published, modified, cited, copied, translated into other languages or adapted without prior written permission from the International Federation of Red Cross and Red Crescent Societies. All photos used in this document are copyright of the IFRC unless otherwise indicated.

#### Acknowledgements

This publication is supported by Fondation Botnar and implemented by the Global Road Safety Partnership.







This guidance document was written under the Botnar Child Road Safety Challenge with funding support from Fondation Botnar. It was written by Prasanthi Attwood, Elizabeth Towner and Margie Peden of The George Institute for Global Health, UK.

#### **Recommended citation:**

Attwood P, Towner E, Peden M. *The Botnar Child Road Safety Challenge Toolkit*, https://www.grsproadsafety.org/resources/botnar-challenge-toolkit, Geneva, Switzerland, November 2021.

# What is a Knowledge, Attitude and Practice (KAP) survey?

A Knowledge, Attitude and Practice (KAP) survey is a quantitative method of collecting information from respondents on their knowledge, attitudes and practices surrounding specific areas of interest e.g. speeding and road safety.

KAP surveys can be administered in different ways e.g. selfadministered paper questionnaires or on a computer or an interviewer can administer questionnaires in person or remotely over the telephone. These different methods of administration will need to be taken into account when the KAP survey is designed as each will have differing resource needs (human, time and financial) and will have varying response rates.

#### For example:

( i

A KAP survey surrounding speeding can include knowledge questions on speed limits in different areas of a town, and/or on road signs. *Attitude* questions can include opinions on speeding and on the use of speed cameras, and *practice* questions may ask whether the respondent has been issued a speeding ticket in the preceding 12 months.

#### Why is a KAP Survey useful?

A KAP survey is useful in helping to plan, implement, monitor and evaluate road safety interventions. It can identify gaps in knowledge, cultural beliefs or behavioural patterns that will facilitate understanding. KAP surveys provide a useful tool by which to measure repeated responses over a period of time thereby permitting trends to be observed pre- and post- a particular intervention e.g. increased speed enforcement.

#### What are the advantages and limitations of KAP Surveys?

ADVANTAGES 🕂	
Can collect information from large numbers of people, compared with other methods such as focus groups and in-depth interviews	Do not get in-depth responses and answers to 'how' and 'why' questions.
Because of larger numbers, comparisons can be made between different groups, e.g. younger/ older children; males / females.	Advisable to have statistical support to conduct robust analysis.
Can be repeated over different times to show trends and patterns in results.	Based on self-reported statements not objective data, compared with methods such as observation surveys.
Analysis of the results may be quicker than for qualitative methods	

#### When can a KAP survey be conducted?

The great strength of KAP surveys is in their reliability (repeatability) – if the same tool is used before an intervention and at regular intervals during and after an intervention, robust results testing the effectiveness of the intervention can be elicited (see Annex 1.5 for an example of how a KAP survey has been used to test the effectiveness of a drink-driving intervention).

A KAP survey can be used in *all* stages of a project and can complement the findings of focus groups and in-depth interviews.

In the **early stages** of a study or project, KAP surveys may explore participants' understanding about road safety issues and interventions to help in the development and targeting of an appropriate intervention and in targeting groups at most risk. At this early stage, KAP surveys can be used to allocate resources, aid in project design and in establishing a baseline for comparison with subsequent KAP surveys.

In the **development stage**, KAP surveys can be used to contribute to the design of the intervention (e.g. volunteers to supervise children when crossing a busy road.)

In the **evaluation stage** of the intervention, KAP surveys can help to measure whether the intervention has had any effect by comparing baseline surveys before the intervention and follow-up surveys, after the intervention has taken place.

#### Do I need ethical approval to carry out a KAP?

KAP surveys will need to be developed to take into account the 'Ethical Considerations for all Challenge Projects'. Permission is needed from relevant bodies and authorities to conduct any KAP survey. This includes the approval of school principals and of parents, the approval of participants and of municipal bodies (road safety and health boards, and the approval of parents. If a university is involved, please check if they have a functioning Ethics committee. If that is the case, we highly encourage you to seek approval for working with human subjects.

