Int J Public Health (2012) 57:959–961
DOI 10.1007/s00038-012-0404-7

HINTS & KINKS

Testing Skype as an interview method in epidemiologic research: response and feasibility

Tobias Weinmann · Silke Thomas · Susanne Brilmayer · Sabine Heinrich · Katja Radon

Received: 10 July 2012 / Accepted: 17 August 2012 / Published online: 4 September 2012

Abstract
Introduction Despite its popularity, Skype has not been tested as a tool for epidemiologic research. We examined its feasibility in Germany.
Methods A population-based sample of young adults was randomly invited to a Skype ($n = 150$) or a phone interview ($n = 150$). Response and duration of interviews were analysed to evaluate the feasibility of Skype interviews.
Results Response was low and, with 10 % (95 % CI 5–15 %), even worse among Skype candidates, compared to 22 % (15–28 %) in the phone group. A third of the Skype group asked for being interviewed by phone. Median duration was 34.0 minutes for Skype interviews and 37.0 minutes for phone interviews.
Conclusions Skype is not yet a feasible tool for data collection in Germany.

Keywords Epidemiologic methods · Data collection · Survey methodology · Communication · Videoconferencing

T. Weinmann (✉) · S. Brilmayer · S. Heinrich · K. Radon
Occupational and Environmental Epidemiology and NetTeaching Unit, Institute and Outpatient Clinic for Occupational, Social and Environmental Medicine, University Hospital of Munich (LMU), Munich, Germany
e-mail: tobias.weinmann@med.lmu.de

S. Thomas
Medical Advisory Service of Social Health Insurance, Essen, Germany

Introduction

Since many years, phone interviews constitute an attractive means for health surveys because of their comparatively low costs and easy administration (Donovan et al. 1997). However, due to the fast development of technological knowledge, new technologies, e.g. the Internet, are challenging as compared to traditional methods such as phone interviews (Bexelius et al. 2009; Ekman and Litton 2007). One of these new instruments is videoconferencing; it has the potential to be a viable, cost-effective alternative to in-person interviews, mainly because it provides the possibility of covering study subjects in large geographical areas (Sedgwick and Spiers 2009). Skype is the most popular videoconferencing tool (De Cicco et al. 2011) and is used not only for private but also for business-related communication (Skype Fast Facts February 2011). Thus, it appears to be obvious that Skype can be an interesting tool for health-related purposes, especially as it has several advantages compared to phone interviews. Through the video mode, the interviewer and the interviewee can see each other, photos or pictures can be shown to illustrate questions, and the contact is of a more personal manner than by phone.

Although videoconferencing has been used in a wide range of health-related areas such as health care teaching or medical diagnostics (Sedgwick and Spiers 2009), Skype has, to our knowledge so far, not been used as an interview method in epidemiological studies. Therefore, we conducted a pilot study to examine the feasibility of using Skype as an interview method in Germany. Especially, we aimed to examine if interviews via Skype are an equivalent or an even more feasible interview method than phone interviews in the German branch of the MOBI-KIDS international case–control study on potential risk factors

for brain tumours among the young (http://www.mbkds.com) as for logistic reasons it will not be possible to interview each participant personally. Finding the most viable substitute for in-person interviews is therefore essential to guarantee high-quality data collection. Differences in response and length of the interviews between the two interview methods were assessed.

Methods

The present study was carried out as a population-based cross-sectional study in Landsberg, southern Germany (28,000 inhabitants). Landsberg was selected as an example for an average-sized German town. Data collection was conducted between May and September 2011.

A total of 300 young people between 18 and 24 years of age were randomly selected from the town's population registry. They were a priori randomly divided into the phone interview group ($n = 150$) and the Skype interview group ($n = 150$). The phone interview group was invited to take part in a phone interview while the Skype group was asked for a Skype interview. The latter group also had the chance to opt for a phone interview if they did not have access to Skype. Both groups were contacted by a postal invitation letter explaining the aim of the pilot study (finding the most viable interview method for the MOBI-KIDS study) and offering small monetary incentives for participation. Up to two reminders were sent to non-respondents and up to five attempts were made to contact them by phone, if the phone number could be tracked.

