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A pilot study on the effect of HIV information

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Introduction

The risk of contracting HIV during travel may be the most important travel related health risk. E.g., between 15 and 20 Norwegian travelers contract hiv every year. Nobody has done an experimental study to see what sort of information is most effective to prevent risk behavior. After an Australian campaign where images of the Death were prominent, they compared risk behavior in Australia and New Zealand (where this campaign was not shown) and found more risk behavior in Australia (1). Some authors have claimed that to scare without any directions of what to do to avoid the risk would lead to a cognitive neglect of the fear, and thereby increased risk behavior. On the other hand, a combination of raising fear and clear advice on how to avoid the risk, is a strong motivating factor (2, 3). In the case of hiv, the individual can to a high degree decide if he or she will take risks or not. Therefore fear would be expected to be an appropriate mean of inducing risk modification. A study from 2010 (4) points out "anticipated regret" as a predictor for the case that fear could lead to modification of behavior. In spite of this, the dominating opinion in most western countries is that evoking fear should be avoided in hiv-campaigns, as this could potentially lead to stigmatization of hiv-positive people. The opposite attitude is dominant in anti-smoking campaigns. Our intention was to carry out an experimental study of the effect of scaring.

Materials and methods

Reiseklinikken-Oslo Travel Clinic performs pre-travel vaccination and advice for about 11000 persons every year. By using a conservative assumption that about 4% of travelers would have a new sexual contact during the travel and that 20% of Norwegians use condoms when having casual sex (5) we calculated that we would need to recruit 4000 subjects for the study to detect a reduction in risk behavior of 40% or an increase of 50%. We did a pilot study, by including 100 ethnic Norwegian and Swedish men and women from 18 to 60 years who planned a trip of 2-16 weeks duration to Asia, Africa or Latin-America without a sexual partner, after informed consent (assured by making them sign an information sheet about the study). The study was approved by the regional ethical committee.

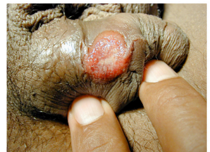
By blind randomization they were given one of two different information sheets. These information sheets had the same text, with the headline: "You can decide if you get hiv or not". The pictures and picture captions, however, were entirely different, as one version had scary pictures, and the other had pictures communicating a positive message. The content was mostly well-known hiv-information, i.e., about how hiv is transferred and that condoms will reduce the risk. It also contained less well-known issues, e.g., that the viral load of hiv-positive persons may vary from not measurable to more than 10,000,000 virus copies per ml, and that this, combined with genital ulcer disease may make some people much more contagious than an average hiv-positive. This implies that it would be a much higher risk of encountering a hyper-contagious hiv positive if you have sex with many partnes than to have many intercourses with one partner. It was also emphasized that local people who engage in casual sex with tourists would most likely be sex-workers.
The main message is: "Don't have sex with the local population, and if you do, use a condom".

Du kan velge selv om du blir hiv-smittet eller ikke.

Det er et tyvetall nordmenn som får hiv ved utenlandsreiser hvert år, og hiv/AIDS er derfor vårt desidert største infeksjonsproblem ved reiser. For det meste er det norske menn som blir smittet i Asia, mens i Afrika er også norske kvinner utsatt.

Hiv smitter gjennom blod, ved ubeskyttet seksuell kontakt med hiv-positive (også munnsex) og fra mor til barn.

Smittsomheten av hiv kan variere. Antall virus per milliliter blod/sæd kan variere fra ikke målbart til mer enn 10 millioner. Personer med et høyt antall virus vil være mye mer smittefarlige enn de med et lavt antall. Videre vil de som har en sårdannende kjønnssykdom, kunne overføre smitten mye lettere enn andre. En studie fra Nairobi viste at 85 % av dem som fikk en sårdannende kjønnssykdom etter kontakt med prostituerte, også fikk hiv. Det går vanligvis flere år før en hiv-positiv smitter sin ektefelle. Det betyr ikke at viruset er lite smittsomt, men at flertallet av hiv-positive er lite smittefarlige. ***Hvis man har mange partnere, vil det mangedoble risikoen for å komme ut for en svært smittefarlig hiv-smittebærer.***



Penis med en sårdannende kjønnssykdom

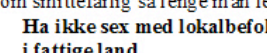
Man kan neppe få hiv ved kyss, selv om det er påvist virus i spytt. Vanlig kroppskontakt, nærhet og klemmer er helt ufarlig.