You must obtain parental consent before interviewing minors, i.e. children and adolescents (under 18 years) who still live with their parents. Verify at what age young people are considered adults in the country in which the survey will take place.

A number (code or ID number) needs to be assigned to each participant to help with data handling, storage and analysis. This will also help ensure confidentiality of respondents. An example of a Consent Form is provided in Annex 1.2 and a Covering Letter for parents to take part in a KAP survey is provided in Annex 1.3. These can be adapted to suit the need of the KAP survey and the target population.

i

#### How to conduct a KAP survey

#### **STEP 1:** Decide on what you want to find out

It is important to have a clear objective for the KAP survey and to develop a thorough survey protocol. What does your survey need to find out? How will the tool relate to the overall project goals and objectives? How will you strategically use the information gathered?

## For example:

A KAP survey with an objective of exploring how children travel safely in cars can include knowledge questions on speed limits in different areas of a town, on road signs. Attitude questions can include children's opinions on speeding and on the usefulness of seat belts, and practice questions which ask whether the child travelled to school on that day in a car, whether they used a seat belt on that car journey, whether the driver of the car also used a seat belt.

In order to execute a KAP survey and allow reasonable time and resources for each stage of the survey, you will need to create a protocol that outlines the steps involved from conception through to dissemination of results with a time frame for each step.

The survey protocol will need to set out the methods which will be used, what population will be surveyed.

### For example:

If children aged 13-14 years and their parents/carers are to be surveyed, then it will consider how the respondents can be accessed. Will this be through schools? What is the population you are surveying? What is the setting – the location, the survey area and the schools involved? How will the survey instrument be designed? How will the sampling of potential participants be conducted. What ethics and consent procedures will be needed? Is training of staff required to conduct the survey? The organisation of all these elements will need to be set down and a suitable timetable developed.

#### **STEP 2:** What resources will be needed?

A KAP survey does not have to be an expensive exercise and if planned well can be cost-effective. Develop a budget for your KAP survey and consider all possible requirements including the costs of in-house and external human resources.

The following categories should be considered when developing the budget:

- Surveyors/ researchers and supervisors with necessary training to administer KAP survey questionnaires
- Data entry staff
- If required, a trained statistician to analyse and assist in the presentation of the findings
- Written survey plan guidelines
- Survey instrument (questionnaire) developed and pilot tested before widespread use with respondents.
- Equipment (computers or other equipment needed e.g. printers/photocopiers)
- Travel (transportation to KAP survey sites, per diems for staff)
- Dissemination costs
- Miscellaneous (facility hire for training)

#### **STEP 3:** Identify your study population

Road safety interventions target different audiences and your survey may as well. In relation to child road safety, the survey population may be children themselves, describing, for example, their trip to and from school, how many roads they cross, how safe they feel crossing roads. (See sample questions provided in Appendix xx). Within schools, children may be able to complete KAP surveys in the classroom, under the direction of teachers and/ or surveyors/ researchers. This will help to maximise the response rate for the survey and allow any questions about the wording or how to fill in the questionnaires to be answered. The survey population could be the parents/ carers of these children; teachers; other school staff. The school can also help in access to these groups

#### **STEP 4:** Decide on an appropriate sampling strategy

Sampling is needed to gather information from a representative segment of the population, so that

conclusions about the whole population can be drawn. It will be helpful to consult a statistician to make sure that the sample size is suitable for the purpose of the study. The number will relate to the aims of the study and also whether the results for different sub groups will be required. A larger sample will produce more accurate data, but will be more costly and time-consuming than a smaller sample. If your analysis plan includes comparing different subsets of the population, then your sample size should be calculated accordingly.

If the aim of the survey is to give a general idea of the knowledge, aims and practices of a particular group, in order to develop a more detailed survey instrument, 30-40 respondents may be sufficient. But if the KAP survey is part of an evaluation of an intervention, the sample size will need to be larger. In addition, the sample selected in the baseline survey before the intervention, will need to be the same as that in the survey carried out after the intervention.