The German translation of the common questionnaire developed by the MOBI-KIDS study consortium (http://www.mbkds.com) was used in the interviews.

In order to compare the techniques in terms of response, 95 % confidence intervals were calculated. Statistical analysis was performed with SPSS 19.

Results

15 subjects could not be traced leaving a study population of 285 young adults (144 Skype group, 141 phone group). Overall, 54 subjects agreed to participate (response 19 %). 29 subjects (54 %) were females, mean age was 21 years (SD 2.0).

Among the subjects who were asked for their participation in a Skype interview, 23 (16 %) agreed to take part. However, eight of them did not have Skype installed on their computer and had to be interviewed via phone. Thus, only 15 subjects participated in a Skype interview. Of the subjects invited to a phone interview, 31 agreed to participate. As a result, net response was clearly lower among Skype candidates, with 10 % (95 % CI 5–15 %) in the Skype group and 22 % (15–28 %) in the phone group.

All Skype interviews could be conducted without any technical problems.

The median duration of the Skype interviews was 34 min (range 31–68 min); for phone interviews median duration was comparable (median 37 min; range 26–117 min).

Conclusion

Our study shows that phone interviews are still more feasible than Skype interviews in epidemiologic research in Germany.

Even though we used mixed methods to increase response (reminders, incentives, and hand written envelopes) as it is recommended in the literature (Edwards et al. 2009), the response in our study population was extremely low. This confirms that young adults constitute an age group that is extremely difficult to reach (Davies et al. 2000; Ramo et al. 2010; Heinrich et al. 2011). In addition, our findings seem to reflect the general difficulties that the population-based epidemiologic studies encounter nowadays, as people's willingness to take part in surveys is constantly decreasing (Galea and Tracy 2007). Alternative recruitment strategies to sending postal invitation letters should be considered. Contacting potential study subjects online, e.g. via social networks, or using web-based questionnaires might be worthwhile options in the future (Rhodes et al. 2003; Touvier et al. 2010; Jones et al. 2011; Russell et al. 2011; Vergnaud et al. 2011).

Although the informative value of the present study is hampered by the low general response, response in the group invited to a Skype interview was even worse compared to the phone interview group. Furthermore, about one-third of the Skype candidates who agreed to participate needed being interviewed via phone. These aspects imply that Skype is not yet feasible as an interview technique for epidemiologic research in Germany. In the future, with fast Internet connections expected to continuously spread, Skype could nevertheless become an interesting tool for communication with study subjects. For, as long as, it is still too early to use Skype as an interview technique, phone interviews continue to be the more viable option as a substitute to in-person interviews.

Acknowledgments The authors are very grateful to all our MOBI-KIDS partners, especially to Elisabeth Cardis, Siegal Sadetzki, Revital Bruchim, Chelsea Eastman, Laurel Kincl, Martine Vrijheid, Sandra Pla, Maria Saarela, Michael Kundi, Hans Kromhout, Roel Vermeulen, Franco Merletti, Milena Maule, Malcolm Sim, Joe Wiart, and Myron Maslanyi for their dedication to the finalisation of the study questionnaire. We also express our appreciation to Verena Eichel for her commitment to the planning of the pilot study and we

thank Carolina Bürger, Carina Dehner, Sebastian Haneder, and Alicja Rogalinska for their support in the fieldwork. Many thanks are also given to Barbara Hartmann for her linguistic adviceThe MOBI-KIDS study is funded by the European Community's Seventh Framework Programme (FP7/2007-2013) under Grant Agreement 226873- the MOBI-KIDS Project.

Conflict of interest The authors declare that they have no conflict of interest.

Ethical standard The study complies with the current laws of the country in which it was performed.

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