Man kan ikke se på folk om de bærer viruset – alle kan være potensielle hiv-positive, uansett alder, kjønn eller nasjonalitet. Lokale kvinner og menn i fattige land som har tilfeldig sex med turister, er ofte prostituerte, selv om de ikke fremtrer som det, og blant prostituerte er hiv utbredt. Sex med prostituerte kan tilsynelatende arte seg som sjekking, at man tilsynelatende møtes på vanlig måte. Og betalingen kan like gjerne være gaver, mat og drikke som penger, som man tradisjonelt tenker. De fleste av oss ville avstå fra sex med en tilfeldig partner som vi visste var hiv-positiv, med eller uten kondom. ***Frykten for at man er blitt smittet etter en tilfeldig sexualkontakt kan lett ødelegge resten av ferien.***

På ferie vil det ofte være alkohol med i spillet, og synet på risiko endres. ***Kondomer reduserer risikoen i betydelig grad***. Ha gjerne med kondomer hjemmefra, og bruk dem under hele samleiet. ***Det tryggeste er å ikke ha sex med mulig prostituerte.***

Om du har ubeskyttet sex må du i ettertid få testet deg, så du eventuelt unngår å smitte andre. Uten behandling er AIDS 100 % dødelig. Om man blir smittet med hiv, må man ta medisiner resten av livet, og det forutsetter tett medisinsk oppfølgning. Medisinene har betydelige bivirkninger. Med god medisinsk oppfølgning kan man få en normal livslengde, men man må regne seg som smittefarlig så lenge man lever.

- **Ha ikke sex med lokalbefolkningen i fattige land**
- **Bruk i så fall kondom**



Denne unge mannen døde av AIDS før medisinene kom. Han hadde ekstrem avmagring og en spesiell hudkreftform som sees ved AIDS

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AIDS overføres ved seksuell kontakt – kondom beskytter.

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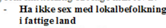


Mennesker med livet foran seg

Anonymous form (translated from the Norwegian version)

Duration of travel:...........weeks Country:..........

Age at start of the travel:.......... Gender M☐ F☐

Did you have casual sex with the local population (included immigrants) during the travel? Yes ☐ No☐

Did you have casual sex with other tourist during the travel? Yes ☐ No☐

If you had casual sex with the local population: Did you use condom during the whole intercourse?
Give only one marking:

- Every time ☐
- Most of the times ☐
- About half of the times ☐
- Some times ☐
- Never ☐
- I don't remember ☐
- I did not have sex with anyone from the local population ☐

How many different sexual partners the local population did you have (if you don't remember, give an approximate number)?..........

Which of the information sheets did you get?

Make a ring around the one you got.

What is your opinion of the information sheet? Mark with a vertical line on this line:

Very scary |________________________________| Not scary

Completely useless |________________________________| Very helpful

Did you read the information sheet before you got to your destination?
I didn't read it |________________________________| I read it very carefully

Do you think that the information sheet had any impact on the pleasure with the travel?
Absolutely not |________________________________| It ruined the travel totally

Commentary?..........

NB! You must not write your name on this form.

The form should be returned as soon as possible to Reiseklinikken in the enclosed postage-paid envelope.

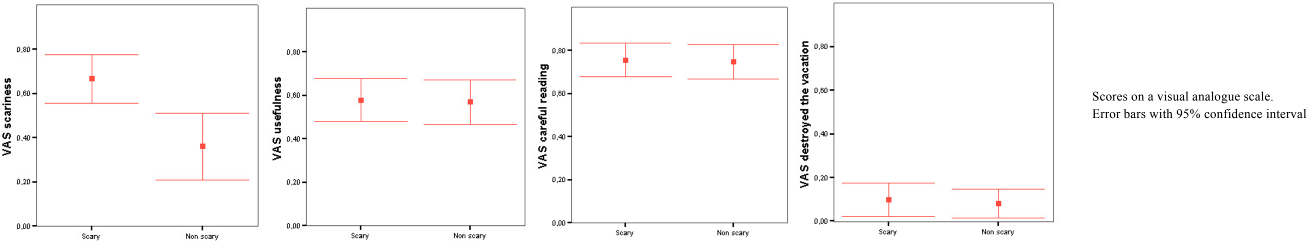
If you have had casual sex with the local population, you should be hiv-tested. Otherwise you risk to transfer the disease to other people.