There are 3 different types of sampling:

**1.** The first is 'random sampling' in which each potential participant is chosen at random, so each individual will have the same chance of being selected. For example it may be that every 3rd name from the school register is taken to be a potential respondent or every other parent arriving at the school gate.

**2.** In 'purposeful sampling' each potential participant is selected in a structured manner, for example school children from 5 schools in the city with the highest rates of RTIs, in each school 3 classes of children aged 11-12 years are selected at random.

**3.** The third type, convenience sampling relates to sampling respondents who are conveniently available to the researcher to be interviewed. This method would introduce more bias that the others.

#### STEP 5: Develop and test your survey instrument

Questions used in other studies on child road safety may provide a useful starting point to develop the list of suitable questions for inclusion in KAP surveys. The overall goal of the survey should be kept in mind when developing the questions. Only ask questions that will give you information that you "need to know" rather than information that is "nice to know". Keep the questions relevant and appropriate for the target audience and local context. For example, in a question on how young children travel to school, it may be beneficial to use pictures rather than words and ensure that all potential modes of travel are included e.g. motor scooter, three-wheeler. Tailoring the survey instrument to a specific setting will benefit from advice from local road safety experts and school teachers.

#### Some key tips for writing questions:

- Remember the purpose of your survey don't ask questions that you won't need to use in analysis. The number of questions need to be kept to a minimum. Many surveys collect far too much information and much of this is not analysed. What questions are essential to answer your study aim? Keep the survey questions as short as possible (for example 25 questions).
- Don't be afraid to discard questions if you can't see a reason for keeping it then throw it out.
- Keep your audience at the forefront when writing the questions what language do you need to use? Avoid complex questions especially where children are involved. Do you need to translate the questions?
- Keep the questions simple to avoid confusion break apart complex questions to keep each one simple and concise. Avoid technical terms and abbreviations.
- Avoid leading questions e.g. most people believe that speeding is dangerous do you agree
- The appearance of the survey instrument is important- the layout of questions and the instructions, the overall length of the survey instrument may affect completion rates.
- The order the question are asked is important. Start with the least sensitive questions and build to the more sensitive ones. The demographic questions (age, gender) are best placed at the end.

**Question types.** It is important that the questions are accompanied by clear instructions on how to complete them (e.g. please tick one box, please tick one or more boxes). Questions that are close-ended are the easiest for respondents to complete and are less prone to error.

Close-ended questions can be multiple choice, scaled or answered by Yes or No answers.

Open ended questions can be used for example 'do you have any other comments?' These need to be kept to a minimum because they will be more time consuming to code and analyse and it may be more appropriate to use In-Depth Interviews instead.

Some further examples of KAP questions can be found in Annex 1.1

**Piloting.** Once you have a draft of the possible questions, pilot test it on a small sample of your target population (e.g. 5-10 respondents) and discuss the questionnaire with the respondents. Try to find out whether there any questions that they found difficult to understand, whether they did not understand any of the words or meanings, whether the wording could be changed, was the questionnaire too long, were there any questions that could be removed or others that could be added. A second pilot of the revised questionnaire (perhaps with 5 respondents) could improve the instrument still further. This second pilot could perhaps be used as part of the training for survey interviewers.

**Translation of questions.** In some settings, the survey questionnaire may need to be translated into the local language or languages. Asking the same question to all respondents is necessary to guarantee the validity of the results. A professional translator needs to translate the initial questionnaire, as the meaning may vary from language to language. The survey team should then translate this version back to English to make sure that the original meaning of the questions has been maintained. The idea is not to translate the questions word-for-word but to translate the meanings of the questions.

At each step of the design, modify survey items and the survey instrument itself on the basis of information gathered at that step, particularly information gathered during the pilot test.

#### Example A: What is the speed limit on the road outside the main school front gate? (Only tick one box)

- 🛛 10 kmh
- 20 kmh
- 🛛 30 kmh
- 🛛 40 kmh
- 🛛 50 kmh
- 🛛 60 kmh

Example B: Do you think that road safety is a problem around your school?

- 🛛 Yes
- 🛛 No

Example C: How often do you use the zebra crossing to cross the main road outside the school?

