Do travel clinic visitors read information on sexual risk abroad in travel health brochures?

Journal of Infection Prevention
2017, Vol. 18(1) 18–22
DOI: 10.1177/1757177416661405
© The Author(s) 2016
Reprints and permissions:
sagepub.co.uk/journalsPermissions.nav
jip.sagepub.com

Mieke Croughs^{1,2}, Annemarie de Gouw¹, Roy Remmen³ and Jef Van den Ende²

Abstract

Background: A substantial proportion of travel clinic visitors have sexual encounters while abroad. Hence, guidelines on travel health recommend discussing sexual risk in a pre-travel consultation. However, previous studies showed that it often is not discussed. Although travel clinic visitors usually do receive written information on sexual risk abroad, few data are available on whether this information is read. Therefore, this prospective cohort study in travel clinic visitors was performed.

Methods: Travel clinic visitors were invited to complete a questionnaire after return from their journey.

Results: A total of 130 travellers (55%) responded. Half of them recorded they read the information on sexual risk. Male gender (OR 9.94 95% CI 3.12 – 31.63) and ‘travelling with others’ (OR 2.7 95% CI 1.29 – 5.78) were significant independent predictors of reading the information on sexual risk. High risk travellers, i.e. those travelling without a steady partner, were less likely to have read it. Although websites and apps were mentioned as better methods of providing information, none of the participants visited the websites on sexual behaviour and sexually transmitted infections recommended in the travel health brochure.

Conclusion: Only half of travel clinic visitors read information on sexual risk in the health brochure received in the clinic and none of them visited the related websites mentioned in the brochure. Further research to identify the most effective way to inform travellers about sexual risk is needed.

Keywords

Education, sexual risk, travel

Date received: 21 February 2016; accepted: 26 June 2016

Introduction

A substantial proportion of international travellers have sexual encounters while abroad, often unexpected and unprotected (Croughs et al., 2008; Hamlyn et al., 2007; McNulty et al., 2010; Mulhall, 1996; Rice et al., 2012; Richens, 2006; Vivancos et al., 2010; Whelan et al., 2013). Therefore, guidelines on travel health recommend discussing sexually transmitted infections (STI) and sexual risk behaviour in pre-travel consultations (Centers for Disease Control and Prevention, 2014; WHO, 2015). However, sexual risk is not always discussed in pre-travel consultations. A study in Peru showed that, although 94% of international visitors to Cusco had received pre-travel advice, only 22% reported to have received information on sexual risk (Cabada et al., 2005). It is not clear whether the information received was given in

oral or written form. To assess whether sexual risk is usually discussed in travel clinics, a study was conducted at a Dutch travel clinic (Croughs et al., 2013). One of the registered travel health nurses observed pre-travel consultations of 13 other registered nurses. Neither the observing nurse nor the

¹Department of Environment, GGD Hart voor Brabant, 's-Hertogenbosch, The Netherlands

²Department of Clinical Sciences, Institute of Tropical Medicine, Antwerp, Belgium

³Department of Primary and Interdisciplinary Care, University of Antwerp, Belgium

Corresponding author:

Mieke Croughs, Department of Environment, GGD Hart voor Brabant, Postbus 3166, 5203 DD 's-Hertogenbosch, The Netherlands.
Email: m.croughs@ggdhvb.nl

nurses performing the consultations were informed that sexual risk discussion was the focus of the study. It appeared that sexual risk abroad was discussed in only 4% of the pre-travel consultations. However, travel clinic visitors usually receive a travel health brochure that *inter alia* contains information on sexual risk abroad. In a previous study, half of Belgian and Dutch travel clinic visitors reported to have read the information on sexual risk in the brochure (Croughs et al., 2008). Moreover, having read the information predicted more consistent condom use, while no evidence is available on the effectiveness of a pre-travel STI discussion (Croughs et al., 2014). The fact that both travel clinic visitors and health advisors were informed about the reasons for the study may have biased the results. Whilst it is improbable that it influenced the relation between reading the information and condom use, it may have increased the proportion reading the information. To determine whether travel clinic visitors usually read the information on sexual risk, a prospective cohort study was performed.

