King's Day, to your health?!

Project Overview

The purpose of this study was to collect data on health and health-related behavior as related to how national (or regional) holidays are celebrated.
Because there is a long period without national holidays between Liberation Day, which is not really celebrated in the Netherlands, and Sinterklaas, which was yet to happen at the time of this assignment, King's Day was selected. King's Day is a Dutch national holiday at the end of April that is widely celebrated in various ways. Most people in the Netherlands would remember at least something of what they were doing at the time, even if they'd only seen it as a newsitem on tv.
This study will focus on the occurrence of hangover-symptoms in relation to the different ways of participating in King's Day celebrations.

Methods

A short web search for the symptoms of hangover revealed a variety in the level of details that could be asked. Fortunately they were consistent on a more aggregate level, so the symptoms were grouped into meaningful categories (fatigue, nausea, headache). To measure how participants celebrated King's Day three activities were selected: dressing in orange ('oranje gekte'), King's Night (partying on the night before) and the Free Market ('vrijmarkt'). For each activity a participant could actively join, passively watch or not join the activity at all. Because the activities themselves do not lead to a hangover, the intermediary more health-related behaviour was also measured by adding three questions about eating, drinking and sleeping habits.
In line with the terms of use on datacourse.org no information was collected that could lead to identification of participants. Personal information collected was limited to information about participants' physical characteristics, i.e. age, gender, height and weight, that could have an effect on health.
To minimise the thinking required by participants nearly all questions were created as checkboxes with predefined answers (categorical). Only the questions that did not fit in a checkbox (date of birth, height, weight and number of alcoholic drinks) were created as text fields, with constraints to avoid nonsensical answers.
To all categorical questions 'Do not know' and 'Decline to answer' options were added. For all other question-types an answer was optional. This might lead to more incomplete surveyrecords, but it also increases the likelihood of a participant finishing (submitting) the survey. I did not expect enough respondents to use an elaborate multivariate analysis anyway, and this would give me more data for the separate, univariate analyses.
Participants were approached via the Coursera-forum, Twitter and e-mail (a selection of personal and business contacts), with an explanation to the how and why of the survey.
Due to the small number of participants, analysis was limited to barcharts and cross-tabulations.

Survey Population

The post on the Coursera-forum obtained 13 views, likely due to the time (European daytime) the post was published. Some 75 Twitter-followers could have seen the tweet, but tweets are usually not well read. A

number of personal (11) and business contacts (22) received an e-mail with a request to participate.

From 30 November to 5 December 2014, 21 surveys were submitted, of which one was a duplicate record. 20 Records were used for further analysis.
Of the 20 participants 12 were male, 8 female, age groups ranged from 16-20 to 51-55 with one missing value. There are few participants in the lower age groups and none in the older (above 60y). The BMI ranged from 20.45 to 58.96 with most participants being of normal weight or slightly overweight and three overweight. Based on gender and age the participants seems to be representative of my network, but not of the Dutch population.

Summary of Findings

Of the 20 participants 16 were in the Netherlands during King's Day. Nine people joined in one or more of the celebrations, only two celebrated King's Night.
Five of the people who joined the celebrations suffered from one or more of the hangover symptom but only one qualified as a hangover (scored 'moderately' on at least two symptoms), the other four had only minor symptoms. The four other people who also joined in the celebrations did not suffer from any symptom at all. Celebrating King's Day did not correlate with having hangover symptoms.
Analysis of health related behaviour revealed that of the participants only two exhibited excessive behaviour (ie skipped several meals, went a night without sleep and/or had more than 6 drinks containing alcohol). One of these suffered from a hangover but one record is usually considered an outlier and not sufficient data to draw reliable conclusions. Health-related behaviour did not correlate with hangover symptoms.
By and large the participants in this study are moderate party-goers who do not suffer from hangovers. This result might be related to the selection of the participants from my network that consists mostly of middle-aged working people who have left the serious partying behind them. (Mind you, I'm not saying we've become a boring lot. Absolutely not, I wouldn't dare.)

Lessons Learned

To achieve clearer and more detailed results about the effects of celebrating King's Day on health, more participants are needed especially from the partying part of our population. A different approach is needed to reach participants outside of my own network.
To achieve more reliable results the survey should be held immediately after King's Day, with a pre-survey to control for existing illnesses. Instead of a using a web-survey it might be better if future participants would receive health and health related questions before, during and after the celebrations (eg by smartphone and in exchange for a personal party-health profile).
Although in general the Dutch understand English good enough for answering questions like these, I would use a translated version next time to increase response rate and minimize misunderstandings.