- □ I always use the crossing
- □ I often use the crossing
- □ I rarely use the crossing
- □ I never use the crossing

There is no zebra crossing outside my school

Example D: Do you have any suggestions on how to improve safety around your school?

#### **STEP 6:** Train your fieldworkers

Staff will need to be recruited with some experience in developing and administering questionnaires. Other researchers may provide expertise in data entry and statistical advice.

The KAP survey need to be carried out by a team of surveyors/ researchers conducting interviews with respondents, with supervisors managing the survey and providing support. All members of the study team need to understand the principles of the survey and the procedure for administering the survey questionnaire. The surveyors/ researchers must be thoroughly trained so that they have the communication skills needed to conduct interviews/ administer questionnaires. The aim is to avoid bias that could significantly affect the results of the survey. This training could include a mix of lecture-type presentations, participatory group discussions and role-playing in interviewing.

In order that the team members understand the principles of the survey, some background on road safety, on the survey objectives need to be presented. The importance of informed consent and confidentiality of the data need to be stressed and the manner in which the researcher presents this important information to participants. Above all, surveyors researchers need to be trained to administer the survey in a consistent manner.

#### **STEP 7:** Administer the survey

KAP surveys can be administered in different ways and these methods need to be taken into account when the survey is designed. The length, level and complexity of the questionnaire may be different.

#### For example:

A questionnaire that is designed to be self- administered (i.e. without the guidance of an interviewer) needs to be shorter and easier to follow, with clear instructions on how to answer the questions e.g. "please tick only one box" or "please tick one or more boxes").

When the KAP survey is administered by a trained interviewer, the interviewer can make sure that the respondent understands the instructions for each question.

#### For example:

The initial question on a child's journey to school shows that the child travelled to school on a cycle, the interviewer can then skip to the next set of questions related to cycling. Thus the format of the questionnaire can be more complex.

#### Types of surveys can include:

- Self-completed, paper-based, KAP surveys
- Self-completed, computer-based, KAP surveys. This may be using on-line software, tool such as Survey Monkey
- An interviewer can administer a KAP survey in person, one-to-one
- An interviewer can administer a KAP survey or remotely on the telephone.

#### **STEP 8: Analyse, interpret and report the data**

**Data entry.** In a well- designed questionnaire, a coding scheme should be developed for all the items in parallel with the questions.

Ideally data should be entered onto an electronic database at the end of each interview session or when questionnaires are completed. The gold standard in data entry is double data entry (i.e. where two different researchers input the same data), however, the realities of time and financial constraints may mean that single data entry, combined with a double entry check every 20 surveys is a more appropriate means of quality control.

#### For example:

A question about 'How safe do you feel crossing the roads outside your school?', can be coded 01 for 'very safe', 02 for 'quite safe', 03 for 'a bit unsafe' and 04 for 'not safe at all'. Standard coding for all questions could be 77 for 'don't know' and 99 for missing values. **Data analysis.** It may initially be useful to explore what the broad patterns/trends are and what are the biggest areas of concern using tabulations.

This may then help to guide your analysis. If statistical expertise are available, it may then be useful to chisquared tests to assess the associations between two risk factors e.g. self-reported speeding and ticket receipt.

When the data analysis is complete, a brief report should be prepared and suggestions made about how the findings can be translated into action.

The report should include the following sections:

- The purpose of the KAP survey and the aims of the data collection.
- The number of participants who took part in the survey, the response rates.
- Background information about the participants (male/ female, age group etc.), the setting, where the focus group was conducted.
- How the data were analysed.
- A summary of what the findings show, including graphs and tables.
- What else has been learned from the process?
- What have the KAP surveys contributed to the study and how can the findings be used?

The final report should be made available to all stakeholders, and results should be presented at relevant meetings to encourage discussion.