Methods

Design

This study was performed at the GGD Hart voor Brabant, a regional community health service in the Netherlands, which is responsible for the preventive health of more than 1,000,000 inhabitants. Adult travellers who visited one of its travel clinics between 18 June and 31 October 2013 and who would return before 31 December 2013, were invited to participate. Only travellers who came unaccompanied to the clinic were invited to participate, in order to increase the proportion of travellers at risk, i.e. those travelling without steady partner (Croughs et al., 2008; Whelan et al., 2013). To minimize bias, two measures were taken. First, the health advisors were informed that the study concerned the written information, but not that the information on sexual risk was the focus. Second, participants were not informed that the study concerned the written information. If visitors agreed to be contacted after return, they signed an information leaflet and received a copy. They were informed that signing the form did not oblige them to participate and that not participating would not have any implications for the future. Name, address and return dates of those who consented were registered in a temporary data file, which was anonymised after finishing the analysis. As it appeared that more than 98% of the candidates provided an email address, the invitations to complete the questionnaire were sent by email. A first email was sent 1 week after return, followed by a reminder 2 weeks later in case of no response. The emails were linked to an anonymous web-based questionnaire (Net-Q). Answers were directly imported in a SPSS file.

This study did not need approval of the Medical Ethical Committee as it concerned an anonymous and non-intrusive questionnaire on reading and usefulness of an educational brochure.

Questionnaire development

In April 2013, the questionnaire was drafted and tested in a small pilot. The questionnaire consisted of 11 tick-box questions and two open questions. Questions concerned the travel health brochure received at the end of the consultation and general data such as gender, age and travel companions. Regarding travel companions, one or more of following four answer categories could be ticked: alone, with my steady partner, with family, friends or colleagues or otherwise (specify).

The travel health brochure in this study, published by GG&DD Utrecht, is used at most public health centres in the Netherlands. It is small, colourful and attractive with many pictures and drawings. It contains information about food hygiene, diarrhoea treatment, insect bites (prevention and diseases transmitted by insects), cooling and swimming (with information on schistosomiasis, legionella, diving and drowning), sun protection, sexual risk, climbing, animals (rabies and avian influenza), special considerations (tuberculosis, psychological problems, venous thrombosis, wound care, diabetes, traffic accidents), preparation for the journey, insurance, vaccinations (and adverse reactions) and the travel pharmacy. In addition, 10 handy websites are listed, of which two discuss sexual risk (Sense, 2015; Soaads, 2015).

Analysis

All variables were described and analysed while correlations between the different variables were tested using chi-square test (SPSS Statistics 21). Variables which were moderately significantly related to reading the information on sexual risk ($P < 0.10$) were studied in a multivariate logistic regression model (Enter method). Odds ratios with an associated 95% confidence intervals were used to measure the strength of correlations. Regarding non-responders, the available data, i.e. gender, age and travel duration, of all travellers who were invited to participate were compared with those of the respondents.

Results

Of 229 travellers, who received an email with a link to the questionnaire, 130 (55%) responded. The vast majority (83%) reported to have read the general information in the health brochure, while about half of the respondents recorded they read the information on sexual risk (Table 1). The brochure was usually read before departure. All respondents who did not read it before departure, took it along on the journey. Almost everyone who had read it, reported that the information was useful. Two travellers remarked that it was not useful as they were experienced travellers, another that 'not everyone travels for sun and sex', and one mentioned that all information is easily accessible on the Internet. A few remarked that they missed

Table 1. Frequencies of variables (n = 130).

Variable		Percentage of respondents
Gender	Female	49
Age	≤ 30 year (range, 18–68 years)	49
Destination	Asia and Middle East	52
	Africa	26
	South/ Central America	18
	Eastern Europe	5
Duration trip	>14 days	66
Travel companion (more answers possible)	With steady partner	30
	Alone	15
	Family, friends or colleges	43
	Previously unknown group	15
	Other	2
Brochure brought along	Yes	56
Brochure read	Yes	83
Read specific information	Yes, on sun protection	63
	Yes, on risk of swimming	58
	Yes, on sexual risk	51
STI-Website visited	Yes	0
Better ways of informing	Yes	20
	App	5
	Email	4
	Website	5
	TV spot	1
	Social media	1
	Text message	1
	YouTube video	1
Frequencies in subgroup that read the brochure (n = 101)		
Information was useful	Yes	96
When brochure read (more answers possible)	Before departure	92
	During journey	17
	After return	1
Missing information	Yes	4
Especially useful	Food safety	18
	Travel health risks in general	11
	Swimming	4
	Mosquito protection	4
	Malaria	3
	Sun protection	1

information; someone missed information on local health-care and another on scabies (as fellow travellers contracted it), while one person wanted more information on possible side effects of vaccines and malaria medication. Three travellers remarked that the warnings were exaggerated and

another three mentioned that they did not read the brochure as they received enough information during the consultation.

One-fifth of the respondents indicated that better ways to inform travellers exist; apps and websites were most

Table 2. Multivariate analysis significant predictors of reading information on sexual risk (n = 130).

Predictors	Sig.	Odds ratio (OR)	95% CI for OR	
			Lower	Upper
Gender	0.000	9.940	3.124	31.627
Traveling with others	0.008	2.732	1.295	5.780

often mentioned as better methods of providing information. However, none of the participants consulted the websites on sexual risk mentioned in the brochure.