After return from the travel, the travelers got an anonymous reply form, with a postage-paid envelope. The intention was to asses if the travelers had had sex with the local population, how many partners and if they had used condoms. Also, we made a visual analogue scale (VAS) registration (values 0-1) to see if the information sheets were perceived as scary or not, useless or helpful, if they thought the information had had any impact on risk behavior and the pleasure of traveling. Those who did not send in the form were reminded two times, by e-mail or telephone.

Results

The recruiting was more difficult than expected, as only 160 persons were found eligible for the study and 100 persons accepted to participate between January 16 and March 5, while more than 2000 persons visited the clinic during this period. Of these, eight withdrew from the study and 35 did not answer, resulting in only 57 completed forms. Of those who responded there were 41 women and 16 men. Of these, 25 had got the scary and 25 the non-scary sheet (six unknown, one had read both). Seven of the 57 responders (five men and two women) had had sex with the local population, two of them without a condom. Of the ones who had sex with the local population three had got the scary, three the non-scary and one had read both sheets. The two who had not used condoms got different sheets. Five of the women and two of the men had had casual sex with other tourists (one man with both a local and a tourist).

The mean rating of scariness was 0.66 and 0.40 for the scary and non-scary sheet ($P<0.05$). The mean rating of usefulness was 0.59, for degree of careful reading 0.73, and for degree of destroying the vacation 0.10. For the three latter issues there were no differences for the two information sheets. There were no significant gender differences.



Scores on a visual analogue scale.
Error bars with 95% confidence interval

Discussion

The choice of pictures gives a significantly different perception of the scariness of the information, although the text is exactly the same. Apparently, scary pictures does not affect or the perceiving of the information as useful or the willingness to read the information carefully, and the information will not ruin the pleasure of travelling.

Recruitment to the study was the main problem, and could have been easier if those who would travel 1-16 weeks were eligible for the study. With a recovery of 57% we would have needed to recruit 7000 participants, which would be an overwhelming task for a single travel clinic. In this pilot study, 12% had sex with the local population. This indicates that our assumption of 4% is too conservative, and that a lower number of respondents could be sufficient. Maybe a simpler procedure for responding, e. g. a link in an email and a few clicks on a survey tool, could improve the response rate. On the other hand the anonymity would not be conceived as being as well taken care of as in this study. This could possible scare away some participants. Furthermore, the validity of the results would be doubtful, with a response rate of only 57%.

Considering the immense importance of the question raised, such an experimental study should be carried out as a multicenter study, based on these experiences.

References

1. Rovin, K, Young, MH, Hardee, K: Condoms and CFLs: Environmental Behavior Change Lessons from Public Health. Condoms and CFLs: Environmental Behavior Change Lessons from Public Health. Population Action International Vol 3 Issue 4 2008.
2. Robert A. C. Ruiter; Charles Abraham; Gerjo Kok. Scary warnings and rational precautions: A review of the psychology of fear appeals. Psychology & Health, Volume 16, Issue 6 November 2001 , pages 613 - 630.
3. Colin Batrouney Victorian AIDS Council/Gay Men's Health Centre. Fear-based appeals in HIV prevention. Social research briefs. Brief No 5, 2004. ISSN 1448-563X.
4. Chris M. R. Smerecnik; Robert A. C. Ruiter Fear appeals in HIV prevention: The role of anticipated regret . Psychology, Health & Medicine, Volume 15, Issue 5 October 2010 , pages 550 - 55
5. Bente Træen, Hein Stigum, Per Magnus. Rapport fra seksualvaneundersøkelsene i 1987, 1992, 1997 og 2002. Nasjonalt folkehelseinstitutt, Avd. for epidemiologi.