#### **Mobility Surveys:**

Also known as a travel survey, a mobility survey gives information about how students and their parents/carers, and staff currently travel to school and what issues are faced by them on their journey. It can assess how they would prefer to travel to school, what their views are on different travel options, how their journey might be improved and what other issues they may have with their journey to school. A mobility survey differs from a KAP survey in the question that it wants to answers. The KAP survey looks can be used as a research tool to assess the knowledge and attitudes of different groups towards any aspect of road safety that is of interest to the project's goals e.g. speeding, road safety education programs. A mobility survey, by contrast, gives a cross-sectional assessment of how students, parents and/or teachers journey to and from school. It can be carried out online or through a paper questionnaire. The steps involved in a mobility survey however are very similar to that of a KAP survey and the above tool can be used to help develop a mobility survey. Annex 1.6 gives a good example of a self-administered, validated mobility survey tool carried out in Hyderabad, India.

*i*)

An example of how data can be analaysed and summarised in tabular format are shown in Annex 1.5. This example, extracted from a paper by Bachani et al (2017) exploring attitudes and practices towards drink driving, demonstrates how KAP surveys can be used as a monitoring and evaluation tool using the same KAP questionnaire at repeated intervals every 6 months to assess the effectiveness of an intervention.

#### References

ACF International (Action Against Hunger). Conducting KAP Surveys : A Learning Document. Lessons Learnt from KAP Survey Failures.

Bachani A M, Risko C B, Gnim C, Coelho S, Hyder A A (2017). Knowledge, attitudes, and practices around drinking and driving in Cambodia. Public Health 144 (2017) S32- S38.

Ruiz-Casares M (2011). Child Protection, Knowledge, Attitudes and Practices in Central and Western Liberia. Final Report, 2011. US Aid and Save the Children.

Tetali S, Edwards P, Murthy G V S, Roberts I (2015). Development and validation of a self-administered questionnaire to estimate the distance and mode of children's travel to school in urban India. BMC Medical Research Methodology (2015) 15:92 DOI 10.1186/s12874-015-0086-y.

Thompson NJ, McClintock HO (2000). Demonstrating your program's worth. A primer on evaluation for programs to prevent unintentional injury. National Center for Injury Prevention and Control, Centers for Disease Control, Atlanta, USA, 2<sup>nd</sup> edition, 2000.

## ANNEX 1.1. SAMPLE QUESTIONS FOR USE IN A KAP SURVEY

(Examples of how to code the responses for data analysis are given in [] where appropriate).

1) What is the speed limit on the road outside the main school gate?

- 0 10kmh [1]
- 0 20kmh [2]
- 🛛 30kmh [3]
- 0 40kmh [4]
- 0 60kmh [5]
- 🛛 I don't know [99]

2) How often do you go over the speed limit when driving on the road outside this school? (*Tick one box only*).

- □ I Never go over the speed limit [1]
- □ I rarely go over the speed limit [2]
- $\hfill\square$  I often go over the speed limit [3]
- □ I always go over the speed limit [4]
- □ Refused to answer [77]

3) Why do you believe drivers go over the speed limit on the road outside this school? (*Tick as many boxes as you wish*).

- □ The speed signs are not visible [1]
- Drivers don't think they will get caught [2]
- There is no police enforcement of the speed [3]
- □ The punishment for speeding is not big [4]
- Drivers think they can stop in time no matter what their speed if a child crosses the road [5]
- Drivers don't know that there is a school nearby [6]
- Drivers are in a rush to get to work [7]
- Everybody else is speeding [8]
- Drivers don't understand the consequences of speeding [9]
- 4) If you were speeding, what do you think your chances are of getting caught?
- Less than 30% (will not get caught) [1]
- □ 30-49% (may not get caught) [2]
- □ 50-79% (may get caught) [3]
- □ 80-100% (will get caught) [4]
- □ Refuse to answer [77]
- Don't know [99]

5) In the past 30 days, approximately how many times have you been caught speeding within the school zone?