The univariate analysis showed that reading the general information in the brochure was not correlated to any of the other variables. In contrast, reading the information on sexual risk was related to male gender and to travelling with others. It was not related to age, travelling without a steady partner or duration of the journey. Men also more often read the information on swimming (86% versus 63%, $P = 0.008$) and on sun protection (90% versus 73%, $P = 0.025$). The multivariate analysis showed that male gender and travelling with companions such as a steady partner, family, friends or colleagues, were independent predictors of reading the information on sexual risk (Table 2).

Regarding the difference between participants and non-respondents, it appeared that the proportion of women was slightly higher in those who responded than in the whole group of invited travellers (49% versus 46%). However, mean age (36 years versus 35 years) and median travel duration (both 18 days) were the same.

Discussion

This study showed that about half of travel clinic visitors read the information on sexual risk in the brochure received in the travel clinic, confirming the results of a previous study (Croughs et al., 2008). Gagneux and colleagues described that 94% of travel clinic visitors read a leaflet on implications of sex tourism in developing countries, which was handed out in addition to the usual travel health brochure (Gagneux et al., 1996). Maybe a leaflet given separately from the travel health brochure is more inviting to read.

Men more often read the information on sexual risk, but they also more often read the information on swimming and sun protection. Contrary to expectations, high-risk travellers, i.e. those travelling without a steady partner, were less likely to read the information on sexual risk. This may be attributed to the fact that, despite belonging to the major risk group, most of them are not aware of this risk, as was shown in other studies (Croughs et al., 2008; Zimmermann et al., 2013). It is not clear why those who travelled alone are less likely to read the information on sexual risk.

Despite one-fifth of respondents mentioning that digital ways of information would be better, no one reported that they consulted the recommended websites on sexual risk,

even though participants were computer literate as they all used email. Therefore, links to websites in health brochures do not appear to be an effective means of preventing sexual risk behaviour. However, this does not mean that such links are entirely useless, as websites mentioned in brochures may still be a source of reliable information for travellers in case of exposure. The authors of a recent publication on condom use in an online community of frequent travellers claimed that tourists should not only be informed before, but also during their travels (Alcedo et al., 2014). Another recent publication suggested that female Swedish backpackers in Thailand were not sufficiently informed on sexual risk abroad and that travel clinics should hand out information or refer to websites with information on what to do in case of unprotected casual sex (Dahlman et al., 2013). However, such information should be at hand while travelling. Unfortunately, a substantial part (44%) of those who read the brochure before departure did not take it with them. Maybe health advisors should emphasise not only reading the brochure, but also bringing it along.

Recently, new ways of informing travellers, such as apps and videos, have been developed (Chiodini, 2014a, 2014b). The app 'GGD Op reis', for instance, is free and contains a lot of travel health information, including on sexual risk and STIs (GGD Flevoland, 2015). Apps obviously would be easier to use than a link in a brochure, on condition that the content is available offline. However, the effectiveness of these digital ways of information have not yet been evaluated.

The fact that actual sexual risk behaviour was not included in the questionnaire could be considered as a limitation of this survey. However, we considered this not relevant as the objective of this small survey was to determine whether travellers at risk read the information independently of actual sexual behaviour. The low power due to the low response is a limitation. However, selection bias is probably low, as the compared data, with the exception of gender, did not differ between non-respondents and participants. The fact that slightly more women responded may have had a small impact on the results, but this does not affect the main conclusion that only about half of travel clinic visitors read information on sexual risk abroad. It is not clear whether our results are applicable to travellers who seek pre-travel advice from general practitioners. In fact, general practitioners are less likely to provide for written travel health information (Kogelman et al., 2014).

Apps may be a valuable alternative methods of providing information. However, there are no data on the impact of pre-travel information on sexual risk, given in an oral, written or digital format. Therefore, further research on the impact of pre-travel information on sexual risk abroad is needed. Robust, randomised clinical or pragmatic trials should be used to compare the effectiveness of different methods of delivering pre-travel information on sexual risk abroad.

Conclusion

Only half of travel clinic visitors read information on sexual risk abroad in the health brochure received. Although websites and apps were mentioned as better ways of information, none of the participants visited the websites on sexual behaviour and STIs recommended in the travel health brochure. Clearly, further research to identify the most effective way to inform travel clinic visitors on sexual risk abroad is needed.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Peer review statement

Not commissioned; blind peer-reviewed.

Data access

Data can be accessed by writing to the first author (m.croughs@ggdhvb.nl).