Number of times:\_\_\_\_\_

6) How safe do you feel it is for your child to cycle on the roads outside their school? (Tick one box only)

- Very safe [1]
- Quite safe [2]
- □ Slightly unsafe [3]
- □ Not safe at all [4]
- □ I don't know [99]

7) How safe do you feel it is for your child to cycle on the roads near where you live? (Tick one box only)

- Very safe [1]
- Quite safe [2]
- □ Slightly unsafe [3]
- □ Not safe at all [4]
- 🛛 I don't know [99]

[NB In similar questions try and ensure that the responses are kept the same to avoid confusion and permit more consistency in answering]

# ANNEX 1.2. SAMPLE CONSENT FORM TEXT FOR PARENTS/ CARERS TO PARTICIPATE IN A SURVEY ON SAFE JOURNEYS TO SCHOOL.

(Draft only - please amend as appropriate)

[INSERT INSTITUTE LOGO]

Dear Sir/Madam,

Thank you for agreeing to take part in a short survey conducted by the (City Name's)' Safer Roads Initiative'. The purpose of the survey is to find out from Parents/Carers how children aged 9-13 years journey to school and how we can keep them safe on their journey. The information gathered in the survey will help us to understand how to make the roads safer for your children when they go to and from school.

You can choose to stop the survey at any time and can ask at any time during the survey for your answers not to be used in the study. You do not have to answer every question. Please note that your responses will remain entirely confidential and will not be able to be traced back to you. Each completed survey will be assigned a number and your name will not be included in any report or publication that may come from this survey.

There are no right or wrong answers. We hope you will be happy to take part in the survey about your child's experience of journeying to school. The survey results can contribute to plans for making (City's name) a safer place for children in the future.

If you agree to participate in this survey we ask that you kindly sign below.

I understand this information and agree to take part in the survey.

Signed:	Print Name:	Date:

## ANNEX 1.3. SAMPLE COVERING LETTER TEXT TO PARENTS/ CARERS FOR KAP SURVEY ON SAFE JOURNEYS TO SCHOOL

(Draft only - please amend as appropriate)

[INSERT INSTITUTE LOGO]

Dear Parent/Carer,

We hope that you will be willing to take part in our survey on Safe Journeys to School. The purpose of the Survey is to find out from Parents/ Carers how children aged 9-13 years travel to and from school and how we can keep them safe on our city's roads.

You can choose to stop the survey at any time and can ask at any time during the survey for your answers not to be used in the study. You do not have to answer every question. Please note that your responses will remain entirely confidential and will not be able to be traced back to you. Each completed survey will be assigned a number and your name will not be included in any report or publication that may come from this survey.

Enclosed with this letter is the survey questionnaire which we hope you will complete and return in the envelope provided. For each question please follow the instructions provided – some questions require just one answer whilst others may involve ticking more than one box. If you have any questions about the survey or any concerns about how the findings will be used, please contact the Project officer by telephone or email (contact details provided below).

The information gathered in the survey will help us to understand how to make the roads safer for your children when they journey to and from school.

Yours sincerely, Name, Project Office, Safer Roads Initiative (telephone number:....., email:.....)



(Based on Bachani et al's (2017) Knowledge, Attitude and Practice survey in Cambodia)

#### (i) What is the purpose of this KAP Survey?

In this study, the overall purpose was to develop a greater understanding about drink driving in Cambodia in order to guide the enforcement of alcohol legislation and develop more targeted educational campaigns in Cambodia.

#### (ii) What is the survey question?

The specific question which was set out is, 'What is the current knowledge, attitudes and practices around drinking and driving in Cambodia?'

#### (iii) What is the survey population and how is it reached?

The survey population was road users aged 18 years and older. They were sampled using a multiple sampling strategy, selecting roads where there were rest areas or petrol stations where the participants could safely be interviewed and then selecting drivers for defined blocks of time each day for 5 days. A sample of 300 road users were interviewed in each round of data collection. A sampling frame was developed, so that it could be replicated for each data collection period. In this example, the same survey was conducted on 5 occasions, 6 months apart, using the same method of administration.

(iv) The question plan. The question plan was developed to reflect the research question and the method of administration of the survey. The survey instrument contained 21 questions on traffic laws, regulations and alcohol consumption.

(v) Administration of the survey. In addition to the survey instrument, a letter summarising the purpose of the study and a consent form for participants to sign was prepared. Instructions for surveyors would ensure that the administered in the same manner in the different data collection sites and time periods. Trained interviewers

(vi) Data Analysis. Following the collection of the data in the five surveys, an analysis plan was needed to plan data entry and analysis.