References

- Alcedo S, Kossuth-Cabrejos S, Piscoya A and Mayta-Tristan P. (2014) Factors associated with non-use of condoms in an online community of frequent travellers. *Travel Medicine and Infectious Disease* 12: 750–756.
- Cabada MM, Maldonado F, Quispe W, Serrano E, Mozo K, Gonzales E, Seas C, Verdonck K, Echevarria JI and Gotuzzo E. (2005) Pretravel health advice among international travellers visiting Cuzco, Peru. *Journal of Travel Medicine* 12: 61–65.
- Centers for Disease Control and Prevention. (2014) *Travellers' Health 2014*. Available at: <http://wwwnc.cdc.gov/travel/page/yellowbook-home-2014> (accessed 26 December 2015)
- Chiodini J. (2014a) "Can I Eat This"—review of a CDC app. *Travel Medicine and Infectious Disease* 12: 553–554.
- Chiodini J. (2014) A video tool to communicate the risk of rabies to a traveller pre travel. *Travel Medicine and Infectious Disease* 12: 410–411.
- Croughs M, Van Gompel A, de Boer E and Van Den Ende J. (2008) Sexual risk behavior of travellers who consulted a pretravel clinic. *Journal of Travel Medicine* 15: 6–12.
- Croughs M and Gouw de A. (2013) How many and which topics are discussed in an average pre-travel consultation? Abstract of Poster Presentation at ISTM conference 2013. Available at: <http://www.istm.org/Files/Documents/Activities/Meetings/Congresses/CISTM13/Abstracts-PosterPresentations.pdf> PO09.08 (accessed 27 December 2015).
- Croughs M, Remmen R and Van den Ende J. (2014) The effect of pre-travel advice on sexual risk behavior abroad: a systematic review. *Journal of Travel Medicine* 21: 45–51.
- Dahlman D and Stafstrom M. (2013) Female Swedish backpackers in Vietnam: a hypotheses generating study on sexual health risks while travelling. *Travel Medicine and Infectious Disease* 11: 243–249.
- Sense. (2015) Dutch centre for sexual health. Sexual health. 16-9-2015. Available at: <https://www.sense.info/> (accessed 26 December 2015).
- Soaids. (2015) Dutch STI organisation. STI and AIDS. 16-9-2015. Available at: <http://www.soaids.nl/nl> (accessed 26 December 2015).
- Gagneux OP, Blochliher CU, Tanner M and Hatz CF. (1996) Malaria and casual sex: what travellers know and how they behave. *Journal of Travel Medicine* 3: 14–21.
- GGD Flevoland (2014) App GGD op reis. Available at: <https://itunes.apple.com/nl/app/ggd-op-reis/id510022656?mt=8&ls=1>. 17-7-2014. (accessed 26 December 2015).
- Hamlyn E, Peer A and Easterbrook P. Sexual health and HIV in travellers and expatriates. *Occupational Medicine (Oxford, England)* 57: 313–321.
- Kogelman L, Barnett ED, Chen LH, Quinn E, Yanni E, Wilson ME, Benoit C, Karchmer AW, Ooi WW, Jentes ES and Hamer DH. (2014) Knowledge, attitudes, and practices of US practitioners who provide pre-travel advice. *Journal of Travel Medicine* 21: 104–114.
- McNulty AM, Egan C, Wand H and Donovan B. (2010) The behaviour and sexual health of young international travellers (backpackers) in Australia. *Sexually Transmitted Infections* 86: 247–250.
- Mulhall BP. (1996) Sex and travel: studies of sexual behaviour, disease and health promotion in international travellers—a global review. *International Journal of STD & AIDS* 7: 455–465.
- Rice B, Gilbert VL, Lawrence J, Smith R, Kall M and Delpech V. (2012) Safe travels? HIV transmission among Britons travelling abroad. *HIV Medicine* 13: 315–317.
- Richens J. (2006) Sexually transmitted infections and HIV among travellers: a review. *Travel Medicine and Infectious Disease* 4: 184–195.
- Vivancos R, Abubakar I and Hunter PR. (2010) Foreign travel, casual sex, and sexually transmitted infections: systematic review and meta-analysis. *International Journal of Infectious Disease* 14: e842–851.
- Whelan J, Belderok S, Van Den Hoek A and Sonder G. (2013) Unprotected casual sex equally common with local and Western partners among long-term Dutch travellers to (sub)tropical countries. *Sexually Transmitted Diseases* 40: 797–800.
- WHO Green book. (2014) International travel and health. Available at: <http://www.who.int/ith/en/> (accessed 26 December 2015).
- Zimmermann R, Hattendorf J, Blum J, Nuesch R and Hatz C. (2013) Risk perception of travellers to tropical and subtropical countries visiting a Swiss travel health center. *Journal of Travel Medicine* 20: 3–10.