# ANNEX 1.5. SAMPLE RESULTS TABLES RELATING TO PARTICIPANTS' ATTITUDES AND PRACTICES.

(Based on Bachani et al's (2017) Knowledge, Attitude and Practice survey in Cambodia – see Annex 1.4 above)

## Participants' attitudes regarding drink driving in Cambodia, by survey round (Nov 2010- May 2012).

Results show the participants' agreement with the attitude statement

Statement	ment Nov 2010 May 2011		Nov 2011	May 2012	Total	
_	N = 298	N = 298	N = 287	N = 304	N = 1187	
	Agree	Agree	Agree	Agree	Agree	
	n (%)	n (%)	n (%)	n (%)	n (%)	
Driving after drinking alcohol increases the risk of a crash (n = 1177)	209 (71.8)	276 (93.2)	251 (87.8)	289 (95.1)	1025 (87.1)	
Drink driving is not a problem when driving for a short distance (n = 1171)	96 (33.1)	69 (23.7)	43 (15.0)	31 (10.2)	239 (20.4)	
l will not drink-drive in order to avoid being caught by the police (n = 1172)	193 (67.3)	250 (84.5)	236 (82.2)	270 (89.4)	949 (81.0)	
After drinking, I will hire a car to go home so that do not drive home by myself (n = 1168)	142 (49.5)	204 (68.1)	154 (54.4)	216 (71.3)	713 (61.0)	

**Participants' behaviours regarding drink driving in Cambodia, by survey round (Nov 2010- May 2012)** Results show the participants' agreement with the practice statements

Statement	Nov 2010 N = 286	May 2011 N = 296	Dec 2011 N = 286	May 2012 N = 302	Total N = 1170
	n (%)	n (%)	n (%)	n (%)	n (%)
l don't drink at any time (n = 178)	46 (16.1)	70 (23.7)	35 (12.2)	27 (8.9)	178 (15.2)
lf I am driving, I don't drink (n = 435)	101 (35.3)	94 (31.8)	124 (43.4)	116 (38.4)	435 (37.2)
If I am driving, I restrict what I drink (n = 546)	132 (46.2)	132 (44.6)	124 (43.4)	158 (52.3)	546 (46.7)
If I am driving, I do not restrict what I drink (n = 11)	7 (2.5)	0 (0.0)	3 (1.1)	1 (0.3)	11 (0.9)
Total (n = 1170)	286 (100.0)	296 (100.0)	286 (100.0)	302 (100.0)	1170 (100.0)

This following is an example of how the Chi-Squared test can be used to test the association between two factors – in this case self-reported alcohol consumption and involvement in a crash:

Relationship between reported alcohol consumption and crashes involving drinking and driving among drivers in Cambodia (Nov 2010 – May 2012)

Involved in crash because of drink driving in past year	Avoid alcohol N = 430	Limit alcohol use N = 541	Total N = 971
-	n (%)	n (%)	n (%)
Yes (n = 84)	33 (7.7)	51 (60.7)	84 (8.6)
No (n = 887)	397 (92.3)	490 (90.6)	887 (91.4)
Total (n = 971)	430 (100.0)	541 (100.0)	971 (100.0)

Pearson's Chi-squared = 0.9312; P = 0.335.

# **Global Road Safety Partnership**

# Seneva Office

c/o International Federation of Red Cross and Red Crescent Societies P.O. Box 303 Chemin des Crêts, 17 Petit-Sacconex, 1209 Geneva Switzerland Email: grsp@ifrc.org Tel: +41 22 730 4249 Fax: +41 22 733 0395

### <mark>ង</mark> Kuala Lumpur Office

Menara Tokio Marine Life, Level 10, 189 Jalan Tun Razak, 50400 Kuala Lumpur, Malaysia Tel: +603 9207 5700

## **Budapest Office** Budapest,

Váci út 30. 4.em., 1132 Hungary Tel: +36 1 888 4500

For more information about how to join the Global Road Safety Partnership please visit our website **www.grsproadsafety.org** 



www.grsproadsafety.org



The Global Road Safety Partnership is hosted by:



